



# PORT AUTHORITY OF ALLEGHENY COUNTY

## CONTRACT DRAWINGS

### BUS RAPID TRANSIT (BRT) UPTOWN TO OAKLAND

### CONSTRUCTION CONTRACT NO. BRT-001

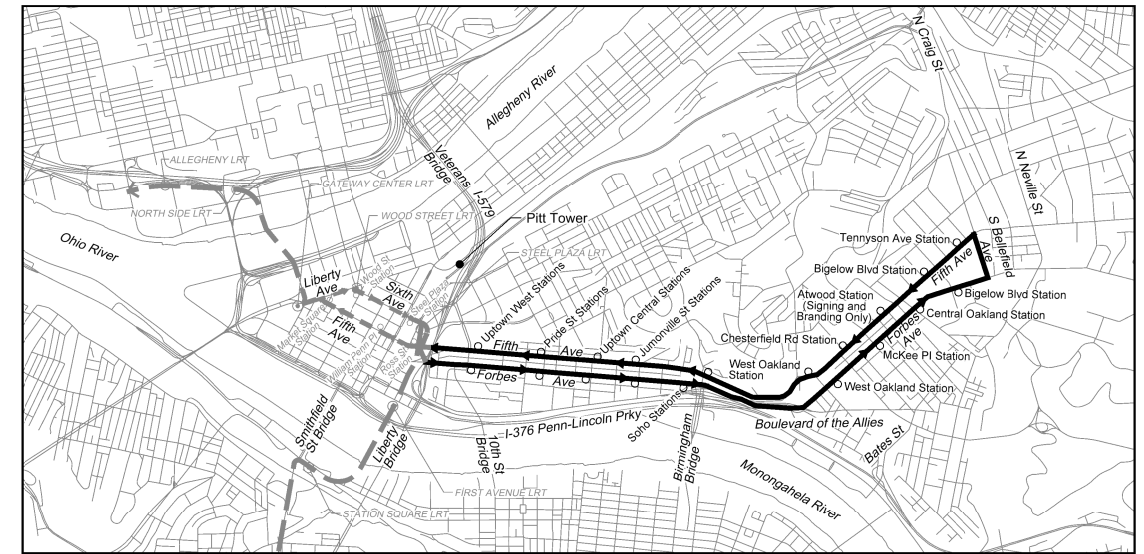
**FTA GRANT NO.:** PA-2023-002-00

**PROJECT NO.:** CCA-G-22-23-PAAC-00702  
 CCA-21-22-PAAC-00764  
 CCA-20-21-PAAC-00715  
 CAA-19-20-PAAC-00538

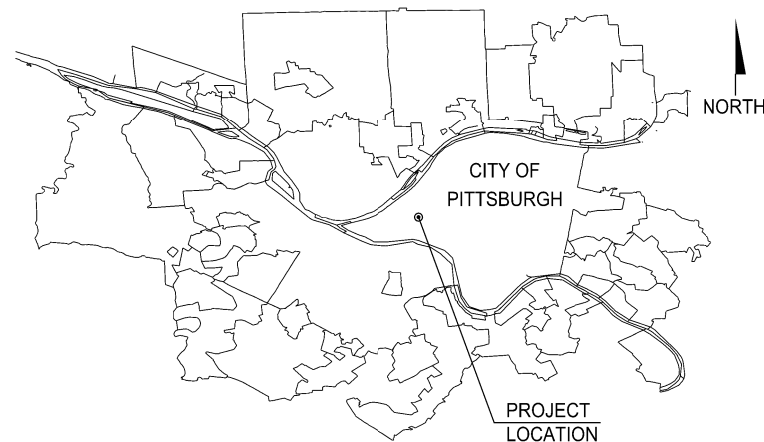
**ISSUE DATE:** MAY 1, 2024

**VOLUME 3 OF 3**

- INDEX OF DRAWINGS
- INDEX SHEETS
- SIGNAL PLANS
- CROSS SECTIONS
- PWSA STORMWATER MANAGEMENT PLANS (ALSO PLAN)



**LOCATION MAP**  
NO SCALE



**VICINITY PLAN**  
NO SCALE

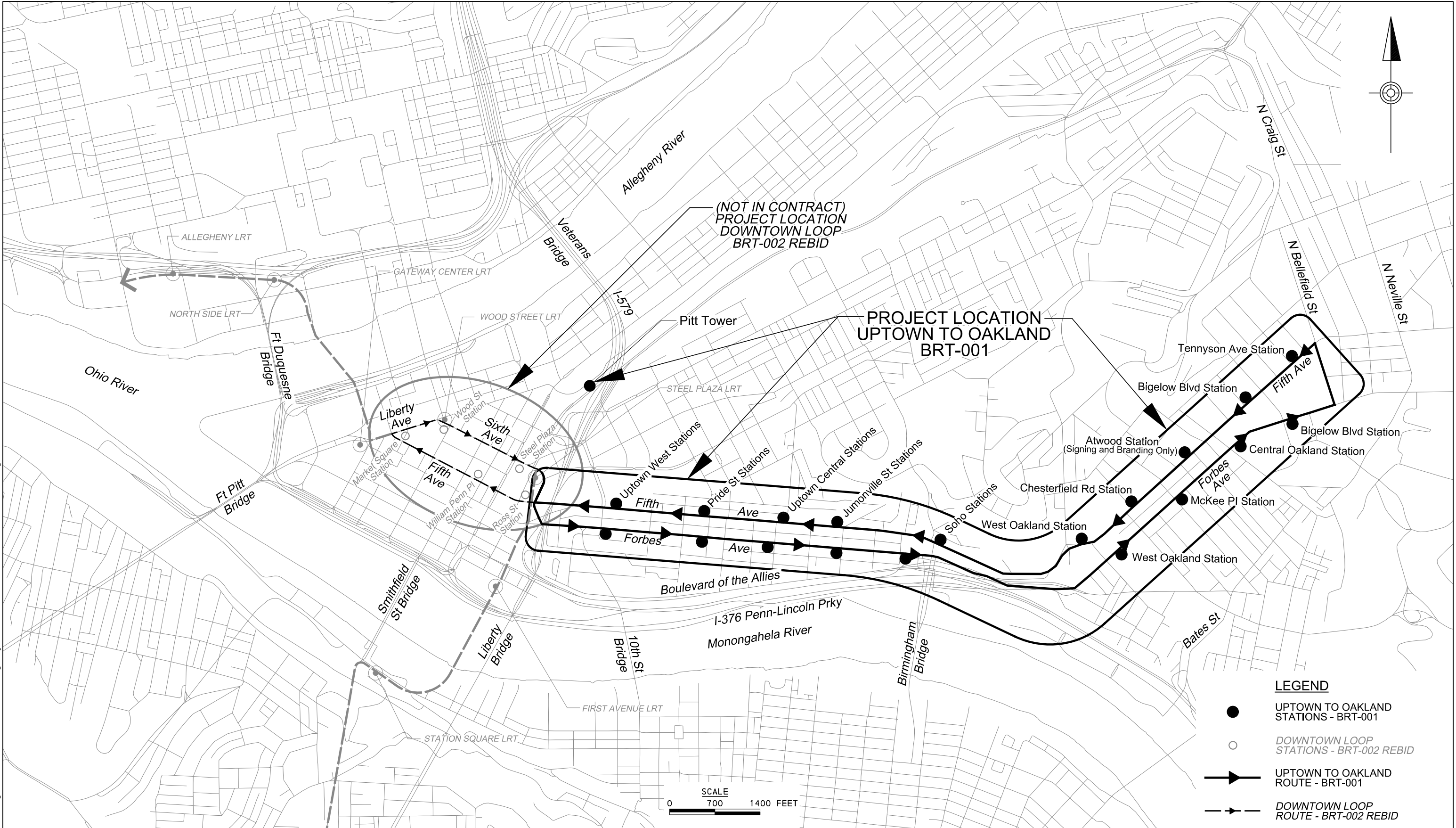
THE PREPARATION OF THESE DRAWINGS HAS BEEN FINANCED, IN PART, THROUGH A GRANT FROM THE U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL TRANSIT ADMINISTRATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED.

(NOT FOR  
CONSTRUCTION)

PREPARED BY:  
**AECOM**  
 Gulf Tower  
 707 Grant Street  
 5th Floor  
 Pittsburgh, PA 15219

AECOM	
Project Manager _____	Date _____
REGISTERED PROFESSIONAL ENGINEER, PENNSYLVANIA	
PORT AUTHORITY OF ALLEGHENY COUNTY	
Approved _____	Date _____
CHIEF ENGINEER - ENGINEERING AND TECHNICAL SUPPORT	

CITY OF PITTSBURGH	
APPROVAL	DATE
ASSISTANT DIRECTOR OF PLANNING, POLICY AND PERMITTING _____	_____
MUNICIPAL TRAFFIC ENGINEER _____	_____
CHIEF ENGINEER _____	_____
DIRECTOR _____	_____



**LEGEND**

- UPTOWN TO OAKLAND STATIONS - BRT-001
- DOWNTOWN LOOP STATIONS - BRT-002 REBID
- ➔ UPTOWN TO OAKLAND ROUTE - BRT-001
- - -➔ DOWNTOWN LOOP ROUTE - BRT-002 REBID

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REVISIONS		

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DESIGNED	JMS
DRAWN	JMS
CHECKED	MES
IN CHARGE	LAR
DATE	05/01/24
SCALE	AS SHOWN

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
 PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT UPTOWN TO OAKLAND**  
 CONTRACT LOCATION MAP

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CONTRACT NO. BRT-001	
DWG. NO. GN2	SHT. 2



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OPERATOR: "joseph.silich" FILE: "PA\TH: c:\pwworking\aecom\ds16.nda\joseph.silich\aecom.com\d0207700\BRT\_01\_RD\_10D01.dgn

INDEX OF DRAWINGS

DRAWING NUMBER	SHEET NUMBER	TITLE	DRAWING NUMBER	SHEET NUMBER	TITLE	DRAWING NUMBER	SHEET NUMBER	TITLE	DRAWING NUMBER	SHEET NUMBER	TITLE						
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GN7	7	INDEX OF DRAWINGS				GN32	32	STATION CONTROL POINTS JUMONVILLE ST STATION & SOHO STATION	GN61	61	DRAINAGE TABULATION SHEET	CV15	90	TYPICAL SECTIONS FIFTH AVE BOUQUET ST TO BIGELOW BLVD			
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			GN54	54	ROADWAY TABULATION SHEET	CV8	83	TYPICAL SECTIONS FIFTH AVE / MOULTRIE ST TO BIRMINGHAM BRIDGE				CV38	113	TYPICAL SECTIONS FORBES AVE			
									CV39	114	TYPICAL SECTIONS FORBES AVE						



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**BUS RAPID TRANSIT UPTOWN TO OAKLAND**

INDEX OF DRAWINGS

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CONTRACT NO. BRT-001

DWG. NO. GN3 SHT. 3

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<u>TYPICAL SECTIONS (CONT'D)</u>			<u>SPECIAL DETAILS (CONT'D)</u>			<u>DRAINAGE PROFILES (CONT'D)</u>			<u>INTERSECTION DETAILS (CONT'D)</u>		
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CV45	120	TYPICAL SECTIONS FORBES AVE	CV72	147	DRAINAGE DATA DRAINAGE STRUCTURES A19- A20	CV101	176	DRAINAGE PROFILES DRAINAGE STRUCTURES G11- G12	ID29	205	INTERSECTION DETAILS FIFTH AVE & KIRKPATRICK ST/BIRMINGHAM BR
CV46	121	TYPICAL SECTIONS MARION ST AND JUMONVILLE ST	CV73	148	DRAINAGE DATA DRAINAGE STRUCTURES A21 - A22				ID30	206	INTERSECTION DATA FIFTH AVE & KIRKPATRICK ST/BIRMINGHAM BR
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CV58	133	SPECIAL DETAILS PWSA - TRENCH IN SIDEWALK & TRENCH REPAVING	CV85	160	DRAINAGE PROFILES DRAINAGE STRUCTURES A17 - A19	ID12	188	INTERSECTION DATA FIFTH AVE & PRIDE ST	ID43	219	INTERSECTION DATA FIFTH AVE & ATWOOD ST
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CV62	137	SPECIAL DETAILS PWSA - CATCH BASIN TYPE 13	CV89	164	DRAINAGE PROFILES DRAINAGE STRUCTURES A24 - A25	ID16	192	INTERSECTION DATA FIFTH AVE & VAN BRAAM ST	ID47	223	INTERSECTION DATA FIFTH AVE & BOUQUET ST
CV63	138	SPECIAL DETAILS PWSA - CATCH BASINS TYPE 13 MODIFIED	CV90	165	DRAINAGE PROFILES DRAINAGE STRUCTURES A25 - A26	ID17	193	INTERSECTION DETAILS FIFTH AVE & MILTENBERGER ST	ID48	224	INTERSECTION DETAILS FIFTH AVE & THACKERY AVE
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CV66	141	SPECIAL DETAILS PWSA - WYE CONNECTIONS	CV93	168	DRAINAGE PROFILES DRAINAGE STRUCTURES A36 - A38	ID20	196	INTERSECTION DATA FIFTH AVE & DINNWIDDIE ST	ID51	227	INTERSECTION DATA FIFTH AVE & BIGELOW BLVD
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						ID23	199	INTERSECTION DETAILS FIFTH AVE & JUMONVILLE ST/WYANDOTTE ST	ID54	230	INTERSECTION DETAILS FIFTH AVE & TENNYSON AVE



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BUS RAPID TRANSIT UPTOWN TO OAKLAND  
INDEX OF DRAWINGS



CONTRACT NO. BRT-001

DWG. NO. GN4 SHT. 4

OPERATOR: "joseph.s.jitoh" FILE\_PATH: c:\pwworking\aescom\ds16\_n\d\joseph.s.jitoh\joseph.s.jitoh\aescom.com\d0207700\BRT\_01\_RD\_10D02.dgn

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 FILE\_PATH: c:\pwworking\aecocom.com\d0207700\BRT\_01\_RD\_10D03.dgn

DRAWING NUMBER	SHEET NUMBER	TITLE	DRAWING NUMBER	SHEET NUMBER	TITLE	DRAWING NUMBER	SHEET NUMBER	TITLE	DRAWING NUMBER	SHEET NUMBER	TITLE
<u>INTERSECTION DETAILS (CONT'D)</u>			<u>INTERSECTION DETAILS (CONT'D)</u>			<u>CIVIL LAYOUT PLANS (CONT'D)</u>			<u>REMOVAL &amp; ADJUSTMENTS PLANS (CONT'D)</u>		
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ID59	235	INTERSECTION DATA FIFTH AVE & BELLEFIELD AVE	ID90	266	INTERSECTION DETAILS FORBES AVE & SCHENLEY DR EXT	CL28	295	CIVIL LAYOUT PLANS FORBES AVE - STA 138+50 TO STA 143+50	RA15	324	REMOVAL & ADJUSTMENTS PLANS FIFTH AVE - STA 464+50 TO STA 470+50
ID60	236	INTERSECTION DETAILS FORBES AVE & BOYD ST	ID91	267	INTERSECTION DETAILS FORBES AVE & SCHENLEY DR EXT	CL29	296	CIVIL LAYOUT PLANS FORBES AVE - STA 143+50 TO STA 149+50	RA16	325	REMOVAL & ADJUSTMENTS PLANS FIFTH AVE - STA 470+50 TO STA 475+50
ID61	237	INTERSECTION DATA FORBES AVE & BOYD ST	<u>CIVIL LAYOUT PLANS</u>			CL30	297	CIVIL LAYOUT PLANS FORBES AVE - STA 149+50 TO STA 154+50	RA17	326	REMOVAL & ADJUSTMENTS PLANS FIFTH AVE - STA 475+50 TO STA 480+50
ID62	238	INTERSECTION DETAILS FORBES AVE & ARMSTRONG TUNNEL	CL1	268	CIVIL LAYOUT PLANS FIFTH AVE - STA 433+50 TO STA 438+50	CL31	298	CIVIL LAYOUT PLANS FORBES AVE - STA 154+50 TO STA 159+50	RA18	327	REMOVAL & ADJUSTMENTS PLANS FIFTH AVE - STA 480+50 TO STA 485+50
ID63	239	INTERSECTION DATA FORBES AVE & ARMSTRONG TUNNEL	CL2	269	CIVIL LAYOUT PLANS FIFTH AVE - STA 438+50 TO STA 443+50	CL32	299	CIVIL LAYOUT PLANS FORBES AVE - STA 159+50 TO STA 164+50	RA19	328	REMOVAL & ADJUSTMENTS PLANS FIFTH AVE - STA 485+50 TO STA 490+50
ID64	240	INTERSECTION DETAILS FORBES AVE & CHATHAM SQ	CL3	270	CIVIL LAYOUT PLANS FIFTH AVE - STA 443+50 TO STA 448+50	CL33	300	CIVIL LAYOUT PLANS FORBES AVE - STA 164+50 TO STA 169+50	RA20	329	REMOVAL & ADJUSTMENTS PLANS FIFTH AVE - STA 490+50 TO STA 496+50
ID65	241	INTERSECTION DATA FORBES AVE & CHATHAM SQ	CL4	271	CIVIL LAYOUT PLANS FIFTH AVE - STA 448+50 TO STA 454+50	CL34	301	CIVIL LAYOUT PLANS FORBES AVE - STA 169+50 TO STA 173+50	RA21	330	REMOVAL & ADJUSTMENTS PLANS FIFTH AVE - STA 496+50 TO STA 502+50
ID66	242	INTERSECTION DETAILS FORBES AVE & STEVENSON ST	CL5	272	CIVIL LAYOUT PLANS FIFTH AVE - STA 454+50 TO STA 458+50	CL35	302	CIVIL LAYOUT PLANS FORBES AVE - STA 173+50 TO STA 177+50	RA22	331	REMOVAL & ADJUSTMENTS PLANS FIFTH AVE - STA 502+50 TO STA 507+50
ID67	243	INTERSECTION DATA FORBES AVE & STEVENSON ST	CL6	273	CIVIL LAYOUT PLANS FIFTH AVE - STA 458+50 TO STA 464+50	CL36	303	CIVIL LAYOUT PLANS FORBES AVE - STA 177+50 TO STA 182+50	RA23	332	REMOVAL & ADJUSTMENTS PLANS FIFTH AVE - STA 507+50 TO STA 513+50
ID68	244	INTERSECTION DETAILS FORBES AVE & PRIDE ST	CL7	274	CIVIL LAYOUT PLANS FIFTH AVE - STA 464+50 TO STA 470+50	CL37	304	CIVIL LAYOUT PLANS FORBES AVE - STA 207+50 TO STA 213+50	RA24	333	REMOVAL & ADJUSTMENTS PLANS FIFTH AVE - STA 513+50 TO STA 517+50
ID69	245	INTERSECTION DATA FORBES AVE & PRIDE ST	CL8	275	CIVIL LAYOUT PLANS FIFTH AVE - STA 470+50 TO STA 475+50	CL38	305	CIVIL LAYOUT PLANS FORBES AVE - STA 213+50 TO STA 217+50	RA25	334	REMOVAL & ADJUSTMENTS PLANS FIFTH AVE - STA 517+50 TO STA 522+50
ID70	246	INTERSECTION DETAILS FORBES AVE & MARION ST	CL9	276	CIVIL LAYOUT PLANS FIFTH AVE - STA 475+50 TO STA 480+50	CL39	306	CIVIL LAYOUT PLANS FORBES AVE - STA 221+50 TO STA 227+00	RA26	335	REMOVAL & ADJUSTMENTS PLANS FIFTH AVE - STA 522+50 TO STA 528+50
ID71	247	INTERSECTION DATA FORBES AVE & MARION ST	CL10	277	CIVIL LAYOUT PLANS FIFTH AVE - STA 480+50 TO STA 485+50	CL40	307	CIVIL LAYOUT PLANS FORBES AVE - STA 232+00 TO STA 237+50	RA27	336	REMOVAL & ADJUSTMENTS PLANS FIFTH AVE - STA 528+50 TO STA 534+50
ID72	248	INTERSECTION DETAILS FORBES AVE & VAN BRAAM ST	CL11	278	CIVIL LAYOUT PLANS FIFTH AVE - STA 485+50 TO STA 490+50	CL41	308	CIVIL LAYOUT PLANS FORBES AVE - STA 242+50 TO STA 247+50	RA28	337	REMOVAL & ADJUSTMENTS PLANS FIFTH AVE - STA 534+50 TO STA 540+50
ID73	249	INTERSECTION DATA FORBES AVE & VAN BRAAM ST	CL12	279	CIVIL LAYOUT PLANS FIFTH AVE - STA 490+50 TO STA 496+50	CL42	309	CIVIL LAYOUT PLANS FORBES AVE - STA 247+50 TO STA 251+50	RA29	338	REMOVAL & ADJUSTMENTS PLANS FIFTH AVE - STA 540+50 TO STA 545+50
ID74	250	INTERSECTION DETAILS FORBES AVE & MILTENBERGER ST	CL13	280	CIVIL LAYOUT PLANS FIFTH AVE - STA 496+50 TO STA 502+50	<u>REMOVAL &amp; ADJUSTMENTS PLANS</u>			RA30	339	REMOVAL & ADJUSTMENTS PLANS FIFTH AVE - STA 545+50 TO STA 551+50
ID75	251	INTERSECTION DATA FORBES AVE & MILTENBERGER ST	CL14	281	CIVIL LAYOUT PLANS FIFTH AVE - STA 502+50 TO STA 507+50	RA1	310	REMOVAL & ADJUSTMENTS PLANS LEGEND	RA31	340	REMOVAL & ADJUSTMENTS PLANS FIFTH AVE - STA 551+50 TO STA 555+50
ID76	252	INTERSECTION DETAILS FORBES AVE & GIST ST	CL15	282	CIVIL LAYOUT PLANS FIFTH AVE - STA 507+50 TO STA 513+50	RA2	311	REMOVAL & ADJUSTMENTS PLANS TABULATIONS	RA32	341	REMOVAL & ADJUSTMENTS PLANS FIFTH AVE - STA 555+50 TO STA 561+50
ID77	253	INTERSECTION DATA FORBES AVE & GIST ST	CL16	283	CIVIL LAYOUT PLANS FIFTH AVE - STA 513+50 TO STA 517+50	RA3	312	REMOVAL & ADJUSTMENTS PLANS TABULATIONS	RA33	342	REMOVAL & ADJUSTMENTS PLANS FIFTH AVE - STA 561+50 TO STA 566+50
ID78	254	INTERSECTION DETAILS FORBES AVE & JUMONVILLE ST	CL17	284	CIVIL LAYOUT PLANS FIFTH AVE - STA 517+50 TO STA 522+50	RA4	313	REMOVAL & ADJUSTMENTS PLANS TABULATIONS	RA34	343	REMOVAL & ADJUSTMENTS PLANS FORBES AVE - STA 122+00 TO STA 128+00
ID79	255	INTERSECTION DATA FORBES AVE & JUMONVILLE ST	CL18	285	CIVIL LAYOUT PLANS FIFTH AVE - STA 522+50 TO STA 528+50	RA5	314	REMOVAL & ADJUSTMENTS PLANS TABULATIONS	RA35	344	REMOVAL & ADJUSTMENTS PLANS FORBES AVE - STA 128+00 TO STA 133+50
ID80	256	INTERSECTION DETAILS FORBES AVE & SENECA ST	CL19	286	CIVIL LAYOUT PLANS FIFTH AVE - STA 528+50 TO STA 534+50	RA6	315	REMOVAL & ADJUSTMENTS PLANS TABULATIONS	RA36	345	REMOVAL & ADJUSTMENTS PLANS FORBES AVE - STA 138+50 TO STA 143+50
ID81	257	INTERSECTION DATA FORBES AVE & SENECA ST	CL20	287	CIVIL LAYOUT PLANS FIFTH AVE - STA 534+50 TO STA 540+50	RA7	316	REMOVAL & ADJUSTMENTS PLANS TABULATIONS	RA37	346	REMOVAL & ADJUSTMENTS PLANS FORBES AVE - STA 143+50 TO STA 149+50
ID82	258	INTERSECTION DETAILS FORBES AVE & MOULTRIE ST	CL21	288	CIVIL LAYOUT PLANS FIFTH AVE - STA 540+50 TO STA 545+50	RA8	317	REMOVAL & ADJUSTMENTS PLANS TABULATIONS	RA38	347	REMOVAL & ADJUSTMENTS PLANS FORBES AVE - STA 149+50 TO STA 154+50
ID83	259	INTERSECTION DATA FORBES AVE & MOULTRIE ST	CL22	289	CIVIL LAYOUT PLANS FIFTH AVE - STA 545+50 TO STA 551+50	RA9	318	REMOVAL & ADJUSTMENTS PLANS FIFTH AVE - STA 433+50 TO STA 438+50	RA39	348	REMOVAL & ADJUSTMENTS PLANS FORBES AVE - STA 154+50 TO STA 159+50
ID84	260	INTERSECTION DETAILS FORBES AVE & BIRMINGHAM BR	CL23	290	CIVIL LAYOUT PLANS FIFTH AVE - STA 551+50 TO STA 555+50	RA10	319	REMOVAL & ADJUSTMENTS PLANS FIFTH AVE - STA 438+50 TO STA 443+50	RA40	349	REMOVAL & ADJUSTMENTS PLANS FORBES AVE - STA 159+50 TO STA 164+50
ID85	261	INTERSECTION DATA FORBES AVE & BIRMINGHAM BR							RA41	350	REMOVAL & ADJUSTMENTS PLANS FORBES AVE - STA 164+50 TO STA 169+50



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**(NOT FOR CONSTRUCTION)**

DESIGNED	JMS
DRAWN	JMS
CHECKED	MES
IN CHARGE	LAR
DATE	05/01/24
SCALE	AS SHOWN

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
 PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT UPTOWN TO OAKLAND**  
 INDEX OF DRAWINGS



CONTRACT NO. BRT-001

DWG. NO.	GN5	SHT.	5
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INDEX OF DRAWINGS

DRAWING NUMBER	SHEET NUMBER	TITLE	DRAWING NUMBER	SHEET NUMBER	TITLE	DRAWING NUMBER	SHEET NUMBER	TITLE	DRAWING NUMBER	SHEET NUMBER	TITLE
REMOVAL & ADJUSTMENTS PLANS (CONT'D)			ROADWAY PLANS (CONT'D)			ROADWAY PROFILES (CONT'D)			ROADWAY PROFILES (CONT'D)		
RA42	351	REMOVAL & ADJUSTMENTS PLANS FORBES AVE - STA 169+50 TO STA 173+50	PP24	380	FIFTH AVE - STA 555+50 TO STA 561+50	PP53	409	FIFTH AVE - STA 464+50 TO STA 470+50	PP84	440	ROADWAY PROFILE VAN BRAAM ST AND MILTENBERGER ST
RA43	352	REMOVAL & ADJUSTMENTS PLANS FORBES AVE - STA 173+50 TO STA 177+50	PP25	381	FIFTH AVE - STA 561+50 TO STA 566+50	PP54	410	FIFTH AVE - STA 470+50 TO STA 475+50	PP85	441	ROADWAY PROFILE GIST ST AND JUMONVILLE ST
RA44	353	REMOVAL & ADJUSTMENTS PLANS FORBES AVE - STA 207+50 TO STA 213+50	PP26	382	FORBES AVE - STA 117+00 TO STA 122+00	PP55	411	FIFTH AVE - STA 475+50 TO STA 480+50	PP86	442	ROADWAY PROFILE SENECA ST AND MOULTRIE ST
RA45	354	REMOVAL & ADJUSTMENTS PLANS FORBES AVE - STA 213+50 TO STA 217+50	PP27	383	FORBES AVE - STA 122+00 TO STA 128+00	PP56	412	FIFTH AVE - STA 480+50 TO STA 485+50	KIRKPATRICK ST PARKING LOT		
RA46	355	REMOVAL & ADJUSTMENTS PLANS FORBES AVE - STA 221+50 TO STA 227+00	PP28	384	FORBES AVE - STA 128+00 TO STA 133+50	PP57	413	FIFTH AVE - STA 485+50 TO STA 490+50			
RA47	356	REMOVAL & ADJUSTMENTS PLANS FORBES AVE - STA 242+50 TO STA 247+50	PP29	385	FORBES AVE - STA 133+50 TO STA 138+50	PP58	414	FIFTH AVE - STA 490+50 TO STA 496+50	KP1	443	KIRKPATRICK ST STORMWATER MANAGEMENT PLAN
ROADWAY PLANS			PP30	386	FORBES AVE - STA 138+50 TO STA 143+50	PP59	415	FIFTH AVE - STA 496+50 TO STA 502+50	KP2	444	KIRKPATRICK ST SPECIAL DETAILS
			PP31	387	FORBES AVE - STA 143+50 TO STA 149+50	PP60	416	FIFTH AVE - STA 502+50 TO STA 507+50	EROSION & SEDIMENTATION CONTROL PLANS		
PP1	357	FIFTH AVE - STA 433+50 TO STA 438+50	PP32	388	FORBES AVE - STA 149+50 TO STA 154+50	PP61	417	FIFTH AVE - STA 507+50 TO STA 513+50			
PP2	358	FIFTH AVE - STA 438+50 TO STA 443+50	PP33	389	FORBES AVE - STA 154+50 TO STA 159+50	PP62	418	DIAMOND ST, CHATHAM SQ, WASHINGTON PL, MAGEE ST	EROSION & SEDIMENTATION CONTROL PLANS		
PP3	359	FIFTH AVE - STA 443+50 TO STA 448+50	PP34	390	FORBES AVE - STA 159+50 TO STA 164+50	PP63	419	LOGAN ST, STEVENSON ST, PRIDE ST			
PP4	360	FIFTH AVE - STA 448+50 TO STA 454+50	PP35	391	FORBES AVE - STA 164+50 TO STA 169+50	PP64	420	PRIDE ST, MARION ST, VINE ST, VAN BRAAM ST	ES1	445	EROSION & SEDIMENTATION CONTROL PLANS GENERAL NOTES
PP5	361	FIFTH AVE - STA 454+50 TO STA 458+50	PP36	392	FORBES AVE - STA 169+50 TO STA 173+50	PP65	421	MILTENBERGER ST, DINWIDDIE ST, GIST ST,	ES2	446	EROSION & SEDIMENTATION CONTROL PLANS GENERAL NOTES
PP6	362	FIFTH AVE - STA 458+50 TO STA 464+50	PP37	393	FORBES AVE - STA 173+50 TO STA 177+50	PP66	422	WYANDOTTE ST, SENECA ST, MOULTRIE ST	ES3	447	EROSION & SEDIMENTATION CONTROL PLANS SEQUENCE OF CONSTRUCTION
PP7	363	FIFTH AVE - STA 464+50 TO STA 470+50	PP38	394	FORBES AVE - STA 177+50 TO STA 182+50	PP67	423	KIRKPATRICK ST, BIRMINGHAM BR	ES4	448	EROSION & SEDIMENTATION CONTROL PLANS DETAILS
PP8	364	FIFTH AVE - STA 470+50 TO STA 475+50	PP39	395	FORBES AVE - STA 207+50 TO STA 213+50	PP68	424	FORBES AVE - STA 119+00 TO STA 122+00	ES5	449	EROSION & SEDIMENTATION CONTROL PLANS DETAILS
PP9	365	FIFTH AVE - STA 475+50 TO STA 480+50	PP40	396	FORBES AVE - STA 213+50 TO STA 217+50	PP69	425	FORBES AVE - STA 122+00 TO STA 128+00	ES6	450	EROSION & SEDIMENTATION CONTROL PLANS DETAILS
PP10	366	FIFTH AVE - STA 480+50 TO STA 485+50	PP41	397	FORBES AVE - STA 221+50 TO STA 227+00	PP70	426	FORBES AVE - STA 128+00 TO STA 133+50	ES7	451	EROSION & SEDIMENTATION CONTROL PLANS DETAILS
PP11	367	FIFTH AVE - STA 485+50 TO STA 490+50	PP42	398	FORBES AVE - STA 227+00 TO STA 232+00	PP71	427	FORBES AVE - STA 133+50 TO STA 138+50	ES8	452	EROSION & SEDIMENTATION CONTROL PLANS DETAILS
PP12	368	FIFTH AVE - STA 490+50 TO STA 496+50	PP43	399	FORBES AVE - STA 232+00 TO STA 237+50	PP72	428	FORBES AVE - STA 138+50 TO STA 143+50	ES9	453	EROSION & SEDIMENTATION CONTROL PLANS DETAILS
PP13	369	FIFTH AVE - STA 496+50 TO STA 502+50	PP44	400	FORBES AVE - STA 237+50 TO STA 242+50	PP73	429	FORBES AVE - STA 143+50 TO STA 149+50	ES10	454	EROSION & SEDIMENTATION CONTROL PLANS DETAILS
PP14	370	FIFTH AVE - STA 502+50 TO STA 507+50	PP45	401	FORBES AVE - STA 242+50 TO STA 247+50	PP74	430	FORBES AVE - STA 149+50 TO STA 154+50	ES11	455	EROSION & SEDIMENTATION CONTROL PLANS DETAILS
PP15	371	FIFTH AVE - STA 507+50 TO STA 513+50	PP46	402	FORBES AVE - STA 247+50 TO STA 251+50	PP75	431	FORBES AVE - STA 154+50 TO STA 159+50	ES12	456	EROSION & SEDIMENTATION CONTROL PLANS FIFTH AVE - STA 433+50 TO STA 438+50
PP16	372	FIFTH AVE - STA 513+50 TO STA 517+50	ROADWAY PROFILES			PP76	432	FORBES AVE - STA 159+50 TO STA 164+50	ES13	457	EROSION & SEDIMENTATION CONTROL PLANS FIFTH AVE - STA 438+50 TO STA 443+50
PP17	373	FIFTH AVE - STA 517+50 TO STA 522+50				PP47	403	FIFTH AVE - STA 433+50 TO STA 438+50	PP77	433	FORBES AVE - STA 164+50 TO STA 169+50
PP18	374	FIFTH AVE - STA 522+50 TO STA 528+50	PP48	404	FIFTH AVE - STA 438+50 TO STA 443+50	PP78	434	FORBES AVE - STA 169+50 TO STA 173+50	ES15	459	EROSION & SEDIMENTATION CONTROL PLANS FIFTH AVE - STA 448+50 TO STA 454+50
PP19	375	FIFTH AVE - STA 528+50 TO STA 534+50	PP49	405	FIFTH AVE - STA 443+50 TO STA 448+50	PP79	435	FORBES AVE - STA 173+50 TO STA 177+50	ES16	460	EROSION & SEDIMENTATION CONTROL PLANS FIFTH AVE - STA 454+50 TO STA 458+50
PP20	376	FIFTH AVE - STA 534+50 TO STA 540+50	PP50	406	FIFTH AVE - STA 448+50 TO STA 454+50	PP80	436	FORBES AVE - STA 177+50 TO STA 182+50	ES17	461	EROSION & SEDIMENTATION CONTROL PLANS FIFTH AVE - STA 458+50 TO STA 464+50
PP21	377	FIFTH AVE - STA 540+50 TO STA 545+50	PP51	407	FIFTH AVE - STA 454+50 TO STA 458+50	PP81	437	BOYD ST, MCNULTY ST, CHATHAM SQ	ES18	462	EROSION & SEDIMENTATION CONTROL PLANS FIFTH AVE - STA 464+50 TO STA 470+50
PP22	378	FIFTH AVE - STA 545+50 TO STA 551+50	PP52	408	FIFTH AVE - STA 458+50 TO STA 464+50	PP82	438	MAGEE ST AND STEVENSON ST	ES19	463	EROSION & SEDIMENTATION CONTROL PLANS FIFTH AVE - STA 470+50 TO STA 475+50
PP23	379	FIFTH AVE - STA 551+50 TO STA 555+50				PP83	439	PRIDE ST AND MARION ST	ES20	464	EROSION & SEDIMENTATION CONTROL PLANS FIFTH AVE - STA 475+50 TO STA 480+50
									ES21	465	EROSION & SEDIMENTATION CONTROL PLANS FIFTH AVE - STA 480+50 TO STA 485+50



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PITTSBURGH PENNSYLVANIA

BUS RAPID TRANSIT UPTOWN TO OAKLAND  
INDEX OF DRAWINGS



CONTRACT NO. BRT-001

DWG. NO. GN6 SHT. 6

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INDEX OF DRAWINGS

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DRAWING NUMBER	SHEET NUMBER	TITLE	DRAWING NUMBER	SHEET NUMBER	TITLE	DRAWING NUMBER	SHEET NUMBER	TITLE	DRAWING NUMBER	SHEET NUMBER	TITLE
<u>EROSION &amp; SEDIMENTATION CONTROL PLANS (CONT'D)</u>			<u>EROSION &amp; SEDIMENTATION CONTROL PLANS (CONT'D)</u>			<u>UTILITY PLANS (CONT'D)</u>			<u>PWSA RELOCATION PLANS (CONT'D)</u>		
ES22	466	EROSION & SEDIMENTATION CONTROL PLANS FIFTH AVE - STA 485+50 TO STA 490+50	ES53	497	EROSION & SEDIMENTATION CONTROL PLANS FORBES AVE - STA 232+00 TO STA 237+50	UT28	526	UTILITY PLANS FORBES AVE - STA 128+00 TO STA 133+50	PWSA5	555	PWSA WATERLINE RELOCATION PLAN FIFTH AVE - STA 444+50
ES23	467	EROSION & SEDIMENTATION CONTROL PLANS FIFTH AVE - STA 490+50 TO STA 496+50	ES54	498	EROSION & SEDIMENTATION CONTROL PLANS FORBES AVE - STA 242+50 TO STA 247+50	UT29	527	UTILITY PLANS FORBES AVE - STA 133+50 TO STA 138+50	PWSA6	556	PWSA WATERLINE RELOCATION PLAN FIFTH AVE & MAGEE ST - STA 448+00
ES24	468	EROSION & SEDIMENTATION CONTROL PLANS FIFTH AVE - STA 496+50 TO STA 502+50	<u>UTILITY PLANS</u>			UT30	528	UTILITY PLANS FORBES AVE - STA 138+50 TO STA 143+50	PWSA7	557	PWSA WATERLINE RELOCATION PLAN FIFTH AVE & WYANDOTTE ST - STA 478+00
ES25	469	EROSION & SEDIMENTATION CONTROL PLANS FIFTH AVE - STA 502+50 TO STA 507+50	<u>UTILITY PLANS</u>			UT31	529	UTILITY PLANS FORBES AVE - STA 143+50 TO STA 149+50	PWSA8	558	PWSA WATERLINE RELOCATION PLAN FIFTH AVE - STA 471+00 TO STA 481+00
ES26	470	EROSION & SEDIMENTATION CONTROL PLANS FIFTH AVE - STA 507+50 TO STA 513+50	UT1	499	GENERAL NOTES & UTILITY LEGENDS	UT32	530	UTILITY PLANS FORBES AVE - STA 149+50 TO STA 154+50	PWSA9	559	PWSA WATERLINE RELOCATION PLAN FIFTH AVE - STA 490+00
ES27	471	EROSION & SEDIMENTATION CONTROL PLANS FIFTH AVE - STA 513+50 TO STA 517+50	UT2	500	UTILITY PLANS FIFTH AVE - STA 433+50 TO STA 438+50	UT33	531	UTILITY PLANS FORBES AVE - STA 154+50 TO STA 159+50	PWSA10	560	PWSA WATERLINE RELOCATION PLAN FIFTH AVE - STA 495+00
ES28	472	EROSION & SEDIMENTATION CONTROL PLANS FIFTH AVE - STA 528+50 TO STA 534+50	UT3	501	UTILITY PLANS FIFTH AVE - STA 438+50 TO STA 443+50	UT34	532	UTILITY PLANS FORBES AVE - STA 159+50 TO STA 164+50	PWSA11	561	PWSA WATERLINE RELOCATION PLAN FIFTH AVE - STA 503+00
ES29	473	EROSION & SEDIMENTATION CONTROL PLANS FIFTH AVE - STA 522+50 TO STA 528+50	UT4	502	UTILITY PLANS FIFTH AVE - STA 443+50 TO STA 448+50	UT35	533	UTILITY PLANS FORBES AVE - STA 164+50 TO STA 169+50	PWSA12	562	PWSA WATERLINE RELOCATION PLAN FIFTH AVE - STA 511+50
ES30	474	EROSION & SEDIMENTATION CONTROL PLANS FIFTH AVE - STA 528+50 TO STA 534+50	UT5	503	UTILITY PLANS FIFTH AVE - STA 448+50 TO STA 454+50	UT36	534	UTILITY PLANS FORBES AVE - STA 169+50 TO STA 173+50	PWSA13	563	PWSA WATERLINE RELOCATION PLAN FIFTH AVE - STA 517+00
ES31	475	EROSION & SEDIMENTATION CONTROL PLANS FIFTH AVE - STA 534+50 TO STA 540+50	UT6	504	UTILITY PLANS FIFTH AVE - STA 454+50 TO STA 458+50	UT37	535	UTILITY PLANS FORBES AVE - STA 173+50 TO STA 177+50	PWSA14	564	PWSA WATERLINE RELOCATION PLAN FIFTH AVE - STA 539+00
ES32	476	EROSION & SEDIMENTATION CONTROL PLANS FIFTH AVE - STA 540+50 TO STA 545+50	UT7	505	UTILITY PLANS FIFTH AVE - STA 458+50 TO STA 464+50	UT38	536	UTILITY PLANS FORBES AVE - STA 177+50 TO STA 182+50	PWSA15	565	PWSA WATERLINE RELOCATION PLAN FIFTH AVE - STA 542+50
ES33	477	EROSION & SEDIMENTATION CONTROL PLANS FIFTH AVE - STA 545+50 TO STA 551+50	UT8	506	UTILITY PLANS FIFTH AVE - STA 464+50 TO STA 470+50	UT39	537	UTILITY PLANS FORBES AVE - STA 182+50 TO STA 187+50	PWSA16	566	PWSA WATERLINE RELOCATION PLAN FORBES AVE & PRIDE ST - STA 146+00
ES34	478	EROSION & SEDIMENTATION CONTROL PLANS FIFTH AVE - STA 551+50 TO STA 555+50	UT9	507	UTILITY PLANS FIFTH AVE - STA 470+50 TO STA 475+50	UT40	538	UTILITY PLANS FORBES AVE - STA 187+50 TO STA 193+50	PWSA17	567	PWSA WATERLINE RELOCATION PLAN FORBES AVE - STA 153+00 TO STA 171+00
ES35	479	EROSION & SEDIMENTATION CONTROL PLANS FIFTH AVE - STA 555+50 TO STA 561+50	UT10	508	UTILITY PLANS FIFTH AVE - STA 475+50 TO STA 480+50	UT41	539	UTILITY PLANS FORBES AVE - STA 193+50 TO STA 198+50	PWSA18	568	PWSA WATERLINE RELOCATION PLAN FORBES AVE - STA 161+00 & 166+50
ES36	480	EROSION & SEDIMENTATION CONTROL PLANS FIFTH AVE - STA 561+50 TO STA 566+50	UT11	509	UTILITY PLANS FIFTH AVE - STA 480+50 TO STA 485+50	UT42	540	UTILITY PLANS FORBES AVE - STA 198+50 TO STA 202+50	PWSA19	569	PWSA WATERLINE RELOCATION PLAN FORBES AVE - STA 175+00
ES37	481	EROSION & SEDIMENTATION CONTROL PLANS FORBES AVE - STA 117+00 TO STA 122+00	UT12	510	UTILITY PLANS FIFTH AVE - STA 485+50 TO STA 490+50	UT43	541	UTILITY PLANS FORBES AVE - STA 202+50 TO STA 207+50	PWSA20	570	PWSA WATERLINE RELOCATION PLAN FORBES AVE & HALKET ST - STA 217+00
ES38	482	EROSION & SEDIMENTATION CONTROL PLANS FORBES AVE - STA 128+00 TO STA 133+50	UT13	511	UTILITY PLANS FIFTH AVE - STA 490+50 TO STA 496+50	UT44	542	UTILITY PLANS FORBES AVE - STA 207+50 TO STA 213+50	PWSA21	571	PWSA WATERLINE RELOCATION PLAN FORBES AVE & MCKEE PLACE - STA 224+00
ES39	483	EROSION & SEDIMENTATION CONTROL PLANS FORBES AVE - STA 128+00 TO STA 133+50	UT14	512	UTILITY PLANS FIFTH AVE - STA 496+50 TO STA 502+50	UT45	543	UTILITY PLANS FORBES AVE - STA 213+50 TO STA 217+50	<u>LANDSCAPING PLANS</u>		
ES40	484	EROSION & SEDIMENTATION CONTROL PLANS FORBES AVE - STA 133+50 TO STA 138+50	UT15	513	UTILITY PLANS FIFTH AVE - STA 502+50 TO STA 507+50	UT46	544	UTILITY PLANS FORBES AVE - STA 217+50 TO STA 221+50	LS1	572	LANDSCAPING PLANS DETAILS
ES41	485	EROSION & SEDIMENTATION CONTROL PLANS FORBES AVE - STA 138+50 TO STA 143+50	UT16	514	UTILITY PLANS FIFTH AVE - STA 507+50 TO STA 513+50	UT47	545	UTILITY PLANS FORBES AVE - STA 221+50 TO STA 227+00	LS2	573	LANDSCAPING PLANS DETAILS
ES42	486	EROSION & SEDIMENTATION CONTROL PLANS FORBES AVE - STA 143+50 TO STA 149+50	UT17	515	UTILITY PLANS FIFTH AVE - STA 513+50 TO STA 517+50	UT48	546	UTILITY PLANS FORBES AVE - STA 227+00 TO STA 232+00	LS3	574	LANDSCAPING PLANS FIFTH AVE - STA 433+50 TO STA 438+50
ES43	487	EROSION & SEDIMENTATION CONTROL PLANS FORBES AVE - STA 149+50 TO STA 154+50	UT18	516	UTILITY PLANS FIFTH AVE - STA 517+50 TO STA 522+50	UT49	547	UTILITY PLANS FORBES AVE - STA 232+00 TO STA 237+50	LS4	575	LANDSCAPING PLANS FIFTH AVE - STA 438+50 TO STA 443+50
ES44	488	EROSION & SEDIMENTATION CONTROL PLANS FORBES AVE - STA 154+50 TO STA 159+50	UT19	517	UTILITY PLANS FIFTH AVE - STA 522+50 TO STA 528+50	UT50	548	UTILITY PLANS FORBES AVE - STA 237+50 TO STA 242+50	LS5	576	LANDSCAPING PLANS FIFTH AVE - STA 443+50 TO STA 448+50
ES45	489	EROSION & SEDIMENTATION CONTROL PLANS FORBES AVE - STA 159+50 TO STA 164+50	UT20	518	UTILITY PLANS FIFTH AVE - STA 528+50 TO STA 534+50	UT51	549	UTILITY PLANS FORBES AVE - STA 242+50 TO STA 247+50	LS6	577	LANDSCAPING PLANS FIFTH AVE - STA 448+50 TO STA 454+50
ES46	490	EROSION & SEDIMENTATION CONTROL PLANS FORBES AVE - STA 164+50 TO STA 169+50	UT21	519	UTILITY PLANS FIFTH AVE - STA 534+50 TO STA 540+50	UT52	550	UTILITY PLANS FORBES AVE - STA 247+50 TO STA 251+50	LS7	578	LANDSCAPING PLANS FIFTH AVE - STA 454+50 TO STA 458+50
ES47	491	EROSION & SEDIMENTATION CONTROL PLANS FORBES AVE - STA 169+50 TO STA 173+50	UT22	520	UTILITY PLANS FIFTH AVE - STA 540+50 TO STA 545+50	<u>PWSA RELOCATION PLANS</u>			LS8	579	LANDSCAPING PLANS FIFTH AVE - STA 458+50 TO STA 464+50
ES48	492	EROSION & SEDIMENTATION CONTROL PLANS FORBES AVE - STA 173+50 TO STA 177+50	UT23	521	UTILITY PLANS FIFTH AVE - STA 545+50 TO STA 551+50	PWSA1	551	PWSA WATERLINE RELOCATION PLAN PWSA DETAILS	LS9	580	LANDSCAPING PLANS FIFTH AVE - STA 464+50 TO STA 470+50
ES49	493	EROSION & SEDIMENTATION CONTROL PLANS FORBES AVE - STA 177+50 TO STA 182+50	UT24	522	UTILITY PLANS FIFTH AVE - STA 551+50 TO STA 555+50	PWSA2	552	PWSA WATERLINE RELOCATION PLAN PWSA DETAILS	LS10	581	LANDSCAPING PLANS FIFTH AVE - STA 470+50 TO STA 475+50
ES50	494	EROSION & SEDIMENTATION CONTROL PLANS FORBES AVE - STA 207+50 TO STA 213+50	UT25	523	UTILITY PLANS FIFTH AVE - STA 555+50 TO STA 561+50	PWSA3	553	PWSA WATERLINE RELOCATION PLAN PWSA DETAILS	LS11	582	LANDSCAPING PLANS FIFTH AVE - STA 475+50 TO STA 480+50
ES51	495	EROSION & SEDIMENTATION CONTROL PLANS FORBES AVE - STA 213+50 TO STA 217+50	UT26	524	UTILITY PLANS FIFTH AVE - STA 561+50 TO STA 566+50	PWSA4	554	PWSA WATERLINE RELOCATION PLAN FIFTH AVE - STA 441+00	LS12	583	LANDSCAPING PLANS FIFTH AVE - STA 480+50 TO STA 485+50
ES52	496	EROSION & SEDIMENTATION CONTROL PLANS FORBES AVE - STA 221+50 TO STA 227+00	UT27	525	UTILITY PLANS FORBES AVE - STA 122+00 TO STA 128+00						



NO.	DATE	DESCRIPTION
REVISIONS		

THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE FEDERAL TRANSIT ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1984, AS AMENDED, FOR THE PORT AUTHORITY OF ALLEGHENY COUNTY, PENNSYLVANIA.

(NOT FOR CONSTRUCTION)

DESIGNED	JMS
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CHECKED	MES
IN CHARGE	LAR
DATE	05/01/24
SCALE	AS SHOWN

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT UPTOWN TO OAKLAND**

INDEX OF DRAWINGS

<b>Port Authority</b> <small>connecting people to life</small>	CONTRACT NO. BRT-001	
	DWG. NO. GN7	SHT. 7



INDEX OF DRAWINGS

PLOTTED: 4/23/2024 4:34:39 PM

OPERATOR: "Joseph.s.jitoh"  
FILE\_PATH: c:\pwork\img\veecom\dstf6\_nad\joseph.s.jitoh\010000\BRT\_01\_RD\_10D06.dgn

DRAWING NUMBER	SHEET NUMBER	TITLE	DRAWING NUMBER	SHEET NUMBER	TITLE	DRAWING NUMBER	SHEET NUMBER	TITLE	DRAWING NUMBER	SHEET NUMBER	TITLE
LANDSCAPING PLANS (CONT'D)			SIGNING & PAVEMENT MARKING PLANS (CONT'D)			SIGNING & PAVEMENT MARKING PLANS (CONT'D)			SIGNING & PAVEMENT MARKING PLANS (CONT'D)		
LS13	584	FIFTH AVE - STA 485+50 TO STA 490+50	SN8	611	SIGNING & PAVEMENT MARKING PLANS TABULATION SHEET	SN39	642	SIGNING & PAVEMENT MARKING PLANS SIXTH AVE - STA 624+50 TO STA 628+50	SN70	673	SIGNING & PAVEMENT MARKING PLANS FORBES AVE - STA 138+50 TO STA 143+50
LS14	585	FIFTH AVE - STA 490+50 TO STA 495+50	SN9	612	SIGNING & PAVEMENT MARKING PLANS TABULATION SHEET	SN40	643	SIGNING & PAVEMENT MARKING PLANS FIFTH AVE - STA 428+50 TO STA 433+50	SN71	674	SIGNING & PAVEMENT MARKING PLANS FORBES AVE - STA 143+50 TO STA 149+50
LS15	586	FIFTH AVE - STA 495+50 TO STA 502+50	SN10	613	SIGNING & PAVEMENT MARKING PLANS TABULATION SHEET	SN41	644	SIGNING & PAVEMENT MARKING PLANS SIXTH AVE - STA 631+50 TO STA 633+24	SN72	675	SIGNING & PAVEMENT MARKING PLANS FORBES AVE - STA 149+50 TO STA 154+50
LS16	587	FIFTH AVE - STA 502+50 TO STA 507+50	SN11	614	SIGNING & PAVEMENT MARKING PLANS TABULATION SHEET	SN42	645	SIGNING & PAVEMENT MARKING PLANS FIFTH AVE - STA 433+50 TO STA 438+50	SN73	676	SIGNING & PAVEMENT MARKING PLANS FORBES AVE - STA 154+50 TO STA 159+50
LS17	588	FIFTH AVE - STA 507+50 TO STA 513+50	SN12	615	SIGNING & PAVEMENT MARKING PLANS TABULATION SHEET	SN43	646	SIGNING & PAVEMENT MARKING PLANS FIFTH AVE - STA 438+50 TO STA 443+50	SN74	677	SIGNING & PAVEMENT MARKING PLANS FORBES AVE - STA 159+50 TO STA 164+50
LS18	589	FIFTH AVE - STA 513+50 TO STA 517+50	SN13	616	SIGNING & PAVEMENT MARKING PLANS TABULATION SHEET	SN44	647	SIGNING & PAVEMENT MARKING PLANS FIFTH AVE - STA 443+50 TO STA 448+50	SN75	678	SIGNING & PAVEMENT MARKING PLANS FORBES AVE - STA 164+50 TO STA 169+50
LS19	590	FIFTH AVE - STA 517+50 TO STA 522+50	SN14	617	SIGNING & PAVEMENT MARKING PLANS TABULATION SHEET	SN45	648	SIGNING & PAVEMENT MARKING PLANS FIFTH AVE - STA 448+50 TO STA 454+50	SN76	679	SIGNING & PAVEMENT MARKING PLANS FORBES AVE - STA 169+50 TO STA 173+50
LS20	591	FIFTH AVE - STA 522+50 TO STA 527+50	SN15	618	SIGNING & PAVEMENT MARKING PLANS SUMMARY OF ROADWAY SIGNS	SN46	649	SIGNING & PAVEMENT MARKING PLANS FIFTH AVE - STA 454+50 TO STA 458+50	SN77	680	SIGNING & PAVEMENT MARKING PLANS FORBES AVE - STA 173+50 TO STA 177+50
LS21	592	FIFTH AVE - STA 527+50 TO STA 532+50	SN16	619	SIGNING & PAVEMENT MARKING PLANS SUMMARY OF ROADWAY SIGNS	SN47	650	SIGNING & PAVEMENT MARKING PLANS FIFTH AVE - STA 458+50 TO STA 464+50	SN78	681	SIGNING & PAVEMENT MARKING PLANS FORBES AVE - STA 177+50 TO STA 182+50
LS22	593	FIFTH AVE - STA 532+50 TO STA 537+50	SN17	620	SIGNING & PAVEMENT MARKING PLANS SUMMARY OF ROADWAY SIGNS	SN48	651	SIGNING & PAVEMENT MARKING PLANS FIFTH AVE - STA 464+50 TO STA 470+50	SN79	682	SIGNING & PAVEMENT MARKING PLANS FORBES AVE - STA 182+50 TO STA 187+50
LS23	594	FORBES AVE - STA 138+50 TO STA 143+50	SN18	621	SIGNING & PAVEMENT MARKING PLANS SUMMARY OF ROADWAY SIGNS	SN49	652	SIGNING & PAVEMENT MARKING PLANS FIFTH AVE - STA 470+50 TO STA 475+50	SN80	683	SIGNING & PAVEMENT MARKING PLANS FORBES AVE - STA 202+50 TO STA 207+50
LS24	595	FORBES AVE - STA 143+50 TO STA 149+50	SN19	622	SIGNING & PAVEMENT MARKING PLANS SUMMARY OF ROADWAY SIGNS	SN50	653	SIGNING & PAVEMENT MARKING PLANS FIFTH AVE - STA 475+50 TO STA 480+50	SN81	684	SIGNING & PAVEMENT MARKING PLANS FORBES AVE - STA 207+50 TO STA 213+50
LS25	596	FORBES AVE - STA 149+50 TO STA 154+50	SN20	623	SIGNING & PAVEMENT MARKING PLANS SUMMARY OF ROADWAY SIGNS	SN51	654	SIGNING & PAVEMENT MARKING PLANS FIFTH AVE - STA 480+50 TO STA 485+50	SN82	685	SIGNING & PAVEMENT MARKING PLANS FORBES AVE - STA 213+50 TO STA 217+50
LS26	597	FORBES AVE - STA 154+50 TO STA 159+50	SN21	624	SIGNING & PAVEMENT MARKING PLANS SUMMARY OF ROADWAY SIGNS	SN52	655	SIGNING & PAVEMENT MARKING PLANS FIFTH AVE - STA 485+50 TO STA 490+50	SN83	686	SIGNING & PAVEMENT MARKING PLANS FORBES AVE - STA 217+50 TO STA 221+50
LS27	598	FORBES AVE - STA 159+50 TO STA 164+50	SN22	625	SIGNING & PAVEMENT MARKING PLANS SUMMARY OF ROADWAY SIGNS	SN53	656	SIGNING & PAVEMENT MARKING PLANS FIFTH AVE - STA 490+50 TO STA 496+50	SN84	687	SIGNING & PAVEMENT MARKING PLANS FORBES AVE - STA 221+50 TO STA 227+00
LS28	599	FORBES AVE - STA 164+50 TO STA 169+50	SN23	626	SIGNING & PAVEMENT MARKING PLANS SUMMARY OF ROADWAY SIGNS	SN54	657	SIGNING & PAVEMENT MARKING PLANS FIFTH AVE - STA 496+50 TO STA 502+50	SN85	688	SIGNING & PAVEMENT MARKING PLANS FORBES AVE - STA 227+00 TO STA 232+00
LS29	600	FORBES AVE - STA 169+50 TO STA 174+50	SN24	627	SIGNING & PAVEMENT MARKING PLANS SUMMARY OF ROADWAY SIGNS	SN55	658	SIGNING & PAVEMENT MARKING PLANS FIFTH AVE - STA 502+50 TO STA 507+50	SN86	689	SIGNING & PAVEMENT MARKING PLANS FORBES AVE - STA 232+00 TO STA 237+50
LS30	601	FORBES AVE - STA 174+50 TO STA 178+50	SN25	628	SIGNING & PAVEMENT MARKING PLANS SUMMARY OF ROADWAY SIGNS	SN56	659	SIGNING & PAVEMENT MARKING PLANS FIFTH AVE - STA 507+50 TO STA 513+50	SN87	690	SIGNING & PAVEMENT MARKING PLANS FORBES AVE - STA 237+50 TO STA 242+50
LS31	602	FORBES AVE - STA 207+50 TO STA 213+50	SN26	629	SIGNING & PAVEMENT MARKING PLANS SUMMARY OF ROADWAY SIGNS	SN57	660	SIGNING & PAVEMENT MARKING PLANS FIFTH AVE - STA 513+50 TO STA 517+50	SN88	691	SIGNING & PAVEMENT MARKING PLANS FORBES AVE - STA 242+50 TO STA 247+50
LS32	603	FORBES AVE - STA 213+50 TO STA 217+50	SN27	630	SIGNING & PAVEMENT MARKING PLANS SUMMARY OF ROADWAY SIGNS	SN58	661	SIGNING & PAVEMENT MARKING PLANS FIFTH AVE - STA 517+50 TO STA 522+50	SN89	692	SIGNING & PAVEMENT MARKING PLANS FORBES AVE - STA 247+50 TO STA 251+50
			SN28	631	SIGNING & PAVEMENT MARKING PLANS SUMMARY OF ROADWAY SIGNS	SN59	662	SIGNING & PAVEMENT MARKING PLANS FIFTH AVE - STA 522+50 TO STA 528+50	SN90	693	SIGNING & PAVEMENT MARKING PLANS FORBES AVE - STA 251+50 TO STA 256+50
			SN29	632	SIGNING & PAVEMENT MARKING PLANS SUMMARY OF ROADWAY SIGNS	SN60	663	SIGNING & PAVEMENT MARKING PLANS FIFTH AVE - STA 528+50 TO STA 534+50	SN91	694	SIGNING & PAVEMENT MARKING PLANS BELLEFIELD AVE
			SN30	633	SIGNING & PAVEMENT MARKING PLANS SUMMARY OF ROADWAY SIGNS	SN61	664	SIGNING & PAVEMENT MARKING PLANS FIFTH AVE - STA 534+50 TO STA 540+50			
			SN31	634	SIGNING & PAVEMENT MARKING PLANS SUMMARY OF ROADWAY SIGNS	SN62	665	SIGNING & PAVEMENT MARKING PLANS FIFTH AVE - STA 540+50 TO STA 545+50			
			SN32	635	SIGNING & PAVEMENT MARKING PLANS SUMMARY OF ROADWAY SIGNS	SN63	666	SIGNING & PAVEMENT MARKING PLANS FIFTH AVE - STA 545+50 TO STA 551+50			
SN1	604	SIGNING & PAVEMENT MARKING PLANS GENERAL NOTES	SN33	636	SIGNING & PAVEMENT MARKING PLANS DETAILS	SN64	667	SIGNING & PAVEMENT MARKING PLANS FIFTH AVE - STA 551+50 TO STA 555+50	LP1	695	LIGHTING PLANS GENERAL NOTES
SN2	605	SIGNING & PAVEMENT MARKING PLANS SUMMARY OF QUANTITIES	SN34	637	SIGNING & PAVEMENT MARKING PLANS DETAILS	SN65	668	SIGNING & PAVEMENT MARKING PLANS FIFTH AVE - STA 555+50 TO STA 561+50	LP2	696	LIGHTING PLANS TABULATION SHEET
SN3	606	SIGNING & PAVEMENT MARKING PLANS SUMMARY OF QUANTITIES	SN35	638	SIGNING & PAVEMENT MARKING PLANS DETAILS	SN66	669	SIGNING & PAVEMENT MARKING PLANS FIFTH AVE - STA 561+50 TO STA 566+50	LP3	697	LIGHTING PLANS DETAIL SHEET
SN4	607	SIGNING & PAVEMENT MARKING PLANS SUMMARY OF QUANTITIES	SN36	639	SIGNING & PAVEMENT MARKING PLANS DETAILS	SN67	670	SIGNING & PAVEMENT MARKING PLANS FORBES AVE - STA 122+00 TO STA 128+00	LP4	698	LIGHTING PLANS DETAIL SHEET
SN5	608	SIGNING & PAVEMENT MARKING PLANS TABULATION SHEET	SN37	640	SIGNING & PAVEMENT MARKING PLANS DETAILS	SN68	671	SIGNING & PAVEMENT MARKING PLANS FORBES AVE - STA 128+00 TO STA 133+50	LP5	699	LIGHTING PLANS DETAIL SHEET
SN6	609	SIGNING & PAVEMENT MARKING PLANS TABULATION SHEET	SN38	641	SIGNING & PAVEMENT MARKING PLANS DETAILS	SN69	672	SIGNING & PAVEMENT MARKING PLANS FORBES AVE - STA 133+50 TO STA 138+50	LP6	700	LIGHTING PLANS DETAIL SHEET
SN7	610	SIGNING & PAVEMENT MARKING PLANS TABULATION SHEET									

SIGNING & PAVEMENT MARKING PLANS

LIGHTING PLANS



Gulf Tower  
707 Grant Street  
5th Floor  
Pittsburgh, PA 15219

NO.	DATE	DESCRIPTION
REVISIONS		

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(NOT FOR CONSTRUCTION)

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IN CHARGE	LAR
DATE	05/01/24
SCALE	AS SHOWN

<b>PORT AUTHORITY OF ALLEGHENY COUNTY</b> PITTSBURGH PENNSYLVANIA	
<b>BUS RAPID TRANSIT UPTOWN TO OAKLAND</b>	
INDEX OF DRAWINGS	
<b>Port Authority</b> <small>connecting people to life</small>	CONTRACT NO. BRT-001
DWG. NO. GN8	SHT. 8

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## INDEX OF DRAWINGS

DRAWING NUMBER	SHEET NUMBER	TITLE	DRAWING NUMBER	SHEET NUMBER	TITLE	DRAWING NUMBER	SHEET NUMBER	TITLE	DRAWING NUMBER	SHEET NUMBER	TITLE
<u>LIGHTING PLANS (CONT'D)</u>			<u>LIGHTING PLANS (CONT'D)</u>			<u>ARCHITECTURAL PLANS (CONT'D)</u>			<u>STRUCTURAL PLANS (CONT'D)</u>		
LP7	701	FIFTH AVE - STA 433+50 TO STA 438+50	LP38	732	FORBES AVE - STA 159+50 TO STA 164+50	AR032	761	22 SOHO STATION-OVERALL SITE PLAN	ST6	790	BUS STATION 60' - PART 1
LP8	702	FIFTH AVE - STA 438+50 TO STA 443+50	LP39	733	FORBES AVE - STA 164+50 TO STA 169+50	AR033	762	23 WEST OAKLAND STATION-OVERALL SITE PLAN	ST7	791	BUS STATION 60' - PART 2
LP9	703	FIFTH AVE - STA 443+50 TO STA 448+50	LP40	734	FORBES AVE - STA 169+50 TO STA 173+50	AR034	763	24 MCKEE PL STATION-OVERALL SITE PLAN	ST8	792	BUS STATION 60' - PART 3
LP10	704	FIFTH AVE - STA 448+50 TO STA 454+50	LP41	735	FORBES AVE - STA 173+50 TO STA 177+50	AR035	764	25 CENTRAL OAKLAND STATION-OVERALL SITE PLAN-PART 1	ST9	793	BUS STATION TABLES
LP11	705	FIFTH AVE - STA 454+50 TO STA 458+50	LP42	736	FORBES AVE - STA 177+50 TO STA 182+50	AR036	765	25 CENTRAL OAKLAND STATION-OVERALL SITE PLAN-PART 2	ST10	794	DRAINAGE DETAILS - PART 1
LP12	706	FIFTH AVE - STA 458+50 TO STA 464+50	LP43	737	FORBES AVE - STA 207+50 TO STA 213+50	AR037	766	26 BIGELOW BLVD STATION-OVERALL SITE PLAN-PART 1	ST11	795	DRAINAGE DETAILS - PART 2
LP13	707	FIFTH AVE - STA 464+50 TO STA 470+50	LP44	738	FORBES AVE - STA 213+50 TO STA 217+50	AR038	767	26 BIGELOW BLVD STATION-OVERALL SITE PLAN-PART 2	ST12	796	MISC DETAILS
LP14	708	FIFTH AVE - STA 470+50 TO STA 475+50	LP45	739	FORBES AVE - STA 221+50 TO STA 227+00	AR095	768	WINDSCREEN TYPES	ST13	797	VAULT HATCH CLOSURE SLAB
LP15	709	FIFTH AVE - STA 475+50 TO STA 480+50	LP46	740	FORBES AVE - STA 232+00 TO STA 237+50	AR096	769	WINDSCREEN SCHEDULES	ST14	798	VAULT SLAB PARTIAL REMOVAL
LP16	710	FIFTH AVE - STA 480+50 TO STA 485+50	LP47	741	FORBES AVE - STA 242+50 TO STA 247+50	AR102	770	30' SHELTER ENLARGED PLAN, ROOF PLAN, AND RCP	ST15	799	SLAB MODIFICATIONS - OVERLAY
LP17	711	FIFTH AVE - STA 485+50 TO STA 490+50	LP48	742	FORBES AVE - STA 247+50 TO STA 251+50	AR103	771	30' SHELTER ELEVATIONS	ST16	800	SLAB MODIFICATIONS - SIDEWALK SLAB
LP18	712	FIFTH AVE - STA 490+50 TO STA 496+50	LP49	743	FORBES AVE - STA 251+50 TO STA 256+50	AR104	772	60' SHELTER ENLARGED PLAN, ROOF PLAN, AND RCP	ST17	801	VAULT BACKFILL - PART 1
LP19	713	FIFTH AVE - STA 496+50 TO STA 502+50	<u>ARCHITECTURAL PLANS</u>			AR105	773	60' SHELTER ELEVATIONS	ST18	802	VAULT BACKFILL - PART 2
LP20	714	FIFTH AVE - STA 502+50 TO STA 507+50	AR001	744	ABBREVIATIONS AND SYMBOLS	AR106	774	ARCHITECTURAL PLANS-30' GULLWING SHELTER ENLARGED PLAN, ROOF PLAN AND RCP	ST19	803	VAULT BACKFILL - PART 3
LP21	715	FIFTH AVE - STA 507+50 TO STA 513+50	AR002	745	ARCHITECTURAL PLANS-GENERAL NOTES, APPLICABLE CODES AND STANDARDS, AND CODE SUMMARY	AR107	775	30' GULLWING SHELTER ELEVATIONS	ST20	804	VAULT HATCH REMOVAL
LP22	716	FIFTH AVE - STA 513+50 TO STA 517+50	AR003	746	SHELTER SIZE AND AMENITIES SCHEDULE	AR200	776	TYPICAL SHELTER SECTIONS	ST21	805	VAULT HATCH REPLACEMENT - PART 1
LP23	717	FIFTH AVE - STA 517+50 TO STA 522+50	AR016	747	6 UPTOWN WEST STATION-OVERALL SITE PLAN	AR201	777	TYPICAL SHELTER SECTIONS	ST22	806	VAULT HATCH REPLACEMENT - PART 2
LP24	718	FIFTH AVE - STA 522+50 TO STA 528+50	AR017	748	7 PRIDE ST STATION-OVERALL SITE PLAN	AR300	778	SHELTER CANOPY DETAILS	ST23	807	VAULT SLAB REMOVAL - FORBES AVE STA 163+90.86
LP25	719	FIFTH AVE - STA 528+50 TO STA 534+50	AR018	749	8 UPTOWN CENTRAL STATION-OVERALL SITE PLAN	AR310	779	SHELTER WINDSCREEN DETAILS	ST24	808	VAULT SLAB MODIFICATION - FORBES AVE STA 163+90.86
LP26	720	FIFTH AVE - STA 534+50 TO STA 540+50	AR019	750	9 JUMONVILLE ST STATION-OVERALL SITE PLAN	AR311	780	SHELTER WINDSCREEN DETAILS	ST25	809	VAULT DETAILS - FORBES AVE STA 163+90.86
LP27	721	FIFTH AVE - STA 540+50 TO STA 545+50	AR020	751	10 SOHO STATION-OVERALL SITE PLAN	AR320	781	SHELTER SERVICE CARRIER DETAILS	ST26	810	VAULT SLAB REMOVAL - FIFTH AVE STA 437+12.03
LP28	722	FIFTH AVE - STA 545+50 TO STA 551+50	AR021	752	11 WEST OAKLAND STATION-OVERALL SITE PLAN	AR330	782	SIGNAGE & WAYFINDING	ST27	811	VAULT SLAB REPLACEMENT - FIFTH AVE STA 437+12.03
LP29	723	FIFTH AVE - STA 551+50 TO STA 555+50	AR022	753	12 CHESTERFIELD RD STATION-OVERALL SITE PLAN	AR331	783	SHELTER SIGNAGE DETAILS	ST28	812	VAULT SLAB REMOVAL - FIFTH AVE STA 442+54.33
LP30	724	FIFTH AVE - STA 555+50 TO STA 561+50	AR023	754	13 ATWOOD STATION-OVERALL SITE PLAN	AR340	784	MISC SHELTER & WINDSCREEN DETAILS	ST29	813	VAULT SLAB REPLACEMENT - FIFTH AVE STA 442+54.33
LP31	725	FIFTH AVE - STA 561+50 TO STA 566+50	AR024	755	14 BIGELOW BLVD STATION-OVERALL SITE PLAN	<u>STRUCTURAL PLANS</u>			ST30	814	VAULT SLAB REMOVAL - FIFTH AVE STA 469+59.93
LP32	726	FORBES AVE - STA 128+00 TO STA 133+50	AR025	756	15 TENNYSON AVE STATION-OVERALL SITE PLAN	ST1	785	GENERAL NOTES	ST31	815	VAULT SLAB REPLACEMENT - FIFTH AVE STA 469+59.93
LP33	727	FORBES AVE - STA 133+50 TO STA 138+50	AR028	757	18 UPTOWN WEST STATION-OVERALL SITE PLAN	ST2	786	QUANTITIES	ST32	816	VAULT SLAB REPLACEMENT DETAILS
LP34	728	FORBES AVE - STA 138+50 TO STA 143+50	AR029	758	19 PRIDE ST STATION-OVERALL SITE PLAN	ST3	787	TYPICAL SLAB SECTIONS	ST33	817	DLC VAULT SLAB REMOVAL - FIFTH AVE STA 438+14
LP35	729	FORBES AVE - STA 143+50 TO STA 149+50	AR030	759	20 UPTOWN CENTRAL STATION-OVERALL SITE PLAN	ST4	788	BUS STATION 30' - PART 1	ST34	818	DLC VAULT SLAB REPLACEMENT 1 - FIFTH AVE STA 438+14
LP36	730	FORBES AVE - STA 149+50 TO STA 154+50	AR031	760	21 JUMONVILLE ST STATION-OVERALL SITE PLAN	ST5	789	BUS STATION 30' - PART 2	ST35	819	DLC VAULT SLAB REPLACEMENT 2 - FIFTH AVE STA 438+14
LP37	731	FORBES AVE - STA 154+50 TO STA 159+50							ST36	820	DLC VAULT SLAB REMOVAL - FIFTH AVE STA 441+69



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THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE FEDERAL TRANSIT ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1984, AS AMENDED, FOR THE PORT AUTHORITY OF ALLEGHENY COUNTY, PENNSYLVANIA.

(NOT FOR CONSTRUCTION)

DESIGNED	JMS
DRAWN	JMS
CHECKED	MES
IN CHARGE	LAR
DATE	05/01/24
SCALE	AS SHOWN

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT UPTOWN TO OAKLAND**  
INDEX OF DRAWINGS



CONTRACT NO. BRT-001

DWG. NO. GN9	SHT. 9
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## INDEX OF DRAWINGS

DRAWING NUMBER	SHEET NUMBER	TITLE	DRAWING NUMBER	SHEET NUMBER	TITLE	DRAWING NUMBER	SHEET NUMBER	TITLE	DRAWING NUMBER	SHEET NUMBER	TITLE
<u>STRUCTURAL PLANS (CONT'D)</u>			<u>STATION TAP IN PLANS (CONT'D)</u>			<u>CONTROL SYSTEMS PLANS (CONT'D)</u>			<u>CONTROL SYSTEMS PLANS (CONT'D)</u>		
ST37	821	STRUCTURAL PLANS DLC VAULT SLAB REPLACEMENT 1 - FIFTH AVE STA 441+69	TI4	847	STATION TAP IN PLANS JUMONVILLE STATION	CS24	876	CONTROL SYSTEMS PLANS GENERAL NOTES	CS55	907	CONTROL SYSTEMS PLANS FORBES AVE - STA 169+50 TO STA 173+50
ST38	822	STRUCTURAL PLANS DLC VAULT SLAB REPLACEMENT 2 - FIFTH AVE STA 441+69	TI5	848	STATION TAP IN PLANS SOHO STATION	CS25	877	CONTROL SYSTEMS PLANS SPECIAL DETAILS	CS56	908	CONTROL SYSTEMS PLANS FORBES AVE - STA 173+50 TO STA 177+50
ST39	823	STRUCTURAL PLANS DLC VAULT SLAB REMOVAL - FIFTH AVE STA 443+11	TI6	849	STATION TAP IN PLANS WEST OAKLAND STATION	CS26	878	CONTROL SYSTEMS PLANS TABULATION SHEET	CS57	909	CONTROL SYSTEMS PLANS FORBES AVE - STA 177+50 TO STA 182+50
ST40	824	STRUCTURAL PLANS DLC VAULT SLAB REPLACEMENT 1 - FIFTH AVE STA 443+11	TI7	850	STATION TAP IN PLANS CHESTERFIELD STATION	CS27	879	CONTROL SYSTEMS PLANS TABULATION SHEET	CS58	910	CONTROL SYSTEMS PLANS FORBES AVE - STA 207+50 TO STA 213+50
ST41	825	STRUCTURAL PLANS DLC VAULT SLAB REPLACEMENT 2 - FIFTH AVE STA 443+11	TI8	851	STATION TAP IN PLANS BIGELOW STATION	CS28	880	CONTROL SYSTEMS PLANS FIFTH AVE - STA 438+50 TO STA 443+50	CS59	911	CONTROL SYSTEMS PLANS FORBES AVE - STA 221+50 TO STA 227+00
ST42	826	STRUCTURAL PLANS VAULT SLAB MODIFICATION - MISC DETAILS	TI9	852	STATION TAP IN PLANS TENNYSON STATION	CS29	881	CONTROL SYSTEMS PLANS FIFTH AVE - STA 443+50 TO STA 448+50	CS60	912	CONTROL SYSTEMS PLANS FORBES AVE - STA 232+00 TO STA 237+50
ST43	827	STRUCTURAL PLANS KIRKPATRICK WALL - GENERAL PLAN	<u>CONTROL SYSTEMS PLANS</u>			CS30	882	CONTROL SYSTEMS PLANS FIFTH AVE - STA 448+50 TO STA 454+50	CS61	913	CONTROL SYSTEMS PLANS FORBES AVE - STA 242+50 TO STA 247+50
ST44	828	STRUCTURAL PLANS KIRKPATRICK WALL - TYPICAL SECTION	CS1	853	CONTROL SYSTEMS PLANS SYSTEMS GENERAL NOTES	CS31	883	CONTROL SYSTEMS PLANS FIFTH AVE - STA 454+50 TO STA 458+50	<u>MAINTENANCE &amp; PROTECTION OF TRAFFIC PLANS</u>		
ST45	829	STRUCTURAL PLANS KIRKPATRICK WALL - ELEVATION 1	CS2	854	CONTROL SYSTEMS PLANS SYSTEMS SHELTER COMMUNICATIONS OVERVIEW	CS32	884	CONTROL SYSTEMS PLANS FIFTH AVE - STA 458+50 TO STA 464+50	MT1	914	MAINTENANCE & PROTECTION OF TRAFFIC PLANS GENERAL NOTES
ST46	830	STRUCTURAL PLANS KIRKPATRICK WALL - ELEVATION 2	CS3	855	CONTROL SYSTEMS PLANS SYSTEMS BRT BLOCK DIAGRAM	CS33	885	CONTROL SYSTEMS PLANS FIFTH AVE - STA 464+50 TO STA 470+50	MT2	915	MAINTENANCE & PROTECTION OF TRAFFIC PLANS GENERAL NOTES
ST47	831	STRUCTURAL PLANS KIRKPATRICK WALL - FOOTING PLAN	CS4	856	CONTROL SYSTEMS PLANS PITT TOWER BLOCK DIAGRAM	CS34	886	CONTROL SYSTEMS PLANS FIFTH AVE - STA 470+50 TO STA 475+50	MT3	916	MAINTENANCE & PROTECTION OF TRAFFIC PLANS GENERAL NOTES
ST48	832	STRUCTURAL PLANS KIRKPATRICK WALL - WALL DETAILS 1	CS5	857	CONTROL SYSTEMS PLANS PITT TOWER PLAN	CS35	887	CONTROL SYSTEMS PLANS FIFTH AVE - STA 475+50 TO STA 480+50	MT4	917	MAINTENANCE & PROTECTION OF TRAFFIC PLANS INDEX SHEET
ST49	833	STRUCTURAL PLANS OFFSET POLE FOUNDATIONS - PART 1	CS6	858	CONTROL SYSTEMS PLANS PITT TOWER EQUIPMENT RACK ELEVATION	CS36	888	CONTROL SYSTEMS PLANS FIFTH AVE - STA 480+50 TO STA 485+50	MT5	918	MAINTENANCE & PROTECTION OF TRAFFIC PLANS INDEX SHEET
ST50	834	STRUCTURAL PLANS OFFSET POLE FOUNDATIONS - PART 2	CS7	859	CONTROL SYSTEMS PLANS TICKET VENDING MACHINE DETAILS SHEET 01	CS37	889	CONTROL SYSTEMS PLANS FIFTH AVE - STA 485+50 TO STA 490+50	MT6	919	MAINTENANCE & PROTECTION OF TRAFFIC PLANS INDEX SHEET
<u>STATION ELECTRICAL PLANS</u>			CS8	860	CONTROL SYSTEMS PLANS TICKET VENDING MACHINE DETAILS SHEET 02	CS38	890	CONTROL SYSTEMS PLANS FIFTH AVE - STA 490+50 TO STA 496+50	MT7	920	MAINTENANCE & PROTECTION OF TRAFFIC PLANS INDEX SHEET
EL1	835	STATION ELECTRICAL PLANS STATION TRACKER - CONSTRUCTION DATA	CS9	861	CONTROL SYSTEMS PLANS TICKET VALIDATOR DETAILS	CS39	891	CONTROL SYSTEMS PLANS FIFTH AVE - STA 496+50 TO STA 502+50	MT8	921	MAINTENANCE & PROTECTION OF TRAFFIC PLANS TABULATION SHEET
EL2	836	STATION ELECTRICAL PLANS GENERAL ELECTRICAL NOTES	CS10	862	CONTROL SYSTEMS PLANS SYSTEM REAL TIME SIGN DETAILS SHEET 01	CS40	892	CONTROL SYSTEMS PLANS FIFTH AVE - STA 502+50 TO STA 507+50	MT9	922	MAINTENANCE & PROTECTION OF TRAFFIC PLANS TABULATION SHEET
EL3	837	STATION ELECTRICAL PLANS TYPICAL STATION PLAN & ELEVATION - 30 & 60 FT	CS11	863	CONTROL SYSTEMS PLANS SYSTEM REAL TIME SIGN DETAILS SHEET 02	CS41	893	CONTROL SYSTEMS PLANS FIFTH AVE - STA 507+50 TO STA 513+50	MT10	923	MAINTENANCE & PROTECTION OF TRAFFIC PLANS TABULATION SHEET
EL4	838	STATION ELECTRICAL PLANS TYPICAL STATION PLAN & ELEVATION - 30 & 60 FT	CS12	864	CONTROL SYSTEMS PLANS SYSTEM REAL TIME SIGN DETAILS SHEET 03	CS42	894	CONTROL SYSTEMS PLANS FIFTH AVE - STA 513+50 TO STA 519+50	MT11	924	MAINTENANCE & PROTECTION OF TRAFFIC PLANS TABULATION SHEET
EL5	839	STATION ELECTRICAL PLANS MISCELLANEOUS ELECTRICAL DETAILS	CS13	865	CONTROL SYSTEMS PLANS EMERGENCY CALL STATION DETAILS	CS43	895	CONTROL SYSTEMS PLANS FIFTH AVE - STA 522+50 TO STA 528+50	MT12	925	MAINTENANCE & PROTECTION OF TRAFFIC PLANS TABULATION SHEET
EL6	840	STATION ELECTRICAL PLANS PANEL SCHEDULES - STATIONS 6 THRU 11	CS14	866	CONTROL SYSTEMS PLANS CCTV MOUNTING DETAILS	CS44	896	CONTROL SYSTEMS PLANS FIFTH AVE - STA 528+50 TO STA 534+50	MT13	926	MAINTENANCE & PROTECTION OF TRAFFIC PLANS TABULATION SHEET
EL7	841	STATION ELECTRICAL PLANS PANEL SCHEDULES - STATIONS 12 THRU 15	CS15	867	CONTROL SYSTEMS PLANS SYSTEM CABINET DETAILS	CS45	897	CONTROL SYSTEMS PLANS FIFTH AVE - STA 534+50 TO STA 540+50	MT14	927	MAINTENANCE & PROTECTION OF TRAFFIC PLANS TABULATION SHEET
EL8	842	STATION ELECTRICAL PLANS PANEL SCHEDULES - STATIONS 18 THRU 23	CS16	868	CONTROL SYSTEMS PLANS SYSTEMS 60' INBOUND EQUIPMENT PLAN	CS46	898	CONTROL SYSTEMS PLANS EXISTING ATWOOD STATION	MT15	928	MAINTENANCE & PROTECTION OF TRAFFIC PLANS TABULATION SHEET
EL9	843	STATION ELECTRICAL PLANS PANEL SCHEDULES - STATIONS 24 THRU 26	CS17	869	CONTROL SYSTEMS PLANS SYSTEMS 60' SPECIAL CASE EQUIPMENT PLAN	CS47	899	CONTROL SYSTEMS PLANS FIFTH AVE - STA 545+50 TO STA 551+50	MT16	929	MAINTENANCE & PROTECTION OF TRAFFIC PLANS TABULATION SHEET
<u>STATION TAP IN PLANS</u>			CS18	870	CONTROL SYSTEMS PLANS SYSTEMS 30' INBOUND EQUIPMENT PLAN	CS48	900	CONTROL SYSTEMS PLANS FIFTH AVE - STA 555+50 TO STA 561+50	MT17	930	MAINTENANCE & PROTECTION OF TRAFFIC PLANS CONSTRUCTION SEQUENCE
TI1	844	STATION TAP IN PLANS LOCATION MAP	CS19	871	CONTROL SYSTEMS PLANS SYSTEMS 30' INBOUND CONDUIT PLAN	CS49	901	CONTROL SYSTEMS PLANS FORBES AVE - STA 128+00 TO STA 133+50	MT18	931	MAINTENANCE & PROTECTION OF TRAFFIC PLANS CONSTRUCTION SEQUENCE
TI2	845	STATION TAP IN PLANS TAP IN DETAILS	CS20	872	CONTROL SYSTEMS PLANS SYSTEMS 30' OUTBOUND CONDUIT PLAN	CS50	902	CONTROL SYSTEMS PLANS FORBES AVE - STA 143+50 TO STA 149+50	MT19	932	MAINTENANCE & PROTECTION OF TRAFFIC PLANS CONSTRUCTION SEQUENCE
TI3	846	STATION TAP IN PLANS TAP IN DETAILS	CS21	873	CONTROL SYSTEMS PLANS SYSTEMS 30' INBOUND CONDUIT PLAN	CS51	903	CONTROL SYSTEMS PLANS FORBES AVE - STA 149+50 TO STA 154+50	MT20	933	MAINTENANCE & PROTECTION OF TRAFFIC PLANS CONSTRUCTION SEQUENCE
			CS22	874	CONTROL SYSTEMS PLANS SYSTEMS 30' OUTBOUND CONDUIT PLAN	CS52	904	CONTROL SYSTEMS PLANS FORBES AVE - STA 154+50 TO STA 159+50	MT21	934	MAINTENANCE & PROTECTION OF TRAFFIC PLANS CONSTRUCTION SEQUENCE
			CS23	875	CONTROL SYSTEMS PLANS SYSTEMS EQUIPMENT CABINET LAYOUT (TYPICAL)	CS53	905	CONTROL SYSTEMS PLANS FORBES AVE - STA 159+50 TO STA 164+50	MT22	935	MAINTENANCE & PROTECTION OF TRAFFIC PLANS CONSTRUCTION SEQUENCE



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(NOT FOR CONSTRUCTION)

DESIGNED	JMS
DRAWN	JMS
CHECKED	MES
IN CHARGE	LAR
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SCALE	AS SHOWN

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT UPTOWN TO OAKLAND**  
INDEX OF DRAWINGS



CONTRACT NO. BRT-001

DWG. NO. GN10 SHT. 10

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**INDEX OF DRAWINGS**

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DRAWING NUMBER	SHEET NUMBER	TITLE	DRAWING NUMBER	SHEET NUMBER	TITLE	DRAWING NUMBER	SHEET NUMBER	TITLE	DRAWING NUMBER	SHEET NUMBER	TITLE
<b>MAINTENANCE &amp; PROTECTION OF TRAFFIC PLANS (CONT'D)</b>			<b>MAINTENANCE &amp; PROTECTION OF TRAFFIC PLANS (CONT'D)</b>			<b>MAINTENANCE &amp; PROTECTION OF TRAFFIC PLANS (CONT'D)</b>			<b>MAINTENANCE &amp; PROTECTION OF TRAFFIC PLANS (CONT'D)</b>		
MT23	936	MAINTENANCE & PROTECTION OF TRAFFIC PLANS CONSTRUCTION SEQUENCE	MT54	967	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 1A / SIXTH AVE - STA 428+50 TO STA 433+50	MT85	998	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 1D / FIFTH AVE - STA 555+50 TO STA 561+50	MT116	1029	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 1A / FORBES AVE - STA 169+50 TO STA 173+50
MT24	937	MAINTENANCE & PROTECTION OF TRAFFIC PLANS CONSTRUCTION SEQUENCE	MT55	968	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 2A / FIFTH AVE - STA 433+50 TO STA 438+50	MT86	999	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 1D / FIFTH AVE - STA 561+50 TO STA 566+50	MT117	1030	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 1A / FORBES AVE - STA 173+50 TO STA 177+50
MT25	938	MAINTENANCE & PROTECTION OF TRAFFIC PLANS CONSTRUCTION SEQUENCE	MT56	969	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 2A / FIFTH AVE - STA 438+50 TO STA 443+50	MT87	1000	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 2A / FIFTH AVE - STA 490+50 TO STA 496+50	MT118	1031	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 1A / FORBES AVE - STA 177+50 TO STA 182+50
MT26	939	MAINTENANCE & PROTECTION OF TRAFFIC PLANS SIGN FABRICATION DETAILS	MT57	970	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 2A / FIFTH AVE - STA 443+50 TO STA 448+50	MT88	1001	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 2A / FIFTH AVE - STA 496+50 TO STA 502+50	MT119	1032	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 1B / FORBES AVE - STA 138+50 TO STA 143+50
MT27	940	MAINTENANCE & PROTECTION OF TRAFFIC PLANS DETAILS	MT58	971	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 2A / FIFTH AVE - STA 448+50 TO STA 454+50	MT89	1002	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 2A / FIFTH AVE - STA 502+50 TO STA 507+50	MT120	1033	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 1B / FORBES AVE - STA 143+50 TO STA 149+50
MT28	941	MAINTENANCE & PROTECTION OF TRAFFIC PLANS DETAILS	MT59	972	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 2A / FIFTH AVE - STA 454+50 TO STA 458+50	MT90	1003	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 2A / FIFTH AVE - STA 507+50 TO STA 513+50	MT121	1034	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 1B / FORBES AVE - STA 149+50 TO STA 154+50
MT29	942	MAINTENANCE & PROTECTION OF TRAFFIC PLANS DETAILS	MT60	973	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 2B / FIFTH AVE - STA 454+50 TO STA 458+50	MT91	1004	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 2B / FIFTH AVE - STA 507+50 TO STA 513+50	MT122	1035	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 1B / FORBES AVE - STA 154+50 TO STA 159+50
MT30	943	MAINTENANCE & PROTECTION OF TRAFFIC PLANS DETAILS	MT61	974	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 2B / FIFTH AVE - STA 458+50 TO STA 464+50	MT92	1005	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 2B / FIFTH AVE - STA 513+50 TO STA 517+50	MT123	1036	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 1B / FORBES AVE - STA 159+50 TO STA 164+50
MT31	944	MAINTENANCE & PROTECTION OF TRAFFIC PLANS DETAILS	MT62	975	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 2B / FIFTH AVE - STA 464+50 TO STA 470+50	MT93	1006	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 2B / FIFTH AVE - STA 517+50 TO STA 522+50	MT124	1037	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 1B / FORBES AVE - STA 164+50 TO STA 169+50
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MT34	947	MAINTENANCE & PROTECTION OF TRAFFIC PLANS DETAILS	MT65	978	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 2C / FIFTH AVE - STA 470+50 TO STA 475+50	MT96	1009	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 2C / FIFTH AVE - STA 528+50 TO STA 534+50	MT127	1040	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 1C / FORBES AVE - STA 128+00 TO STA 133+50
MT35	948	MAINTENANCE & PROTECTION OF TRAFFIC PLANS DETAILS	MT66	979	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 2C / FIFTH AVE - STA 475+50 TO STA 480+50	MT97	1010	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 2C / FIFTH AVE - STA 534+50 TO STA 540+50	MT128	1041	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 1C / FORBES AVE - STA 133+50 TO STA 138+50
MT36	949	MAINTENANCE & PROTECTION OF TRAFFIC PLANS DETAILS	MT67	980	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 2C / FIFTH AVE - STA 480+50 TO STA 485+50	MT98	1011	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 2C / FIFTH AVE - STA 540+50 TO STA 545+50	MT129	1042	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 1C / FORBES AVE - STA 138+50 TO STA 143+50
MT37	950	MAINTENANCE & PROTECTION OF TRAFFIC PLANS TEMPORARY TRAFFIC SIGNAL TIMINGS	MT68	981	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 2C / FIFTH AVE - STA 485+50 TO STA 490+50	MT99	1012	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 2D / FIFTH AVE - STA 540+50 TO STA 545+50	MT130	1043	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 1C / FORBES AVE - STA 143+50 TO STA 149+50
MT38	951	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 1A / SIXTH AVE - STA 428+50 TO STA 433+50	MT69	982	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 2C / FIFTH AVE - STA 490+50 TO STA 496+50	MT100	1013	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 2D / FIFTH AVE - STA 545+50 TO STA 551+50	MT131	1044	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 2A / FORBES AVE - STA 159+50 TO STA 164+50
MT39	952	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 1A FIFTH AVE - STA 433+50 TO STA 438+50	MT70	983	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 1A / FIFTH AVE - STA 490+50 TO STA 496+50	MT101	1014	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 2D / FIFTH AVE - STA 551+50 TO STA 555+50	MT132	1045	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 2A / FORBES AVE - STA 164+50 TO STA 169+50
MT40	953	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 1A / FIFTH AVE - STA 438+50 TO STA 443+50	MT71	984	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 1A / FIFTH AVE - STA 496+50 TO STA 502+50	MT102	1015	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 2D / FIFTH AVE - STA 555+50 TO STA 561+50	MT133	1046	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 2A / FORBES AVE - STA 169+50 TO STA 173+50
MT41	954	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 1A / FIFTH AVE - STA 443+50 TO STA 448+50	MT72	985	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 1A / FIFTH AVE - STA 502+50 TO STA 507+50	MT103	1016	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 2D / FIFTH AVE - STA 561+50 TO STA 566+50	MT134	1047	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 2A / FORBES AVE - STA 173+50 TO STA 177+50
MT42	955	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 1A / FIFTH AVE - STA 448+50 TO STA 454+50	MT73	986	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 1A / FIFTH AVE - STA 507+50 TO STA 513+50	MT104	1017	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 1A / FORBES AVE - STA 237+50 TO STA 242+50	MT135	1048	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 2A / FORBES AVE - STA 177+50 TO STA 182+50
MT43	956	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 1A / FIFTH AVE - STA 454+50 TO STA 458+50	MT74	987	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 1B / FIFTH AVE - STA 507+50 TO STA 513+50	MT105	1018	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 1A / FORBES AVE - STA 242+50 TO STA 247+50	MT136	1049	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 2B / FORBES AVE - STA 138+50 TO STA 143+50
MT44	957	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 1B / FIFTH AVE - STA 454+50 TO STA 458+50	MT75	988	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 1B / FIFTH AVE - STA 513+50 TO STA 517+50	MT106	1019	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 1A / FORBES AVE - STA 247+50 TO STA 251+50	MT137	1050	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 2B / FORBES AVE - STA 143+50 TO STA 149+50
MT45	958	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 1B / FIFTH AVE - STA 458+50 TO STA 464+50	MT76	989	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 1B / FIFTH AVE - STA 517+50 TO STA 522+50	MT107	1020	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 1B / FORBES AVE - STA 232+00 TO STA 237+50	MT138	1051	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 2B / FORBES AVE - STA 149+50 TO STA 154+50
MT46	959	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 1B / FIFTH AVE - STA 464+50 TO STA 470+50	MT77	990	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 1B / FIFTH AVE - STA 522+50 TO STA 528+50	MT108	1021	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 1B / FORBES AVE - STA 237+50 TO STA 242+50	MT139	1052	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 2B / FORBES AVE - STA 154+50 TO STA 159+50
MT47	960	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 1B / FIFTH AVE - STA 470+50 TO STA 475+50	MT78	991	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 1C / FIFTH AVE - STA 522+50 TO STA 528+50	MT109	1022	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 1C / FORBES AVE - STA 217+50 TO STA 221+50	MT140	1053	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 2B / FORBES AVE - STA 159+50 TO STA 164+50
MT48	961	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 1B / FIFTH AVE - STA 475+50 TO STA 480+50	MT79	992	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 1C / FIFTH AVE - STA 528+50 TO STA 534+50	MT110	1023	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 1C / FORBES AVE - STA 221+50 TO STA 227+00	MT141	1054	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 2B / FORBES AVE - STA 164+50 TO STA 169+50
MT49	962	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 1C / FIFTH AVE - STA 470+50 TO STA 475+50	MT80	993	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 1C / FIFTH AVE - STA 534+50 TO STA 540+50	MT111	1024	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 1D / FORBES AVE - STA 202+50 TO STA 207+50	MT142	1055	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 2C / FORBES AVE - STA 119+00 TO STA 122+00
MT50	963	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 1C / FIFTH AVE - STA 475+50 TO STA 480+50	MT81	994	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 1C / FIFTH AVE - STA 540+50 TO STA 545+50	MT112	1025	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 1D / FORBES AVE - STA 207+50 TO STA 213+50	MT143	1056	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 2C / FORBES AVE - STA 122+00 TO STA 128+00
MT51	964	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 1C / FIFTH AVE - STA 480+50 TO STA 485+50	MT82	995	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 1C / FIFTH AVE - STA 545+50 TO STA 551+50	MT113	1026	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 1D / FORBES AVE - STA 213+50 TO STA 217+50	MT144	1057	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 2C / FORBES AVE - STA 128+00 TO STA 133+50
MT52	965	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 1C / FIFTH AVE - STA 485+50 TO STA 490+50	MT83	996	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 1D / FIFTH AVE - STA 545+50 TO STA 551+50	MT114	1027	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 1A / FORBES AVE - STA 159+50 TO STA 164+50	MT145	1058	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 2C / FORBES AVE - STA 133+50 TO STA 138+50
MT53	966	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 1C / FIFTH AVE - STA 490+50 TO STA 496+50	MT84	997	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 1D / FIFTH AVE - STA 551+50 TO STA 555+50	MT115	1028	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 1A / FORBES AVE - STA 164+50 TO STA 169+50	MT146	1059	MAINTENANCE & PROTECTION OF TRAFFIC PLANS PHASE 2C / FORBES AVE - STA 138+50 TO STA 143+50



NO.	DATE	DESCRIPTION
REVISIONS		

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**(NOT FOR CONSTRUCTION)**

DESIGNED	JMS
DRAWN	JMS
CHECKED	MES
IN CHARGE	LAR
DATE	05/01/24
SCALE	AS SHOWN

<b>PORT AUTHORITY OF ALLEGHENY COUNTY</b> PITTSBURGH PENNSYLVANIA	
<b>BUS RAPID TRANSIT UPTOWN TO OAKLAND</b>	
INDEX OF DRAWINGS	
<b>Port Authority</b> <small>connecting people to life</small>	CONTRACT NO. BRT-001
DWG. NO. GN11	SHT. 11

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## INDEX OF DRAWINGS

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<b>MAINTENANCE &amp; PROTECTION OF TRAFFIC PLANS (CONT'D)</b>			<b>SIGNAL PLANS (CONT'D)</b>			<b>SIGNAL PLANS (CONT'D)</b>			<b>SIGNAL PLANS (CONT'D)</b>		
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		<b>SIGNAL PLANS</b>	SG30	1090	SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	SG61	1121	SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	SG92	1152	SIGNAL PLANS WIRING, MOVEMENT, PHASING & SEQUENCE DIAGRAMS
SG1	1061	SIGNAL PLANS SIXTH AVENUE & CENTRE AVENUE	SG31	1091	SIGNAL PLANS FIFTH AVENUE & DINWIDDIE STREET	SG62	1122	SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	SG93	1153	SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS
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SG3	1063	SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	SG33	1093	SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	SG64	1124	SIGNAL PLANS WIRING, MOVEMENT, PHASING & SEQUENCE DIAGRAMS	SG95	1155	SIGNAL PLANS FORBES AVENUE & TENTH ST/ARMSTRONG TUNNEL
SG4	1064	SIGNAL PLANS FIFTH AVENUE & SIXTH STREET	SG34	1094	SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	SG65	1125	SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	SG96	1156	SIGNAL PLANS WIRING, MOVEMENT, PHASING & SEQUENCE DIAGRAMS
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SG6	1066	SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	SG36	1096	SIGNAL PLANS WIRING, MOVEMENT, PHASING & SEQUENCE DIAGRAMS	SG67	1127	SIGNAL PLANS FIFTH AVENUE & OAKLAND AVENUE/DE SOTO STREET	SG98	1158	SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS
SG7	1067	SIGNAL PLANS FORBES AVENUE/SIXTH AVENUE & DIAMOND STREET	SG37	1097	SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	SG68	1128	SIGNAL PLANS WIRING, MOVEMENT, PHASING & SEQUENCE DIAGRAMS	SG99	1159	SIGNAL PLANS FORBES AVENUE & CHATHAM SQUARE/MCANULTY DRIVE
SG8	1068	SIGNAL PLANS WIRING, MOVEMENT, PHASING & SEQUENCE DIAGRAMS	SG38	1098	SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	SG69	1129	SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	SG100	1160	SIGNAL PLANS WIRING, MOVEMENT, PHASING & SEQUENCE DIAGRAMS
SG9	1069	SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	SG39	1099	SIGNAL PLANS FIFTH AVENUE & BIRMINGHAM BRIDGE/KIRKPATRICK ST	SG70	1130	SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	SG101	1161	SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS
SG10	1070	SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	SG40	1100	SIGNAL PLANS WIRING, MOVEMENT, PHASING & SEQUENCE DIAGRAMS	SG71	1131	SIGNAL PLANS FIFTH AVENUE & BOUQUET STREET	SG102	1162	SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS
SG11	1071	SIGNAL PLANS FIFTH AVENUE & WASHINGTON PLACE	SG41	1101	SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	SG72	1132	SIGNAL PLANS WIRING, MOVEMENT, PHASING & SEQUENCE DIAGRAMS	SG103	1163	SIGNAL PLANS FORBES AVENUE & STEVENSON STREET
SG12	1072	SIGNAL PLANS WIRING, MOVEMENT, PHASING & SEQUENCE DIAGRAMS	SG42	1102	SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	SG73	1133	SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	SG104	1164	SIGNAL PLANS WIRING, MOVEMENT, PHASING & SEQUENCE DIAGRAMS
SG13	1073	SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	SG43	1103	SIGNAL PLANS FIFTH AVENUE & RAMP TO BOULEVARD OF THE ALLIES	SG74	1134	SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	SG105	1165	SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS
SG14	1074	SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	SG44	1104	SIGNAL PLANS WIRING, MOVEMENT, PHASING & SEQUENCE DIAGRAMS	SG75	1135	SIGNAL PLANS FIFTH AVENUE & THACKERY AVENUE	SG106	1166	SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS
SG15	1075	SIGNAL PLANS FIFTH AVENUE & MAGEE STREET	SG45	1105	SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	SG76	1136	SIGNAL PLANS WIRING, MOVEMENT, PHASING & SEQUENCE DIAGRAMS	SG107	1167	SIGNAL PLANS FORBES AVENUE & PRIDE STREET
SG16	1076	SIGNAL PLANS WIRING, MOVEMENT, PHASING & SEQUENCE DIAGRAMS	SG46	1106	SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	SG77	1137	SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	SG108	1168	SIGNAL PLANS WIRING, MOVEMENT, PHASING & SEQUENCE DIAGRAMS
SG17	1077	SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	SG47	1107	SIGNAL PLANS FIFTH AVENUE & CRAFT AVENUE	SG78	1138	SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	SG109	1169	SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS
SG18	1078	SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	SG48	1108	SIGNAL PLANS WIRING, MOVEMENT, PHASING & SEQUENCE DIAGRAMS	SG79	1139	SIGNAL PLANS FIFTH AVENUE & BIGELOW BOULEVARD	SG110	1170	SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS
SG19	1079	SIGNAL PLANS FIFTH AVENUE & STEVENSON STREET	SG49	1109	SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	SG80	1140	SIGNAL PLANS WIRING, MOVEMENT, PHASING & SEQUENCE DIAGRAMS	SG111	1171	SIGNAL PLANS FORBES AVENUE & MARION STREET
SG20	1080	SIGNAL PLANS WIRING, MOVEMENT, PHASING & SEQUENCE DIAGRAMS	SG50	1110	SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	SG81	1141	SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	SG112	1172	SIGNAL PLANS WIRING, MOVEMENT, PHASING & SEQUENCE DIAGRAMS
SG21	1081	SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	SG51	1111	SIGNAL PLANS FIFTH AVENUE & HALKET STREET	SG82	1142	SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	SG113	1173	SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS
SG22	1082	SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	SG52	1112	SIGNAL PLANS WIRING, MOVEMENT, PHASING & SEQUENCE DIAGRAMS	SG83	1143	SIGNAL PLANS FIFTH AVENUE & LYTTON AVENUE	SG114	1174	SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS
SG23	1083	SIGNAL PLANS FIFTH AVENUE & PRIDE STREET	SG53	1113	SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	SG84	1144	SIGNAL PLANS WIRING, MOVEMENT, PHASING & SEQUENCE DIAGRAMS	SG115	1175	SIGNAL PLANS FORBES AVENUE & VAN BRAAM STREET
SG24	1084	SIGNAL PLANS WIRING, MOVEMENT, PHASING & SEQUENCE DIAGRAMS	SG54	1114	SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	SG85	1145	SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	SG116	1176	SIGNAL PLANS WIRING, MOVEMENT, PHASING & SEQUENCE DIAGRAMS
SG25	1085	SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	SG55	1115	SIGNAL PLANS FIFTH AVENUE & MCKEE PLACE/ DARRAGH STREET	SG86	1146	SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	SG117	1177	SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS
SG26	1086	SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	SG56	1116	SIGNAL PLANS WIRING, MOVEMENT, PHASING & SEQUENCE DIAGRAMS	SG87	1147	SIGNAL PLANS FIFTH AVENUE & TENNYSON AVENUE	SG118	1178	SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS
SG27	1087	SIGNAL PLANS FIFTH AVENUE & MARION STREET/VINE STREET	SG57	1117	SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	SG88	1148	SIGNAL PLANS WIRING, MOVEMENT, PHASING & SEQUENCE DIAGRAMS	SG119	1179	SIGNAL PLANS FORBES AVENUE & MILTENBERGER STREET
SG28	1088	SIGNAL PLANS WIRING, MOVEMENT, PHASING & SEQUENCE DIAGRAMS	SG58	1118	SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	SG89	1149	SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	SG120	1180	SIGNAL PLANS WIRING, MOVEMENT, PHASING & SEQUENCE DIAGRAMS
			SG59	1119	SIGNAL PLANS FIFTH AVENUE & MEYRAN AVENUE/ LOTHROP STREET	SG90	1150	SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	SG121	1181	SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS

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(NOT FOR CONSTRUCTION)

DESIGNED	JMS
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IN CHARGE	LAR
DATE	05/01/24
SCALE	AS SHOWN

<b>PORT AUTHORITY OF ALLEGHENY COUNTY</b> PITTSBURGH PENNSYLVANIA	
<b>BUS RAPID TRANSIT UPTOWN TO OAKLAND</b>	
INDEX OF DRAWINGS	
<b>Port Authority</b> <small>connecting people to life</small>	CONTRACT NO. BRT-001
DWG. NO. GN12	SHT. 12



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INDEX OF DRAWINGS

DRAWING NUMBER	SHEET NUMBER	TITLE	DRAWING NUMBER	SHEET NUMBER	TITLE	DRAWING NUMBER	SHEET NUMBER	TITLE	DRAWING NUMBER	SHEET NUMBER	TITLE
<u>SIGNAL PLANS (CONT'D)</u>			<u>CROSS SECTIONS (CONT'D)</u>			<u>CROSS SECTIONS (CONT'D)</u>			<u>CROSS SECTIONS (CONT'D)</u>		
SG122	1182	SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	XS5	1210	CROSS SECTIONS FIFTH AVE - STA 437+00.00	XS36	1241	CROSS SECTIONS FIFTH AVE - STA 460+00.00 TO STA 460+50.00	XS67	1272	CROSS SECTIONS FIFTH AVE - STA 479+50.00 TO STA 480+00.00
SG123	1183	SIGNAL PLANS FORBES AVENUE & GIST STREET	XS6	1211	CROSS SECTIONS FIFTH AVE - STA 437+50.00	XS37	1242	CROSS SECTIONS FIFTH AVE - STA 461+00.00 TO STA 461+50.00	XS68	1273	CROSS SECTIONS FIFTH AVE - STA 480+50.00 TO STA 481+00.00
SG124	1184	SIGNAL PLANS WIRING, MOVEMENT, PHASING & SEQUENCE DIAGRAMS	XS7	1212	CROSS SECTIONS FIFTH AVE - STA 438+00.00 TO STA 438+50.00	XS38	1243	CROSS SECTIONS FIFTH AVE - STA 462+00.00	XS69	1274	CROSS SECTIONS FIFTH AVE - STA 481+50.00 TO STA 482+00.00
SG125	1185	SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	XS8	1213	CROSS SECTIONS FIFTH AVE - STA 439+00.00 TO STA 439+50.00	XS39	1244	CROSS SECTIONS FIFTH AVE - STA 462+50.00	XS70	1275	CROSS SECTIONS FIFTH AVE - STA 482+39.00
SG126	1186	SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	XS9	1214	CROSS SECTIONS FIFTH AVE - STA 440+00.00 TO STA 440+21.00	XS40	1245	CROSS SECTIONS FIFTH AVE - STA 463+00.00 TO STA 463+50.00	XS71	1276	CROSS SECTIONS FIFTH AVE - STA 482+50.00
SG127	1187	SIGNAL PLANS FORBES AVENUE & JUMONVILLE STREET	XS10	1215	CROSS SECTIONS FIFTH AVE - STA 440+00.00 TO STA 440+50.00	XS41	1246	CROSS SECTIONS FIFTH AVE - STA 463+65.00 TO STA 464+00.00	XS72	1277	CROSS SECTIONS FIFTH AVE - STA 483+00.00
SG128	1188	SIGNAL PLANS WIRING, MOVEMENT, PHASING & SEQUENCE DIAGRAMS	XS11	1216	CROSS SECTIONS FIFTH AVE - STA 440+59.00 TO STA 441+00.00	XS42	1247	CROSS SECTIONS FIFTH AVE - STA 464+50.00 TO STA 465+00.00	XS73	1278	CROSS SECTIONS FIFTH AVE - STA 483+50.00
SG129	1189	SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	XS12	1217	CROSS SECTIONS FIFTH AVE - STA 441+50.00 TO STA 442+00.00	XS43	1248	CROSS SECTIONS FIFTH AVE - STA 465+50.00 TO STA 466+00.00	XS74	1279	CROSS SECTIONS FIFTH AVE - STA 484+00.00 TO STA 484+50.00
SG130	1190	SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	XS13	1218	CROSS SECTIONS FIFTH AVE - STA 442+11.00 TO STA 442+50.00	XS44	1249	CROSS SECTIONS FIFTH AVE - STA 466+50.00 TO STA 467+00.00	XS75	1280	CROSS SECTIONS FIFTH AVE - STA 485+00.00
SG131	1191	SIGNAL PLANS FORBES AVENUE & MOULTRIE STREET	XS14	1219	CROSS SECTIONS FIFTH AVE - STA 443+00.00 TO STA 443+50.00	XS45	1250	CROSS SECTIONS FIFTH AVE - STA 467+08.00 TO 467+50.00	XS76	1281	CROSS SECTIONS FIFTH AVE - STA 485+50.00
SG132	1192	SIGNAL PLANS WIRING, MOVEMENT, PHASING & SEQUENCE DIAGRAMS	XS15	1220	CROSS SECTIONS FIFTH AVE - STA 440+00.00 TO STA 444+50.00	XS46	1251	CROSS SECTIONS FIFTH AVE - STA 467+86.00 TO 468+00.00	XS77	1282	CROSS SECTIONS FIFTH AVE - STA 486+00.00 TO STA 486+45.00
SG133	1193	SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	XS16	1221	CROSS SECTIONS FIFTH AVE - STA 445+00.00 TO STA 445+50.00	XS47	1252	CROSS SECTIONS FIFTH AVE - STA 468+50.00 TO 468+73.00	XS78	1283	CROSS SECTIONS FIFTH AVE - STA 486+50.00 TO STA 486+93.00
SG134	1194	SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	XS17	1222	CROSS SECTIONS FIFTH AVE - STA 446+00.00	XS48	1253	CROSS SECTIONS FIFTH AVE - STA 469+00.00 TO STA 469+50.00	XS79	1284	CROSS SECTIONS FIFTH AVE - STA 487+00.00 TO STA 487+50.00
SG135	1195	SIGNAL PLANS FORBES AVENUE & BIRMINGHAM BRIDGE ON-OFF RAMP	XS18	1223	CROSS SECTIONS FIFTH AVE - STA 446+50.00	XS49	1254	CROSS SECTIONS FIFTH AVE - STA 470+00.00	XS80	1285	CROSS SECTIONS FIFTH AVE - STA 488+00.00 TO STA 488+50.00
SG136	1196	SIGNAL PLANS WIRING, MOVEMENT, PHASING & SEQUENCE DIAGRAMS	XS19	1224	CROSS SECTIONS FIFTH AVE - STA 447+00.00 TO STA 447+50.00	XS50	1255	CROSS SECTIONS FIFTH AVE - STA 470+50.00	XS81	1286	CROSS SECTIONS FIFTH AVE - STA 489+00.00 TO STA 489+50.00
SG137	1197	SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	XS20	1225	CROSS SECTIONS FIFTH AVE - STA 447+86.00 TO STA 448+00.00	XS51	1256	CROSS SECTIONS FIFTH AVE - STA 471+00.00	XS82	1287	CROSS SECTIONS FIFTH AVE - STA 490+00.00
SG138	1198	SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	XS21	1226	CROSS SECTIONS FIFTH AVE - STA 448+50.00 TO STA 449+00.00	XS52	1257	CROSS SECTIONS FIFTH AVE - STA 471+50.00 TO STA 472+00.00	XS83	1288	CROSS SECTIONS FIFTH AVE - STA 490+50.00
SG139	1199	SIGNAL PLANS FORBES AVENUE & HALKET STREET	XS22	1227	CROSS SECTIONS FIFTH AVE - STA 449+50.00 TO STA 450+00.00	XS53	1258	CROSS SECTIONS FIFTH AVE - STA 472+46.00 TO STA 472+50.00	XS84	1289	CROSS SECTIONS FIFTH AVE - STA 491+00.00
SG140	1200	SIGNAL PLANS WIRING, MOVEMENT, PHASING & SEQUENCE DIAGRAMS	XS23	1228	CROSS SECTIONS FIFTH AVE - STA 450+50.00	XS54	1259	CROSS SECTIONS FIFTH AVE - STA 473+00.00 TO STA 473+50.00	XS85	1290	CROSS SECTIONS FIFTH AVE - STA 491+50.00 TO STA 492+00.00
SG141	1201	SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	XS24	1229	CROSS SECTIONS FIFTH AVE - STA 451+00.00 TO STA 451+50.00	XS55	1260	CROSS SECTIONS FIFTH AVE - STA 474+00.00 TO STA 474+50.00	XS86	1291	CROSS SECTIONS FIFTH AVE - STA 492+14.00 TO STA 492+50.00
SG142	1202	SIGNAL PLANS & SCHENLEY DRIVE EXTENSION	XS25	1230	CROSS SECTIONS FIFTH AVE - STA 452+00.00 TO STA 452+50.00	XS56	1261	CROSS SECTIONS FIFTH AVE - STA 475+00.00	XS87	1292	CROSS SECTIONS FIFTH AVE - STA 493+00.00 TO STA 493+50.00
SG143	1203	SIGNAL PLANS WIRING, MOVEMENT, PHASING & SEQUENCE DIAGRAMS	XS26	1231	CROSS SECTIONS FIFTH AVE - STA 452+92.00 TO STA 453+00.00	XS57	1262	CROSS SECTIONS FIFTH AVE - STA 475+50.00	XS88	1293	CROSS SECTIONS FIFTH AVE - STA 494+00.00 TO STA 494+50.00
SG144	1204	SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	XS27	1232	CROSS SECTIONS FIFTH AVE - STA 453+50.00 TO STA 454+00.00	XS58	1263	CROSS SECTIONS FIFTH AVE - STA 476+00.00	XS89	1294	CROSS SECTIONS FIFTH AVE - STA 495+00.00
SG145	1205	SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	XS28	1233	CROSS SECTIONS FIFTH AVE - STA 454+50.00	XS59	1264	CROSS SECTIONS FIFTH AVE - STA 476+18.00	XS90	1295	CROSS SECTIONS FIFTH AVE - STA 495+50.00
			XS29	1234	CROSS SECTIONS FIFTH AVE - STA 455+00.00 TO STA 455+50.00	XS60	1265	CROSS SECTIONS FIFTH AVE - STA 476+50.00	XS91	1296	CROSS SECTIONS FIFTH AVE - STA 496+00.00
			XS30	1235	CROSS SECTIONS FIFTH AVE - STA 455+65.00 TO STA 456+00.00	XS61	1266	CROSS SECTIONS FIFTH AVE - STA 477+00.00	XS92	1297	CROSS SECTIONS FIFTH AVE - STA 496+50.00
			XS31	1236	CROSS SECTIONS FIFTH AVE - STA 456+50.00 TO STA 456+80.00	XS62	1267	CROSS SECTIONS FIFTH AVE - STA 477+42.00	XS93	1298	CROSS SECTIONS FIFTH AVE - STA 497+00.00
XS1	1206	CROSS SECTIONS FIFTH AVE - STA 434+00.00 TO STA 434+50.00	XS32	1237	CROSS SECTIONS FIFTH AVE - STA 457+00.00 TO STA 457+50.00	XS63	1268	CROSS SECTIONS FIFTH AVE - STA 477+50.00	XS94	1299	CROSS SECTIONS FIFTH AVE - STA 497+50.00
XS2	1207	CROSS SECTIONS FIFTH AVE - STA 435+00 TO STA 435+16.00	XS33	1238	CROSS SECTIONS FIFTH AVE - STA 458+00.00 TO STA 458+50.00	XS64	1269	CROSS SECTIONS FIFTH AVE - STA 477+90.00	XS95	1300	CROSS SECTIONS FIFTH AVE - STA 498+00.00
XS3	1208	CROSS SECTIONS FIFTH AVE - STA 435+50.00 TO STA 436+00.00	XS34	1239	CROSS SECTIONS FIFTH AVE - STA 459+00.00 TO STA 459+44.00	XS65	1270	CROSS SECTIONS FIFTH AVE - STA 478+00.00	XS96	1301	CROSS SECTIONS FIFTH AVE - STA 498+50.00
XS4	1209	CROSS SECTIONS FIFTH AVE - STA 436+50.00	XS35	1240	CROSS SECTIONS FIFTH AVE - STA 459+50.00 TO STA 459+75.00	XS66	1271	CROSS SECTIONS FIFTH AVE - STA 478+50.00 TO STA 479+00.00	XS97	1302	CROSS SECTIONS FIFTH AVE - STA 499+00.00 TO STA 499+50.00



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(NOT FOR CONSTRUCTION)

DESIGNED	JMS
DRAWN	JMS
CHECKED	MES
IN CHARGE	LAR
DATE	05/01/24
SCALE	AS SHOWN

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT UPTOWN TO OAKLAND**

INDEX OF DRAWINGS

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CONTRACT NO. BRT-001

DWG. NO. GN13 SHT. 13

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INDEX OF DRAWINGS

DRAWING NUMBER	SHEET NUMBER	TITLE	DRAWING NUMBER	SHEET NUMBER	TITLE	DRAWING NUMBER	SHEET NUMBER	TITLE	DRAWING NUMBER	SHEET NUMBER	TITLE
<u>CROSS SECTIONS (CONT'D)</u>			<u>CROSS SECTIONS (CONT'D)</u>			<u>CROSS SECTIONS (CONT'D)</u>			<u>CROSS SECTIONS (CONT'D)</u>		
XS98	1303	CROSS SECTIONS FIFTH AVE - STA 500+00.00 TO STA 500+50.00	XS129	1334	CROSS SECTIONS FIFTH AVE - STA 533+00.00 TO STA 533+50.00	0	0	0	XS191	1396	CROSS SECTIONS FORBES AVE - STA 138+00.00
XS99	1304	CROSS SECTIONS FIFTH AVE - STA 501+00.00	XS130	1335	CROSS SECTIONS FIFTH AVE - STA 534+00.00 TO STA 534+50.00	XS161	1366	CROSS SECTIONS FORBES AVE - STA 121+50.00	XS192	1397	CROSS SECTIONS FORBES AVE - STA 138+50.00
XS100	1305	CROSS SECTIONS FIFTH AVE - STA 501+50.00 TO STA 502+00.00	XS131	1336	CROSS SECTIONS FIFTH AVE - STA 535+00.00 TO STA 535+50.00	XS162	1367	CROSS SECTIONS FORBES AVE - STA 122+00.00	XS193	1398	CROSS SECTIONS FORBES AVE - STA 139+00.00
XS101	1306	CROSS SECTIONS FIFTH AVE - STA 502+50.00 TO STA 503+00.00	XS132	1337	CROSS SECTIONS FIFTH AVE - STA 536+00.00 TO STA 536+50.00	XS163	1368	CROSS SECTIONS FORBES AVE - STA 122+50.00	XS194	1399	CROSS SECTIONS FORBES AVE - STA 139+50.00
XS102	1307	CROSS SECTIONS FIFTH AVE - STA 503+50.00 TO STA 504+00.00	XS133	1338	CROSS SECTIONS FIFTH AVE - STA 537+00.00 TO STA 537+50.00	XS164	1369	CROSS SECTIONS FORBES AVE - STA 122+86.00	XS195	1400	CROSS SECTIONS FORBES AVE - STA 140+00.00
XS103	1308	CROSS SECTIONS FIFTH AVE - STA 504+50.00 TO STA 505+00.00	XS134	1339	CROSS SECTIONS FIFTH AVE - STA 538+00.00 TO STA 538+50.00	XS165	1370	CROSS SECTIONS FORBES AVE - STA 123+00.00	XS196	1401	CROSS SECTIONS FORBES AVE - STA 140+50.00
XS104	1309	CROSS SECTIONS FIFTH AVE - STA 505+50.00	XS135	1340	CROSS SECTIONS FIFTH AVE - STA 539+00.00 TO STA 539+50.00	XS166	1371	CROSS SECTIONS FORBES AVE - STA 123+50.00 TO STA 124+00.00	XS197	1402	CROSS SECTIONS FORBES AVE - STA 141+00.00
XS105	1310	CROSS SECTIONS FIFTH AVE - STA 506+00.00	XS136	1341	CROSS SECTIONS FIFTH AVE - STA 540+00.00 TO STA 540+50.00	XS167	1372	CROSS SECTIONS FORBES AVE - STA 124+50.00	XS198	1403	CROSS SECTIONS FORBES AVE - STA 141+50.00
XS106	1311	CROSS SECTIONS FIFTH AVE - STA 506+50.00 TO STA 507+00.00	XS137	1342	CROSS SECTIONS FIFTH AVE - STA 541+00.00 TO STA 541+50.00	XS168	1373	CROSS SECTIONS FORBES AVE - STA 125+00.00	XS199	1404	CROSS SECTIONS FORBES AVE - STA 141+78.00
XS107	1312	CROSS SECTIONS FIFTH AVE - STA 507+50.00	XS138	1343	CROSS SECTIONS FIFTH AVE - STA 542+00.00 TO STA 542+50.00	XS169	1374	CROSS SECTIONS FORBES AVE - STA 125+50.00	XS200	1405	CROSS SECTIONS FORBES AVE - STA 142+00.00
XS108	1313	CROSS SECTIONS FIFTH AVE - STA 508+00.00	XS139	1344	CROSS SECTIONS FIFTH AVE - STA 543+00.00 TO STA 543+50.00	XS170	1375	CROSS SECTIONS FORBES AVE - STA 126+00.00 TO STA 126+50.00	XS201	1406	CROSS SECTIONS FORBES AVE - STA 142+50.00
XS109	1314	CROSS SECTIONS FIFTH AVE - STA 508+50.00	XS140	1345	CROSS SECTIONS FIFTH AVE - STA 544+00.00 TO STA 544+50.00	XS171	1376	CROSS SECTIONS FORBES AVE - STA 127+00.00	XS202	1407	CROSS SECTIONS FORBES AVE - STA 143+00.00 TO STA 143+50.00
XS110	1315	CROSS SECTIONS FIFTH AVE - STA 509+00.00 TO STA 509+50.00	XS141	1346	CROSS SECTIONS FIFTH AVE - STA 550+94.00 TO STA 551+00.00	XS172	1377	CROSS SECTIONS FORBES AVE - STA 127+50.00	XS203	1408	CROSS SECTIONS FORBES AVE - STA 144+00.00 TO STA 144+50.00
XS111	1316	CROSS SECTIONS FIFTH AVE - STA 510+00.00 TO STA 510+50.00	XS142	1347	CROSS SECTIONS FIFTH AVE - STA 551+50.00 TO STA 552+00.00	XS173	1378	CROSS SECTIONS FORBES AVE - STA 128+00.00	XS204	1409	CROSS SECTIONS FORBES AVE - STA 145+00.00 TO STA 145+16.00
XS112	1317	CROSS SECTIONS FIFTH AVE - STA 511+00.00 TO STA 511+50.00	XS143	1348	CROSS SECTIONS FIFTH AVE - STA 552+50.00 TO STA 553+00.00	XS174	1379	CROSS SECTIONS FORBES AVE - STA 128+50.00	XS205	1410	CROSS SECTIONS FORBES AVE - STA 145+50.00 TO STA 145+68.00
XS113	1318	CROSS SECTIONS FIFTH AVE - STA 512+00.00 TO STA 512+50.00	XS144	1349	CROSS SECTIONS FIFTH AVE - STA 553+50.00 TO STA 554+00.00	XS175	1380	CROSS SECTIONS FORBES AVE - STA 129+00.00	XS206	1411	CROSS SECTIONS FORBES AVE - STA 146+00.00 TO STA 146+50.00
XS114	1319	CROSS SECTIONS FIFTH AVE - STA 513+00.00 TO STA 513+50.00	XS145	1350	CROSS SECTIONS FIFTH AVE - STA 554+50.00 TO STA 555+00.00	XS176	1381	CROSS SECTIONS FORBES AVE - STA 129+24.00	XS207	1412	CROSS SECTIONS FORBES AVE - STA 147+00.00 TO STA 147+50.00
XS115	1320	CROSS SECTIONS FIFTH AVE - STA 514+00.00 TO STA 514+50.00	XS146	1351	CROSS SECTIONS FIFTH AVE - STA 556+50.00 TO STA 557+00.00	XS177	1382	CROSS SECTIONS FORBES AVE - STA 129+50.00	XS208	1413	CROSS SECTIONS FORBES AVE - STA 148+00.00
XS116	1321	CROSS SECTIONS FIFTH AVE - STA 515+00.00 TO STA 515+50.00	XS147	1352	CROSS SECTIONS FIFTH AVE - STA 557+50.00	XS178	1383	CROSS SECTIONS FORBES AVE - STA 130+00.00	XS209	1414	CROSS SECTIONS FORBES AVE - STA 148+25.00 TO STA 148+50.00
XS117	1322	CROSS SECTIONS FIFTH AVE - STA 516+00.00 TO STA 516+50.00	XS148	1353	CROSS SECTIONS FIFTH AVE - STA 559+50.00 TO STA 560+00.00	XS179	1384	CROSS SECTIONS FORBES AVE - STA 130+28.00	XS210	1415	CROSS SECTIONS FORBES AVE - STA 149+00.00 TO STA 149+50.00
XS118	1323	CROSS SECTIONS FIFTH AVE - STA 516+97.00 TO STA 517+00.00	XS149	1354	CROSS SECTIONS FIFTH AVE - STA 560+50.00 TO STA 561+00.00	XS180	1385	CROSS SECTIONS FORBES AVE - STA 130+50.00	XS211	1416	CROSS SECTIONS FORBES AVE - STA 150+00.00 TO STA 150+50.00
XS119	1324	CROSS SECTIONS FIFTH AVE - STA 517+50.00 TO STA 518+00.00	XS150	1355	CROSS SECTIONS FIFTH AVE - STA 561+50.00 TO STA 562+00.00	XS181	1386	CROSS SECTIONS FORBES AVE - STA 131+00.00 TO STA 131+50.00	XS212	1417	CROSS SECTIONS FORBES AVE - STA 151+00.00
XS120	1325	CROSS SECTIONS FIFTH AVE - STA 518+50.00 TO STA 519+00.00	XS151	1356	CROSS SECTIONS FIFTH AVE - STA 562+50.00 TO STA 563+00.00	XS182	1387	CROSS SECTIONS FORBES AVE - STA 132+00.00 TO STA 132+50.00	XS213	1418	CROSS SECTIONS FORBES AVE - STA 151+50.00
XS121	1326	CROSS SECTIONS FIFTH AVE - STA 520+50.00 TO STA 521+00.00	XS152	1357	CROSS SECTIONS FIFTH AVE - STA 563+50.00 TO STA 564+00.00	XS183	1388	CROSS SECTIONS FORBES AVE - STA 133+00.00 TO STA 133+50.00	XS214	1419	CROSS SECTIONS FORBES AVE - STA 152+00.00
XS122	1327	CROSS SECTIONS FIFTH AVE - STA 521+50.00	XS153	1358	CROSS SECTIONS FIFTH AVE - STA 564+50.00 TO STA 573+95.00	XS184	1389	CROSS SECTIONS FORBES AVE - STA 134+00.00 TO STA 134+50.00	XS215	1420	CROSS SECTIONS FORBES AVE - STA 152+50.00
XS123	1328	CROSS SECTIONS FIFTH AVE - STA 526+00.00 TO STA 526+50.00	XS155	1360	CROSS SECTIONS WASHINGTON PL - STA 25+50.00	XS185	1390	CROSS SECTIONS FORBES AVE - STA 135+00.00 TO STA 135+50.00	XS216	1421	CROSS SECTIONS FORBES AVE - STA 152+55.00
XS124	1329	CROSS SECTIONS FIFTH AVE - STA 527+00.00 TO STA 527+30.00	XS156	1361	CROSS SECTIONS PRIDE ST - STA 30+50.00	XS186	1391	CROSS SECTIONS FORBES AVE - STA 136+00.00	XS217	1422	CROSS SECTIONS FORBES AVE - STA 153+00.00 TO STA 153+50.00
XS125	1330	CROSS SECTIONS FIFTH AVE - STA 527+50.00 TO STA 528+00.00	XS157	1362	CROSS SECTIONS MARION ST - STA 22+75.00	XS187	1392	CROSS SECTIONS FORBES AVE - STA 136+50.00	XS218	1423	CROSS SECTIONS FORBES AVE - STA 154+00.00 TO STA 154+50.00
XS126	1331	CROSS SECTIONS FIFTH AVE - STA 530+50.00 TO STA 531+00.00	XS158	1363	CROSS SECTIONS WYANDOTTE ST - STA 30+50.00	XS188	1393	CROSS SECTIONS FORBES AVE - STA 136+70.00	XS219	1424	CROSS SECTIONS FORBES AVE - STA 155+00.00 TO STA 155+27.00
XS127	1332	CROSS SECTIONS FIFTH AVE - STA 531+50.00 TO STA 532+00.00	XS159	1364	CROSS SECTIONS KIRKPATRICK ST - STA 30+50.00 TO STA 31+00.00	XS189	1394	CROSS SECTIONS FORBES AVE - STA 137+00.00			
XS128	1333	CROSS SECTIONS FIFTH AVE - STA 532+50.00	XS160	1365	CROSS SECTIONS KIRKPATRICK ST - STA 31+50.00	XS190	1395	CROSS SECTIONS FORBES AVE - STA 137+50.00			



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DRAWN	JMS
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PORT AUTHORITY OF ALLEGHENY COUNTY  
PITTSBURGH PENNSYLVANIA

BUS RAPID TRANSIT UPTOWN TO OAKLAND  
INDEX OF DRAWINGS



CONTRACT NO. BRT-001

DWG. NO. GN14 SHT. 14

OPERATOR: "Joseph.s.j.tch" FILE: PA TH: c:\pwork\img\vecom\_dslf6\_nd\joseph.s.j.tch\port\_01\_rd\_10d12.dgn

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OPERATOR: "joseph.s.jitoh"  
 FILE PATH: c:\pwworking\aecom.com\d0207700\BRT\_01\_RD\_10D13.dgn

INDEX OF DRAWINGS

DRAWING NUMBER	SHEET NUMBER	TITLE	DRAWING NUMBER	SHEET NUMBER	TITLE
<u>CROSS SECTIONS (CONT'D)</u>			<u>CROSS SECTIONS (CONT'D)</u>		
XS220	1425	CROSS SECTIONS FORBES AVE - STA 155+50.00	XS251	1456	CROSS SECTIONS FORBES AVE - STA 173+00.00 TO STA 173+50.00
XS221	1426	CROSS SECTIONS FORBES AVE - STA 155+99.00	XS252	1457	CROSS SECTIONS FORBES AVE - STA 174+00.00
XS222	1427	CROSS SECTIONS FORBES AVE - STA 156+00.00	XS253	1458	CROSS SECTIONS FORBES AVE - STA 174+50.00
XS223	1428	CROSS SECTIONS FORBES AVE - STA 156+50.00 TO STA 157+00.00	XS254	1459	CROSS SECTIONS FORBES AVE - STA 175+00.00 TO STA 175+33.00
XS224	1429	CROSS SECTIONS FORBES AVE - STA 157+50.00	XS255	1460	CROSS SECTIONS FORBES AVE - STA 175+50.00 TO STA 176+00.00
XS225	1430	CROSS SECTIONS FORBES AVE - STA 158+00.00	XS256	1461	CROSS SECTIONS FORBES AVE - STA 176+50.00
XS226	1431	CROSS SECTIONS FORBES AVE - STA 158+50.00	XS257	1462	CROSS SECTIONS FORBES AVE - STA 176+58.00
XS227	1432	CROSS SECTIONS FORBES AVE - STA 159+00.00	XS258	1463	CROSS SECTIONS FORBES AVE - STA 177+00.00
XS228	1433	CROSS SECTIONS FORBES AVE - STA 159+50.00	XS259	1464	CROSS SECTIONS FORBES AVE - STA 177+50.00 TO STA 178+00.00
XS229	1434	CROSS SECTIONS FORBES AVE - STA 160+00.00	XS260	1465	CROSS SECTIONS FORBES AVE - STA 178+50.00
XS230	1435	CROSS SECTIONS FORBES AVE - STA 160+50.00	XS261	1466	CROSS SECTIONS FORBES AVE - STA 179+00.00
XS231	1436	CROSS SECTIONS FORBES AVE - STA 161+00.00	XS262	1467	CROSS SECTIONS FORBES AVE - STA 179+50.00
XS232	1437	CROSS SECTIONS FORBES AVE - STA 161+36.00	XS263	1468	CROSS SECTIONS FORBES AVE - STA 180+00.00
XS233	1438	CROSS SECTIONS FORBES AVE - STA 161+50.00	XS264	1469	CROSS SECTIONS FORBES AVE - STA 180+50.00
XS234	1439	CROSS SECTIONS FORBES AVE - STA 162+00.00	XS265	1470	CROSS SECTIONS FORBES AVE - STA 180+65.89
XS235	1440	CROSS SECTIONS FORBES AVE - STA 162+50.00	XS266	1471	CROSS SECTIONS FORBES AVE - STA 211+50.00 TO STA 212+00.00
XS236	1441	CROSS SECTIONS FORBES AVE - STA 163+00.00	XS267	1472	CROSS SECTIONS FORBES AVE - STA 212+41.00 TO STA 212+50.00
XS237	1442	CROSS SECTIONS FORBES AVE - STA 163+50.00 TO STA 164+00.00	XS268	1473	CROSS SECTIONS FORBES AVE - STA 213+00.00 TO STA 213+50.00
XS238	1443	CROSS SECTIONS FORBES AVE - STA 164+50.00 TO STA 165+00.00	XS269	1474	CROSS SECTIONS FORBES AVE - STA 217+15.00
XS239	1444	CROSS SECTIONS FORBES AVE - STA 165+50.00	XS270	1475	CROSS SECTIONS FORBES AVE - STA 217+21.50
XS240	1445	CROSS SECTIONS FORBES AVE - STA 165+88.00	XS271	1476	CROSS SECTIONS FORBES AVE - STA 224+00.00 TO STA 224+50.00
XS241	1446	CROSS SECTIONS FORBES AVE - STA 166+00.00	XS272	1477	CROSS SECTIONS FORBES AVE - STA 224+75.00 TO STA 225+00.00
XS242	1447	CROSS SECTIONS FORBES AVE - STA 166+32.00	XS273	1478	CROSS SECTIONS FORBES AVE - STA 225+50.00
XS243	1448	CROSS SECTIONS FORBES AVE - STA 166+50.00	XS274	1479	CROSS SECTIONS FORBES AVE - STA 236+00.00 TO STA 236+50.00
XS244	1449	CROSS SECTIONS FORBES AVE - STA 167+00.00 TO STA 167+50.00	XS275	1480	CROSS SECTIONS FORBES AVE - STA 236+56.00 TO STA 237+00.00
XS245	1450	CROSS SECTIONS FORBES AVE - STA 168+00.00 TO STA 168+50.00	XS276	1481	CROSS SECTIONS FORBES AVE - STA 237+31.00
XS246	1451	CROSS SECTIONS FORBES AVE - STA 169+00.00 TO STA 169+50.00	XS277	1482	CROSS SECTIONS FORBES AVE - STA 245+00.00
XS247	1452	CROSS SECTIONS FORBES AVE - STA 170+00.00 TO STA 170+50.00	XS278	1483	CROSS SECTIONS FORBES AVE - STA 245+50.00 TO STA 245+76.00
XS248	1453	CROSS SECTIONS FORBES AVE - STA 171+00.00	XS279	1484	CROSS SECTIONS FORBES AVE - STA 246+00.00 TO STA 246+46.00
XS249	1454	CROSS SECTIONS FORBES AVE - STA 171+28.00 TO STA 171+50.00	XS280	1485	CROSS SECTIONS FORBES AVE - STA 246+50.00 TO STA 247+00.00
XS250	1455	CROSS SECTIONS FORBES AVE - STA 172+00.00 TO STA 172+50.00	XS281	1486	CROSS SECTIONS FORBES AVE - STA 247+50.00 TO STA 248+00.00



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DWG. NO. GN15 SHT. 15

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SWM2	2	STORMWATER MANAGEMENT PLANS KEY PLAN	SWM33	33	STORMWATER MANAGEMENT PLANS LANDSCAPE PLANS
SWM3	3	STORMWATER MANAGEMENT PLANS KEY PLAN	SWM34	34	STORMWATER MANAGEMENT PLANS LANDSCAPE PLANS
SWM4	4	STORMWATER MANAGEMENT PLANS GI DETAILS	SWM35	35	STORMWATER MANAGEMENT PLANS LANDSCAPE PLANS
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SWM6	6	STORMWATER MANAGEMENT PLANS GI DETAILS			
SWM7	7	STORMWATER MANAGEMENT PLANS GI DETAILS			
SWM8	8	STORMWATER MANAGEMENT PLANS GI DETAILS			
SWM9	9	STORMWATER MANAGEMENT PLANS GI DETAILS			
SWM10	10	STORMWATER MANAGEMENT PLANS GI DETAILS			
SWM11	11	STORMWATER MANAGEMENT PLANS GI DETAILS			
SWM13	13	STORMWATER MANAGEMENT PLANS STRUCTURE TABLE - FIFTH AVENUE			
SWM14	14	STORMWATER MANAGEMENT PLANS STRUCTURE TABLE - FORBES AVENUE			
SWM15	15	STORMWATER MANAGEMENT PLANS FIFTH AVE - STA 456+50 TO STA 458+50			
SWM16	16	STORMWATER MANAGEMENT PLANS FIFTH AVE - STA 458+50 TO STA 460+00			
SWM17	17	STORMWATER MANAGEMENT PLANS FIFTH AVE - STA 470+50 TO STA 472+50			
SWM18	18	STORMWATER MANAGEMENT PLANS FIFTH AVE - STA 474+50 TO STA 477+50			
SWM19	19	STORMWATER MANAGEMENT PLANS FIFTH AVE - STA 484+50 TO STA 486+50			
SWM20	20	STORMWATER MANAGEMENT PLANS FIFTH AVE - STA 488+00 TO STA 491+00			
SWM21	21	STORMWATER MANAGEMENT PLANS FIFTH AVE - STA 491+50 TO STA 493+50			
SWM22	22	STORMWATER MANAGEMENT PLANS FORBES AVE - STA 142+00 TO STA 144+00			
SWM23	23	STORMWATER MANAGEMENT PLANS FORBES AVE - STA 145+50 TO STA 147+50			
SWM24	24	STORMWATER MANAGEMENT PLANS FORBES AVE - STA 145+50 TO STA 147+50			
SWM25	25	STORMWATER MANAGEMENT PLANS FORBES AVE - STA 148+00 TO STA 150+50			
SWM26	26	STORMWATER MANAGEMENT PLANS FORBES AVE - STA 156+50 TO STA 158+00			
SWM27	27	STORMWATER MANAGEMENT PLANS FORBES AVE - STA 164+50 TO STA 166+00			
SWM28	28	STORMWATER MANAGEMENT PLANS FORBES AVE - STA 169+50 TO STA 171+50			
SWM29	29	STORMWATER MANAGEMENT PLANS FORBES AVE - STA 246+00 TO STA 248+50			
SWM30	30	STORMWATER MANAGEMENT PLANS BIOSWALE GRADING PLANS			
<u>PWSA GREEN INFRASTRUCTURE (GI) PLANS (CONT'D)</u>					



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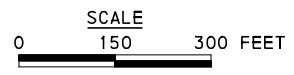
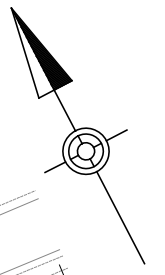
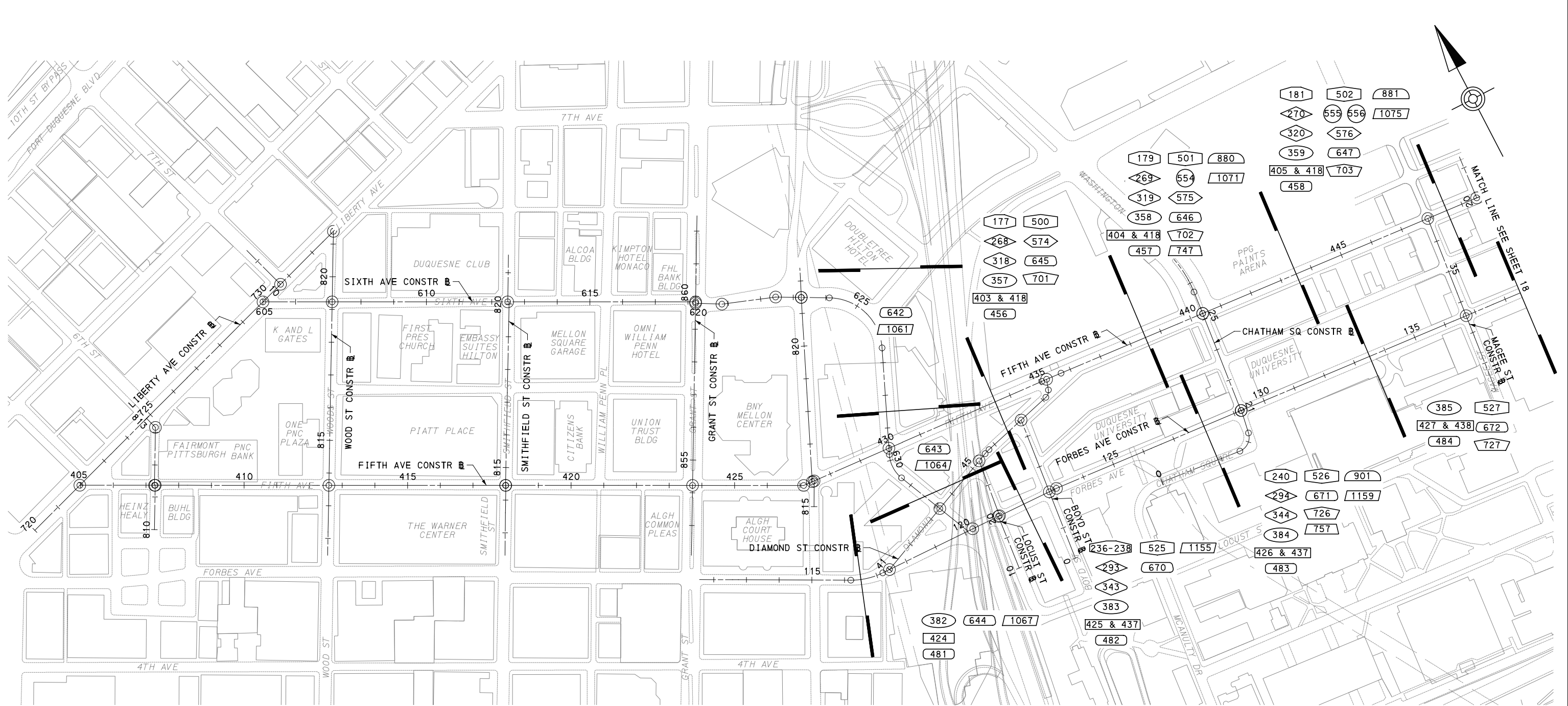
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<b>BUS RAPID TRANSIT UPTOWN TO OAKLAND</b>	
INDEX OF DRAWINGS	
<b>Port Authority</b> <small>connecting people to life</small>	CONTRACT NO. BRT-001
DWG. NO. GN16	SHT. 16



**LEGEND**

INTERSECTION DETAILS	UTILITY PLANS	BUS STATION DRAINAGE TAP-IN PLANS
CIVIL LAYOUT PLANS	PWSA RELOCATION PLANS	CONTROL SYSTEMS PLANS
REMOVAL & ADJUSTMENTS PLANS	LANDSCAPING PLANS	SIGNAL PLANS
ROADWAY PLANS	SIGNING & PAVEMENT MARKING PLANS	STORMWATER MANAGEMENT PLANS
ROADWAY PROFILES	LIGHTING PLANS	SHEET BREAK
EROSION AND SEDIMENTATION CONTROL PLANS	ARCHITECTURAL PLANS	

FOR MAINTENANCE & PROTECTION OF TRAFFIC INDEX SEE SHEET 917

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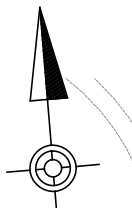
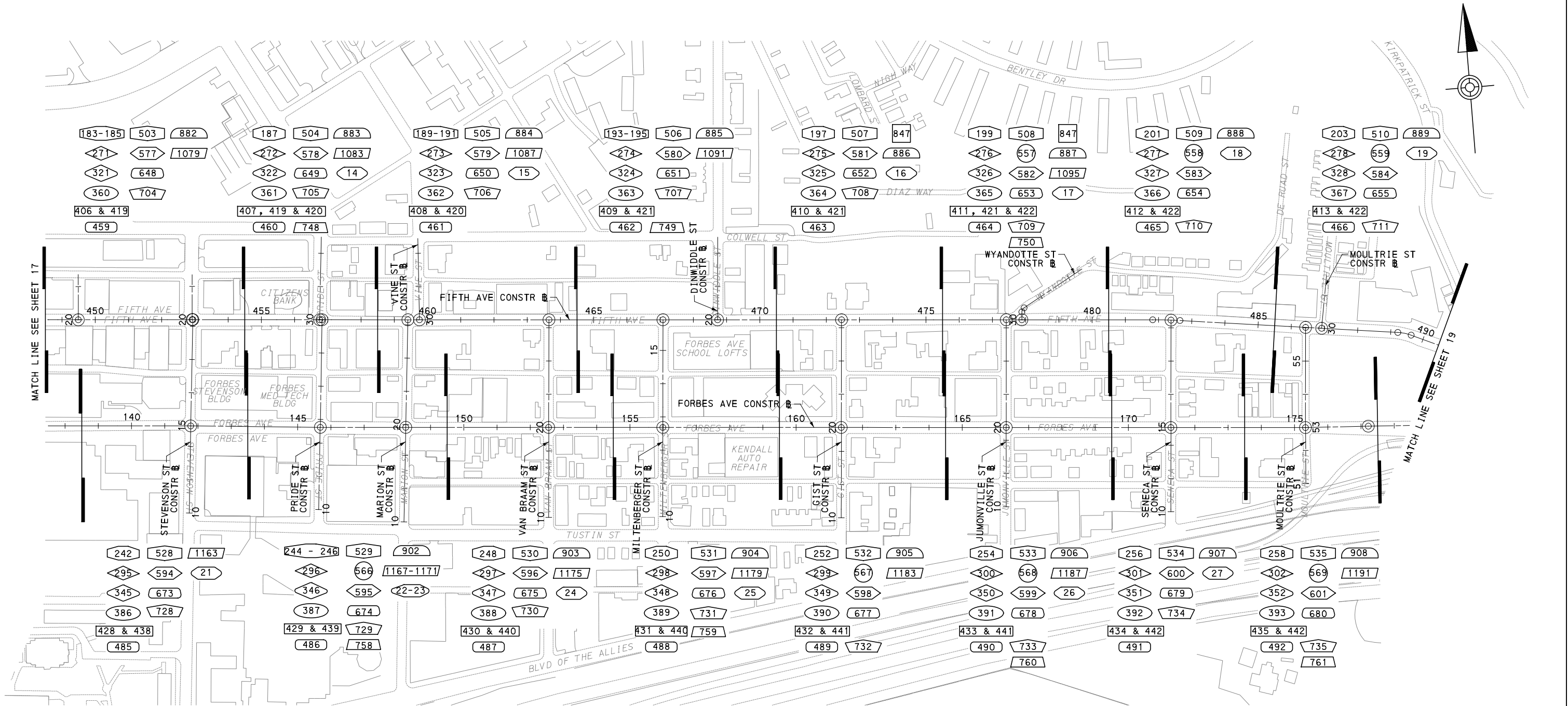
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 PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT UPTOWN TO OAKLAND**  
 INDEX MAP  
 DOWNTOWN TO UPTOWN

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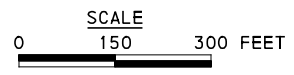
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DWG. NO. GN17	SHT. 17





MATCH LINE SEE SHEET 17

MATCH LINE SEE SHEET 19



**LEGEND**

INTERSECTION DETAILS	UTILITY PLANS	BUS STATION DRAINAGE TAP-IN PLANS
CIVIL LAYOUT PLANS	PWSA RELOCATION PLANS	CONTROL SYSTEMS PLANS
REMOVAL & ADJUSTMENTS PLANS	LANDSCAPING PLANS	SIGNAL PLANS
ROADWAY PLANS	SIGNING & PAVEMENT MARKING PLANS	STORMWATER MANAGEMENT PLANS
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EROSION AND SEDIMENTATION CONTROL PLANS	ARCHITECTURAL PLANS	

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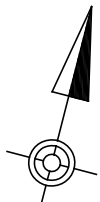
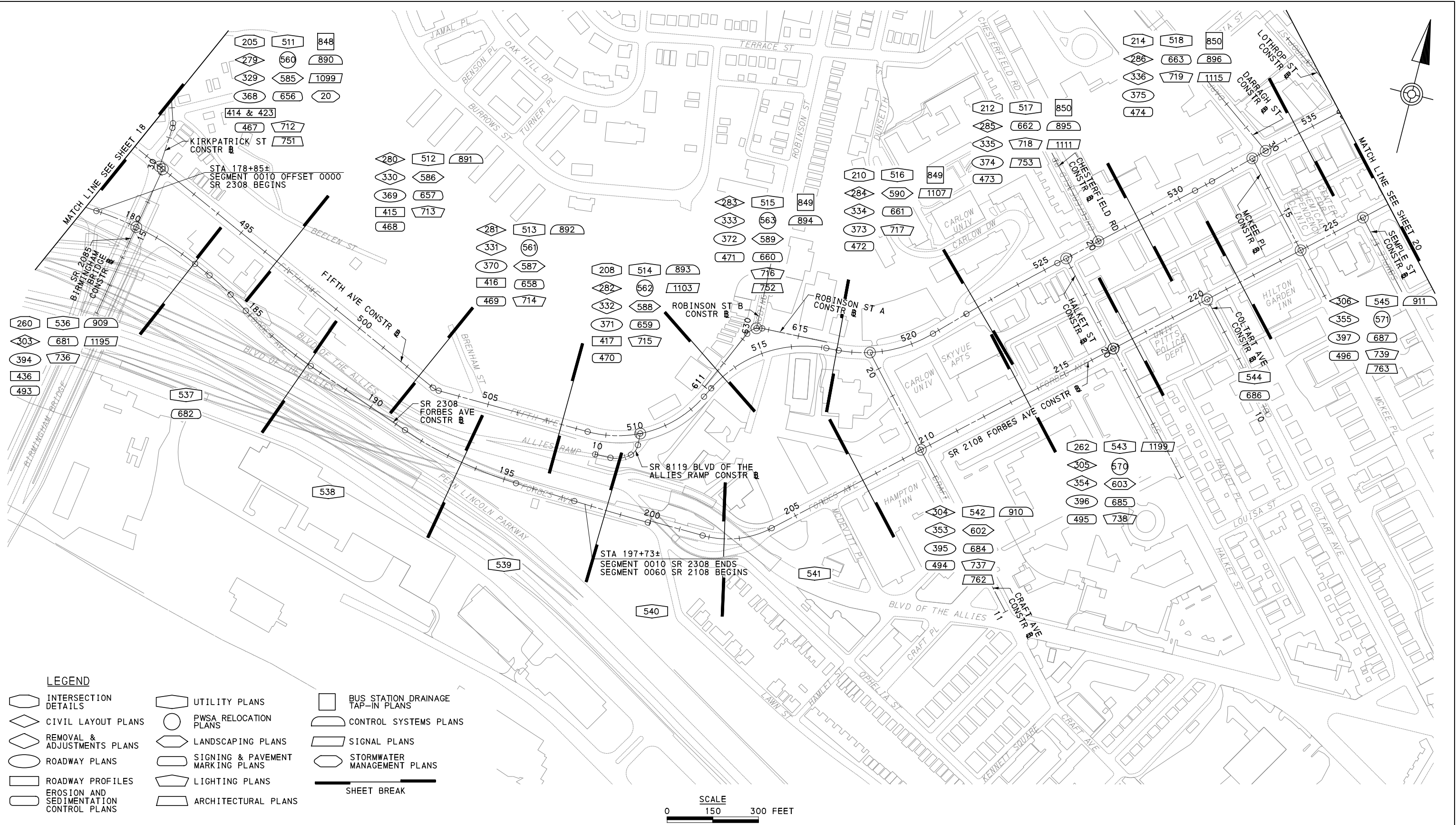
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 PITTSBURGH PENNSYLVANIA

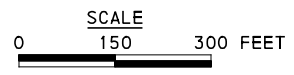
**BUS RAPID TRANSIT UPTOWN TO OAKLAND**  
 INDEX MAP UPTOWN

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- LEGEND**
- INTERSECTION DETAILS
  - CIVIL LAYOUT PLANS
  - REMOVAL & ADJUSTMENTS PLANS
  - ROADWAY PLANS
  - ROADWAY PROFILES
  - EROSION AND SEDIMENTATION CONTROL PLANS
  - UTILITY PLANS
  - PWSA RELOCATION PLANS
  - LANDSCAPING PLANS
  - SIGNING & PAVEMENT MARKING PLANS
  - LIGHTING PLANS
  - ARCHITECTURAL PLANS
  - BUS STATION DRAINAGE TAP-IN PLANS
  - CONTROL SYSTEMS PLANS
  - SIGNAL PLANS
  - STORMWATER MANAGEMENT PLANS
- SHEET BREAK



FOR MAINTENANCE & PROTECTION OF TRAFFIC INDEX SEE SHEET 919

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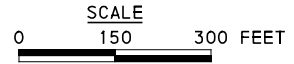
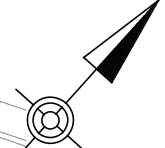
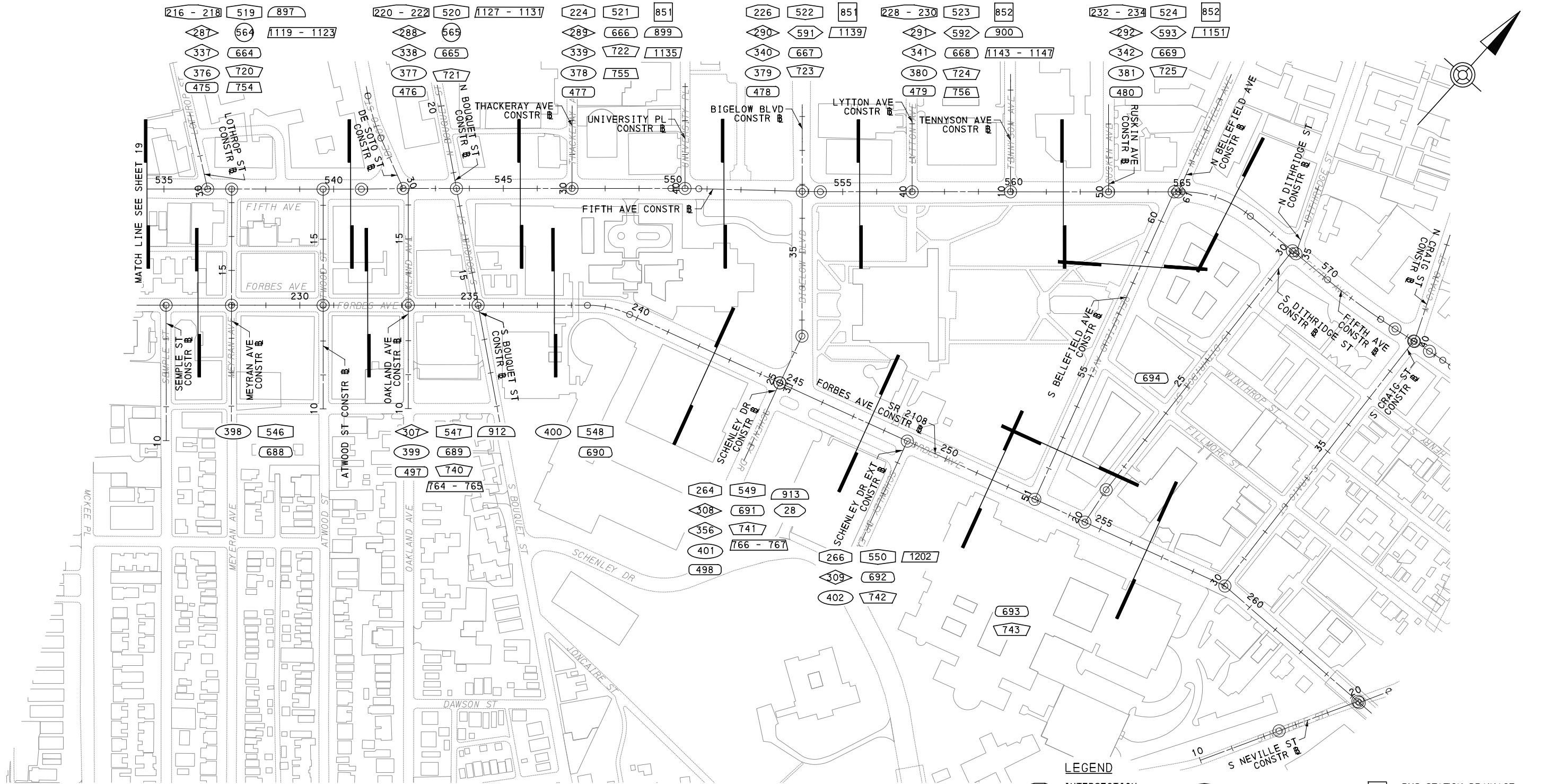
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**BUS RAPID TRANSIT UPTOWN TO OAKLAND**  
 INDEX MAP  
 UPTOWN TO OAKLAND

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CONTRACT NO. BRT-001	
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LEGEND			
	INTERSECTION DETAILS		UTILITY PLANS
	CIVIL LAYOUT PLANS		PWSA RELOCATION PLANS
	REMOVAL & ADJUSTMENTS PLANS		LANDSCAPING PLANS
	ROADWAY PLANS		SIGNING & PAVEMENT MARKING PLANS
	ROADWAY PROFILES		LIGHTING PLANS
	EROSION AND SEDIMENTATION CONTROL PLANS		ARCHITECTURAL PLANS
	BUS STATION DRAINAGE TAP-IN PLANS		CONTROL SYSTEMS PLANS
	SIGNAL PLANS		STORMWATER MANAGEMENT PLANS
	SHEET BREAK		

FOR MAINTENANCE & PROTECTION OF TRAFFIC INDEX SEE SHEET 920



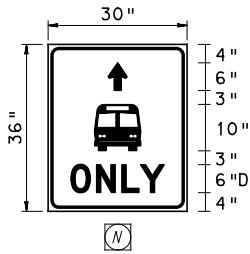
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<b>PORT AUTHORITY OF ALLEGHENY COUNTY</b> PITTSBURGH PENNSYLVANIA	
<b>BUS RAPID TRANSIT UPTOWN TO OAKLAND</b>	
INDEX MAP OAKLAND	
<b>Port Authority</b> <small>connecting people to life</small>	CONTRACT NO. BRT-001
	DWG. NO. GN20      SHT. 20



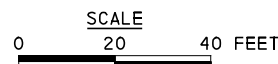
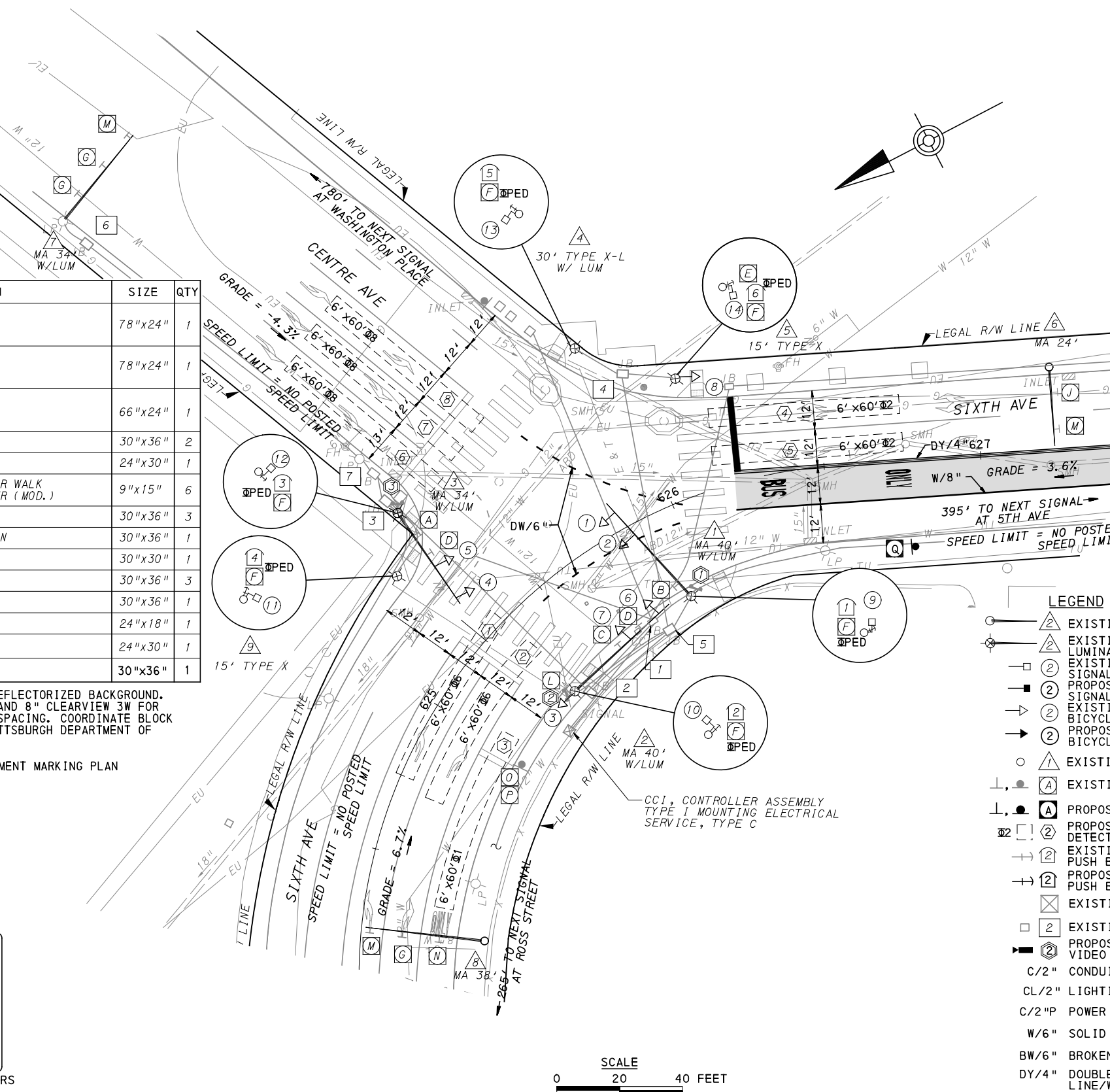
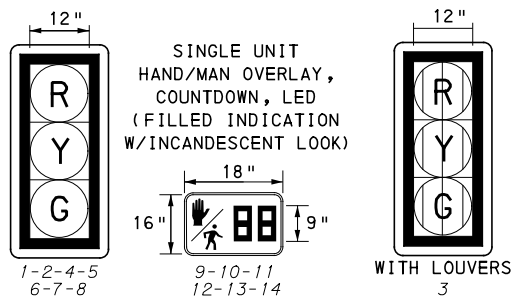
**SIGNS**

SIGN	STANDARD	DESCRIPTION	SIZE	QTY
A	D3-4 *	700 Centre Ave	78"x24"	1
B	D3-4 *	700 Centre Ave	78"x24"	1
C	D3-4 *	600 500 Sixth Ave	66"x24"	1
D	R10-11	NO TURN ON RED ●	30"x36"	2
E	R10-11	NO TURN ON RED ●	24"x30"	1
F	R10-3E (MOD)	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER (MOD.)	9"x15"	6
G	R3-5R	RIGHT TURN ONLY	30"x36"	3
J	R3-6LR	OPTIONAL LEFT OR RIGHT TURN	30"x36"	1
L	SPECIAL	BUS LANE SIGNAL	30"x30"	1
M	R3-5L	LEFT TURN ONLY	30"x36"	3
N	R3-5Ba	BUS ONLY	30"x36"	1
O	R10-6-1R	RIGHT LANE	24"x18"	1
P	R10-6AL	STOP HERE ON RED (LEFT)	24"x30"	1
Q	R3-11B **	LEFT LANE BUSES ONLY	30"x36"	1

\* WHITE REFLECTORIZED LEGEND AND BORDER ON BLUE REFLECTORIZED BACKGROUND. UTILIZE 4" CLEARVIEW 3W FOR BLOCK/NEIGHBORHOOD AND 8" CLEARVIEW 3W FOR STREET NAME. ACTUAL WIDTH DETERMINED BY LETTER SPACING. COORDINATE BLOCK NUMBERS AND STREET NAME DETAILS WITH CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE.

\*\* SIGN TABULATED AS PART OF THE SIGNING AND PAVEMENT MARKING PLAN

**SIGNAL HEADS**



**AUDIBLE PEDESTRIAN SIGNAL NOTES**

1. ALL PUSH BUTTONS SHALL BE EQUIPPED WITH LOCATOR TONES.
2. ALL WALK INTERVALS TO HAVE VERBAL MESSAGE DETAILING WALK DIRECTION.
3. VERBAL MESSAGE TO BE PLAYED DURING WALK INTERVAL WHEN BUTTON IS PRESSED.
4. ALL PEDESTRIAN PUSH BUTTONS TO BE LOCATED AT 42" ABOVE GROUND.
5. ALL PUSH BUTTONS TO BE EQUIPPED WITH VIBROTACTILE ARROW.
6. VIBROTACTILE ARROWS TO VIBRATE DURING WALK INTERVAL.
7. WALK AND DON'T WALK MESSAGE SHALL BE AUDIBLE THROUGH THE PUSH BUTTON SPEAKER.

**SIGNAL ASSEMBLY NOTES**

1. ALL VEHICULAR/BICYCLE SIGNALS SHALL BE EQUIPPED WITH L.E.D LENSES, TUNNEL VISORS AND LOUVERED BLACK METAL BACKPLATES WITH 2" REFLECTIVE BORDERS.
2. MIN/MAX HEIGHT TO BOTTOM OF VEHICULAR SIGNALS 17'/18'.
3. MIN HORIZONTAL SPACING FOR VEHICULAR SIGNALS IS 8'.
4. MIN/MAX HEIGHT TO BOTTOM OF PEDESTRIAN SIGNALS 10'/12'.
5. FINAL SIGNAL HEAD PLACEMENT WILL BE DETERMINED BY REPRESENTATIVES OF THE CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE AND THE DISTRICT TRAFFIC UNIT PRIOR TO SIGNAL BEING TURNED ON.
6. ALL PEDESTRIAN SIGNALS SHALL BE PORTLAND ORANGE FULL "PEDESTRIAN HAND" AND WHITE "WALKING PERSON" SYMBOLS AND HAVE INCANDESCENT LOOK WITH COUNTDOWN TIMER.
7. PROVIDE AIRCRAFT STRANDED CABLE FOR MOUNTING SIGNAL AND SIGN BRACKET ASSEMBLIES TO MAST ARMS.
8. PROVIDE BLACK ALUMINUM HOUSINGS FOR ALL SIGNAL HEADS.
9. INSTALL POST MOUNTED SIGNAL HEADS WITH BOTTOMS NO GREATER THAN 15" ABOVE THE SIDEWALK OR PAVEMENT.
10. EXACT LOCATION OF TRAFFIC SIGNAL SUPPORTS SHALL BE DETERMINED BY REPRESENTATIVES OF THE CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE AND THE DISTRICT TRAFFIC UNIT PRIOR TO INSTALLATION.

**PAVEMENT MARKING NOTES**

1. ALL STOP BARS ARE W/24".
2. CROSSWALKS ARE 10' X 24" KEYS WITH 3' TO 5' SPACING.
3. CROSSWALKS ACROSS BICYCLE LANES ARE 6' X 12" KEYS WITH 1' SPACING.

**LEGEND**

- ▲ EXISTING MAST ARM
- ▲ EXISTING MAST ARM WITH LUMINAIRE ARM
- ▲ EXISTING PEDESTRIAN SIGNAL HEAD
- ▲ PROPOSED PEDESTRIAN SIGNAL HEAD
- ▲ EXISTING VEHICULAR/BICYCLE SIGNAL HEAD
- ▲ PROPOSED VEHICULAR/BICYCLE SIGNAL HEAD
- EXISTING PEDESTAL
- ▲ EXISTING SIGN
- ▲ PROPOSED SIGN
- PROPOSED STOP BAR VIDEO DETECTION ZONE
- EXISTING AUDIBLE PEDESTRIAN PUSH BUTTON/SIGN
- PROPOSED AUDIBLE PEDESTRIAN PUSH BUTTON/SIGN
- ⊠ EXISTING CONTROLLER ASSEMBLY
- EXISTING JUNCTION BOX
- PROPOSED STOP BAR VIDEO DETECTOR
- C/2" CONDUIT/SIZE
- CL/2" LIGHTING CONDUIT/SIZE
- C/2"P POWER CONDUIT/SIZE
- W/6" SOLID WHITE LINE/WIDTH
- BW/6" BROKEN WHITE LINE/WIDTH
- DY/4" DOUBLE SOLID YELLOW LINE/WIDTH
- G/24" SOLID GREEN LINE/WIDTH

COUNTY: ALLEGHENY	
MUNICIPALITY: CITY OF PITTSBURGH	
INTERSECTION: SIXTH AVENUE AND CENTRE AVENUE	
APPROVED AND ACCEPTED:	
CITY TRAFFIC ENGINEER	DATE
APPROVED AND ACCEPTED:	
DISTRICT TRAFFIC ENGINEER	DATE



NO.	DATE	DESCRIPTION
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SCALE	AS SHOWN

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT UPTOWN TO OAKLAND**  
SIGNAL PLANS  
SIXTH AVENUE & CENTRE AVENUE

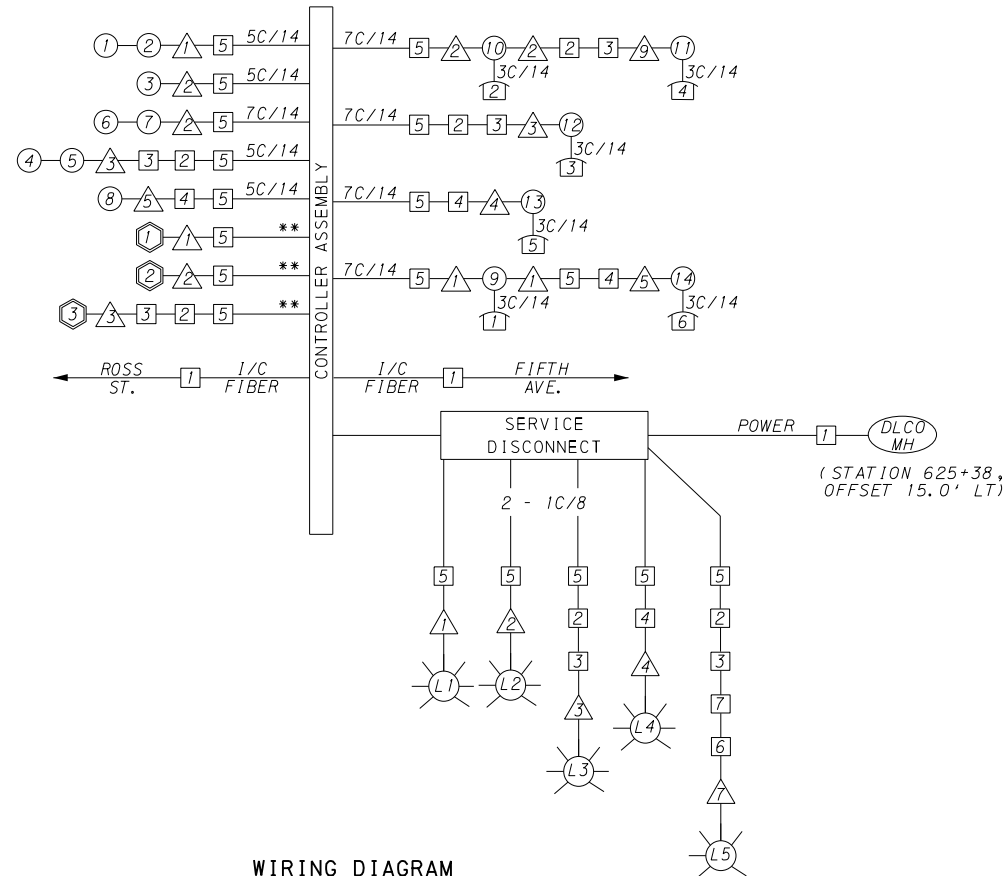
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DWG. NO. SG1 SHT. 1061



**MOVEMENT, PHASING AND SEQUENCE CHART**

SIGNAL	INTERVAL	PHASE 1+2				PHASE 2+6				PHASE PED				PHASE 8				NON LOCKING
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
1-2		R	R	R		G	Y	R		R	R	R		R	R	R		R
3		G	Y	R		R	R	R		R	R	R		R	R	R		R
4-5-8		G	G	G		G	Y	R		R	R	R		R	R	R		R
6-7		R	R	R		R	R	R		R	R	R		G	Y	R		R
9-10-11-12-13-14		DW	DW	DW		DW	DW	DW		W	FD	DW		DW	DW	DW		OFF
FIXED		X	4	3		X	3	3				3		X	3	3		
MINIMUM		5				15								7				
PASSAGE		3				3								3				
FREE (MAX)		10				60								45				
PEDESTRIAN										11	19							
MEMORY		NON LOCKING				MIN RECALL				PED RECALL				NON LOCKING				



**WIRING DIAGRAM**

- 5C/14 - CABLE (NO. OF CONDUCTORS/SIZE AWG.)
- ① EXISTING SIGNAL HEAD      ① PROPOSED SIGNAL HEAD
  - ① EXISTING AUDIBLE PEDESTRIAN INDICATOR      ① PROPOSED AUDIBLE PEDESTRIAN INDICATOR
  - △ EXISTING SIGNAL SUPPORT      △ PROPOSED SIGNAL SUPPORT
  - ① EXISTING JUNCTION BOX      ① PROPOSED JUNCTION BOX
  - Ⓛ EXISTING LUMINAIRE      Ⓛ PROPOSED LUMINAIRE
  - ① PROPOSED DETECTOR
  - \*\* INCIDENTAL TO ITEM 02895.001, AS PER MANUFACTURERS SPECIFICATIONS

**DETECTOR ZONE INFORMATION**

DETECTOR	DETECTION ZONE(S)	MODE	TYPE	ROUTE	PHASE	LOCATION MAST ARM
①	④⑤ (6'x60')	PRESENCE	RADAR (STOP BAR)	6TH AVENUE	2	①
②	①② (6'x60')	PRESENCE	RADAR (STOP BAR)	6TH AVENUE	6	②
	③ (6'x60')				1	
③	⑥⑦⑧ (6'x60')	PRESENCE	RADAR (STOP BAR)	CENTRE AVENUE	8	③

**TRANSIT PRIORITY PRE-EMPTION NOTES (TO BE INSTALLED BY OTHERS)**

- COORDINATE TRAFFIC CONTROLLER PROGRAMMING MODIFICATION WITH REPRESENTATIVES OF THE CITY OF PITTSBURGH AND DISTRICT TRAFFIC UNIT.
- INCLUDE A TRANSIT PRIORITY PHASE THAT WILL EXTEND THE INDICATED PHASE A MAXIMUM OF 10 SECONDS WHEN ACTIVATED BY A PORT AUTHORITY VEHICLE. DO NOT VIOLATE SIDE STREET PEDESTRIAN MINIMUM TIMINGS.
- MAINTAIN ALL YELLOW CLEARANCES AT ALL TIMES.
- PROCEED TO THE SUBSEQUENT INTERVAL AS DEFINED IN THE MOVEMENT, SEQUENCE AND TIMING DIAGRAM UPON COMPLETING THE GREEN EXTENSION INTERVAL.
- ONCE A TRANSIT CALL IS PLACED AND SATISFIED, THE CONTROLLER WILL NOT SATISFY ANOTHER CALL FOR 4 CYCLES.
- LOCATION OF BUS DETECTORS ARE TO BE FIELD ADJUSTED TO ACHIEVE MAXIMUM OPERATION.

**GENERAL NOTES**

THE CITY OF PITTSBURGH SHALL INSPECT THE NEW SIGNAL EQUIPMENT PRIOR TO ACTIVATION.  
 ALL TRAFFIC SIGNAL MAINTENANCE AND OPERATION RESPONSIBILITIES SHALL BE TURNED OVER TO THE CITY OF PITTSBURGH AFTER THE FOLLOWING CONDITIONS ARE IMPLEMENTED TO THE CITY'S SATISFACTION:

- PERMIT "AS-BUILT" TRAFFIC SIGNAL DRAWINGS ARE SUBMITTED AND APPROVED.
- ALL PUNCH LIST ITEMS ARE COMPLETED BY THE CONTRACTOR.
- AFTER THE 30-DAY CONTINUOUS UNINTERRUPTED SIGNAL OPERATION WITHOUT MALFUNCTIONS.

**CONSTRUCTION NOTES**

- ALL JUNCTION BOXES IN WALK AREAS TO BE CITY OF PITTSBURGH STANDARD CONCRETE JUNCTION BOX, TYPE 1.
- ALL JUNCTION BOXES IN NON-WALK AREAS TO BE CITY STANDARD JB-2 WITH BOTTOM.
- THERE SHALL BE NO SIGNAL WIRE OR FIBER CABLE SPLICING.
- SERVICE WIRE FROM THE POWER SOURCE TO THE CONTROLLER CABINET SHALL BE PLACED IN SECONDARY SEPARATE CONDUIT.
- STREET LIGHT CABLE IS NOT PERMITTED TO RUN THROUGH THE CONTROLLER CABINET AND SHALL BE PLACED IN SEPARATE CONDUIT.
- TRAFFIC SIGNAL CABLE SHALL BE PLACED IN DEDICATED CONDUIT.
- MOUNT DISCONNECT ON POLE NEAREST TO THE CONTROLLER CABINET EXCLUDING TYPE X POLES.
- REMOVE AND DISPOSE OF ALL EXISTING SIGNAL WIRING NO LONGER IN USE.
- REMOVE EXISTING SIGNAL EQUIPMENT NO LONGER IN USE AND RETURN TO THE CITY OF PITTSBURGH TRAFFIC CONTROL SHOP. COORDINATE DELIVERY OF EQUIPMENT WITH DELMAS MCELHANY, TRAFFIC CONTROL FOREMAN.

TS-582

COUNTY: ALLEGHENY  
 MUNICIPALITY: CITY OF PITTSBURGH  
 INTERSECTION: SIXTH AVENUE AND CENTRE AVENUE

APPROVED AND ACCEPTED:  
 CITY TRAFFIC ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_  
 APPROVED AND ACCEPTED:  
 DISTRICT TRAFFIC ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_



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**(NOT FOR CONSTRUCTION)**

DESIGNED	DWP
DRAWN	NED
CHECKED	AJR
IN CHARGE	JKM
DATE	05/01/24
SCALE	AS SHOWN

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
 PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT UPTOWN TO OAKLAND**  
 SIGNAL PLANS  
 WIRING, MOVEMENT, PHASING & SEQUENCE DIAGRAMS

**Port Authority** connecting people to life™

CONTRACT NO. BRT-001  
 DWG. NO. SG2 SHT. 1062



TRAFFIC SIGNAL TABULATION

SIXTH AVENUE AND CENTRE AVENUE

ITEM NUMBER	MISCELLANEOUS			
UNIT	DESCRIPTION	QTY.	LOCATION	REMARKS
01882.002	TRAFFIC SIGNAL TIMING MODIFICATIONS	2	cc	
EACH				

DETECTORS

ITEM NUMBER	DESCRIPTION	SEN. NO.	QTY.	LOCATION
	DIGITAL WAVE RADAR DETECTION	①	1	①
	DIGITAL WAVE RADAR DETECTION	②	1	②
	DIGITAL WAVE RADAR DETECTION	③	1	③

TRAFFIC SIGNAL SUPPORTS \*\*

POLE NO.	ITEM NUMBER	DESCRIPTION	QTY.	ROUTE	STATION	SIDE	OFFSET	MAST ARM																PEDESTAL		
								ARM "A"								ARM "C"				SHAFT	SIGNAL					
								H	K	SIGNAL LOCATION				SIGN LOCATION				W	G		X	Z	H	M	N	
								L	M	N	O	P	R	S	T	U	Y									
①		TRAFFIC SIGNAL SUPPORT, 40' MAST ARM WITH LUMINAIRE ARM (30' MOUNTING HEIGHT), PAINTED GRAY	1	SIXTH AVE	625+93	R	29'	17'	10'	40'	36'	26'	--	--	--	--	--	5'	18°	--	30'	0°	--	--	--	
②		TRAFFIC SIGNAL SUPPORT, 40' MAST ARM WITH LUMINAIRE ARM (30' MOUNTING HEIGHT), PAINTED GRAY	1	SIXTH AVE	625+34	R	32'	17'	10'	40'	36'	24'	--	--	29'	19'	0'	--	13'	90°	--	30'	0°	--	--	--
③		TRAFFIC SIGNAL SUPPORT, 34' MAST ARM WITH LUMINAIRE ARM (30' MOUNTING HEIGHT), PAINTED GRAY	1	SIXTH AVE	625+35	L	47'	17'	10'	34'	32'	20'	--	--	15'	--	--	--	8'	349°	--	30'	0°	--	--	--
④		TRAFFIC SIGNAL SUPPORT, 30' TYPE X-L WITH LUMINAIRE ARM, PAINTED GRAY	1	SIXTH AVE	625+95	L	58'	--	--	--	--	--	--	--	--	--	--	--	--	--	30'	0°	30'	--	10'	
⑤		TRAFFIC SIGNAL SUPPORT, 15' TYPE X, PAINTED GRAY	1	SIXTH AVE	626+13	L	37'	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	15'	--	10'	
⑥		TRAFFIC SIGNAL SUPPORT, 24' MAST ARM, PAINTED GRAY	1	SIXTH AVE	627+24	L	26'	17'	--	24'	--	--	--	--	19'	7'	--	--	--	--	--	--	--	--	--	
⑦		TRAFFIC SIGNAL SUPPORT, 34' MAST ARM WITH LUMINAIRE ARM (30' MOUNTING HEIGHT), PAINTED GRAY	1	CENTRE AVE	--	R	40'	17'	--	34'	--	--	--	--	33'	21'	8'	--	--	--	30'	0°	--	--	--	
⑧		TRAFFIC SIGNAL SUPPORT, 38' MAST ARM, PAINTED GRAY	1	SIXTH AVE	624+24	R	40'	17'	--	38'	--	--	--	--	37'	26'	14'	--	--	--	--	--	--	--	--	
⑨		TRAFFIC SIGNAL SUPPORT, 15' TYPE X, PAINTED GRAY	1	SIXTH AVE	625+23	L	35'	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	15'	--	10'	

\*\* REFER TO TRAFFIC STANDARDS TC-8800 SERIES FOR LETTER DESIGNATION

TS-582



Gulf Tower  
707 Grant Street  
5th Floor  
Pittsburgh, PA 15219

NO.	DATE	DESCRIPTION
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(NOT FOR CONSTRUCTION)

DESIGNED	DWP
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PORT AUTHORITY OF ALLEGHENY COUNTY PITTSBURGH PENNSYLVANIA	
BUS RAPID TRANSIT UPTOWN TO OAKLAND SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	
Port Authority connecting people to life®	CONTRACT NO. BRT-001
DWG. NO. SG3	SHT. 1063

**SIGNS**

SIGN	STANDARD	DESCRIPTION	SIZE	QTY
A	R3-1	NO RIGHT TURN	30"x30"	1
B	R6-1R/ R6-1L	HORIZONTAL RIGHT/LEFT ONE-WAY ARROW	36"x12"	2
C	R3-2	NO LEFT TURN	30"x30"	1
D	R3-2	NO LEFT TURN	24"x24"	1
E	R10-11	NO TURN ON RED ●	24"x30"	3
F	R10-3E(MOD)	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER	9"x15"	8
G	R3-11B (MOD)	LEFT LANE BUSES ONLY	30"x36"	2
H	D3-4	500 600 FIFTH AVE	60"x24"	1
I	D3-4	600 500 FIFTH AVE	60"x24"	1
J	D3-4	600 700 SIXTH AVE	66"x24"	1
K	D3-4	700 600 SIXTH AVE	66"x24"	1
L	R5-1	DO NOT ENTER	36"x36"	1
M	R5-1	DO NOT ENTER	24"x24"	2
N	R3-7-1R	ALL TRAFFIC MUST TURN RIGHT	30"x30"	2
O	R3-11B (MOD)	RIGHT LANE BUSES ONLY	30"x36"	1
P	R6-7	END ONE-WAY	30"x36"	2

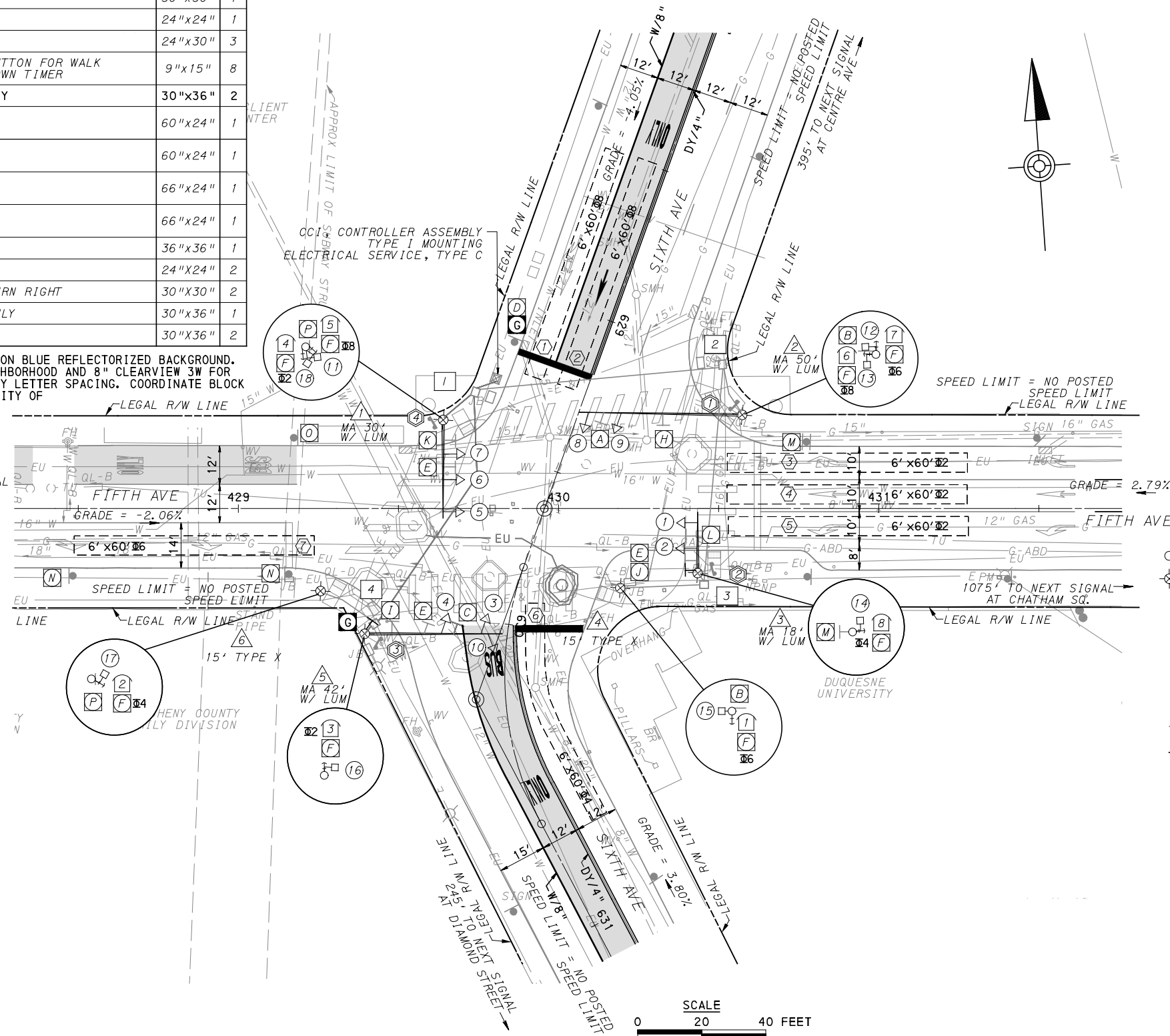
\* WHITE REFLECTORIZED LEGEND AND BORDER ON BLUE REFLECTORIZED BACKGROUND. UTILIZE 4" CLEARVIEW 3W FOR BLOCK/NEIGHBORHOOD AND 8" CLEARVIEW 3W FOR STREET NAME. ACTUAL WIDTH DETERMINED BY LETTER SPACING. COORDINATE BLOCK NUMBERS AND STREET NAME DETAILS WITH CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE.

\*\* SIGN TABULATED AS PART OF THE SIGNING AND PAVEMENT MARKING PLAN

- AUDIBLE PEDESTRIAN SIGNAL NOTES**
1. ALL PUSH BUTTONS SHALL BE EQUIPPED WITH LOCATOR TONES.
  2. ALL WALK INTERVALS TO HAVE VERBAL MESSAGE DETAILING WALK DIRECTION.
  3. VERBAL MESSAGE TO BE PLAYED DURING WALK INTERVAL WHEN BUTTON IS PRESSED.
  4. ALL PEDESTRIAN PUSH BUTTONS TO BE LOCATED AT 42" ABOVE GROUND.
  5. ALL PUSH BUTTONS TO BE EQUIPPED WITH VIBROTACTILE ARROW.
  6. VIBROTACTILE ARROWS TO VIBRATE DURING WALK INTERVAL.
  7. WALK AND DON'T WALK MESSAGE SHALL BE AUDIBLE THROUGH THE PUSH BUTTON SPEAKER.

- SIGNAL ASSEMBLY NOTES**
1. ALL VEHICULAR/BICYCLE SIGNALS SHALL BE EQUIPPED WITH L.E.D LENSES, TUNNEL VISORS AND LOUVERED BLACK METAL BACKPLATES WITH 2" REFLECTIVE BORDERS.
  2. MIN/MAX HEIGHT TO BOTTOM OF VEHICULAR SIGNALS 17' /18'.
  3. MIN HORIZONTAL SPACING FOR VEHICULAR SIGNALS IS 8'.
  4. MIN/MAX HEIGHT TO BOTTOM OF PEDESTRIAN SIGNALS 10' /12'.
  5. FINAL SIGNAL HEAD PLACEMENT WILL BE DETERMINED BY REPRESENTATIVES OF THE CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE AND THE DISTRICT TRAFFIC UNIT PRIOR TO SIGNAL BEING TURNED ON.
  6. ALL PEDESTRIAN SIGNALS SHALL BE PORTLAND ORANGE FULL "PEDESTRIAN HAND" AND WHITE "WALKING PERSON" SYMBOLS AND HAVE INCANDESCENT LOOK WITH COUNTDOWN TIMER.
  7. PROVIDE AIRCRAFT STRANDED CABLE FOR MOUNTING SIGNAL AND SIGN BRACKET ASSEMBLIES TO MAST ARMS.
  8. PROVIDE BLACK ALUMINUM HOUSINGS FOR ALL SIGNAL HEADS.
  9. INSTALL POST MOUNTED SIGNAL HEADS WITH BOTTOMS NO GREATER THAN 15" ABOVE THE SIDEWALK OR PAVEMENT.
  10. EXACT LOCATION OF TRAFFIC SIGNAL SUPPORTS SHALL BE DETERMINED BY REPRESENTATIVES OF THE CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE AND THE DISTRICT TRAFFIC UNIT PRIOR TO INSTALLATION.

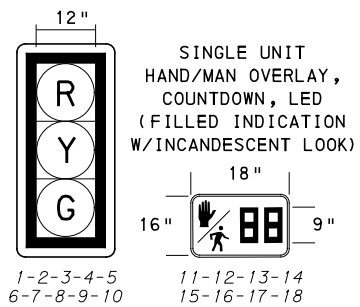
- PAVEMENT MARKING NOTES**
1. ALL STOP BARS ARE W/24".
  2. CROSSWALKS ARE 10' X 24" KEYS WITH 3' TO 5' SPACING.
  3. CROSSWALKS ACROSS BICYCLE LANES ARE 6' X 12" KEYS WITH 1' SPACING.



**LEGEND**

⊙	EXISTING MAST ARM	⊙	PROPOSED AUDIBLE PEDESTRIAN PUSH BUTTON/SIGN
⊙	EXISTING MAST ARM WITH LUMINAIRE ARM	⊙	EXISTING CONTROLLER ASSEMBLY
⊙	EXISTING PEDESTRIAN SIGNAL HEAD	⊙	EXISTING JUNCTION BOX
⊙	PROPOSED PEDESTRIAN SIGNAL HEAD	⊙	PROPOSED STOP BAR RADAR DETECTOR
⊙	EXISTING VEHICULAR/BICYCLE SIGNAL HEAD	⊙	C/2" CONDUIT/SIZE
⊙	PROPOSED VEHICULAR/BICYCLE SIGNAL HEAD	⊙	CL/2" LIGHTING CONDUIT/SIZE
⊙	EXISTING PEDESTAL	⊙	C/2"P POWER CONDUIT/SIZE
⊙	EXISTING SIGN	⊙	W/6" SOLID WHITE LINE/WIDTH
⊙	PROPOSED SIGN	⊙	BW/6" BROKEN WHITE LINE/WIDTH
⊙	PROPOSED STOP BAR VIDEO DETECTION ZONE	⊙	DY/4" DOUBLE SOLID YELLOW LINE/WIDTH
⊙	EXISTING AUDIBLE PEDESTRIAN PUSH BUTTON/SIGN	⊙	G/24" SOLID GREEN LINE/WIDTH

**SIGNAL HEADS**



COUNTY: ALLEGHENY \_\_\_\_\_  
MUNICIPALITY: CITY OF PITTSBURGH \_\_\_\_\_  
INTERSECTION: FIFTH AVENUE \_\_\_\_\_  
AND SIXTH AVENUE \_\_\_\_\_

APPROVED AND ACCEPTED: \_\_\_\_\_  
CITY TRAFFIC ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_  
APPROVED AND ACCEPTED: \_\_\_\_\_  
DISTRICT TRAFFIC ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_



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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT UPTOWN TO OAKLAND**  
**SIGNAL PLANS**  
**FIFTH AVENUE & SIXTH AVENUE**

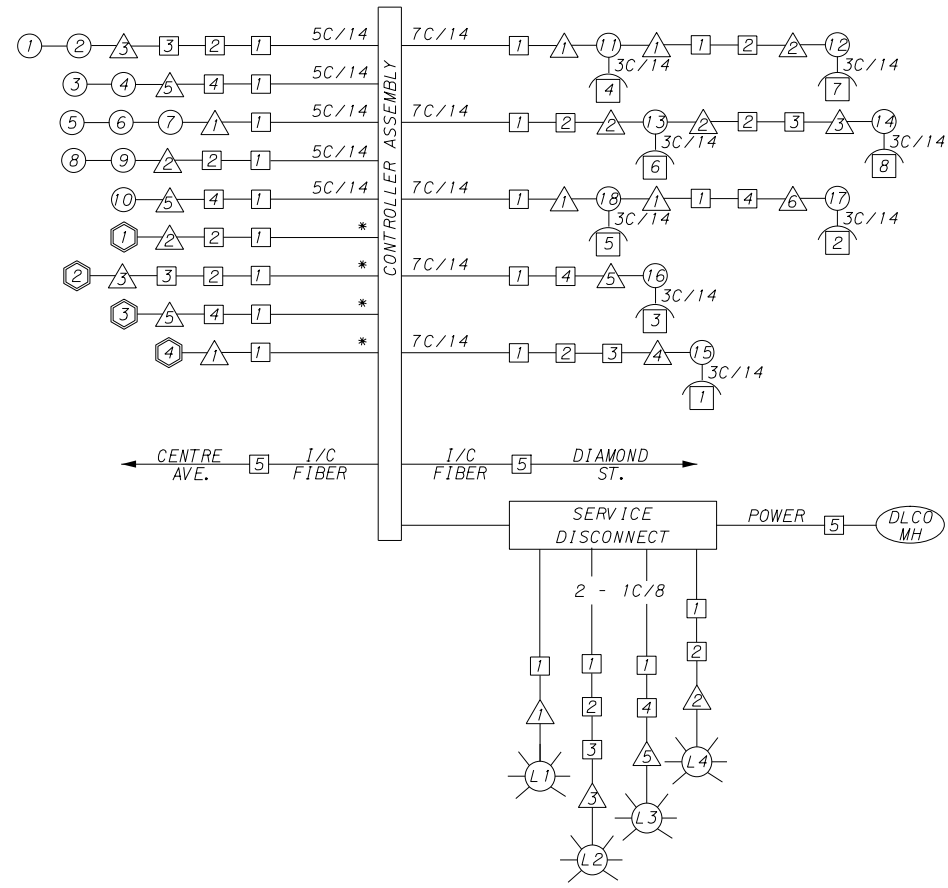
**Port Authority** connecting people to life™

CONTRACT NO. BRT-001  
DWG. NO. SG4 SHT. 1064

NO.	DATE	DESCRIPTION
REVISIONS		

**MOVEMENT, PHASING AND SEQUENCE CHART**

SIGNAL	PHASE 2+6					PHASE 4+8					OFF	
	INTERVAL	1	2	3	4	5	1	2	3	4		5
1-2	R	G	G	Y	R	R	R	R	R	R	R	R
3-4	R	R	R	R	R	R	G	G	Y	R	R	R
5-6-7	R	G	G	Y	R	R	R	R	R	R	R	R
8-9-10	R	R	R	R	R	R	G	G	Y	R	R	R
11-12-15-16	W	W	FD	DW	DW	DW	DW	DW	DW	DW	DW	OFF
13-14-17-18	DW	DW	DW	DW	DW	W	W	FD	DW	DW	DW	OFF
FIXED	3.5					2.5					4	2
MINIMUM	15					15						
PASSAGE	3					3						
FREE (MAX)	60					45						
PEDESTRIAN	3	11	22			3	12	18				
MEMORY	PED RECALL					PED RECALL						



**WIRING DIAGRAM**

- 5C/14 - CABLE (NO. OF CONDUCTORS/SIZE AWG.)
- Ⓛ - EXISTING SIGNAL HEAD      Ⓛ - PROPOSED SIGNAL HEAD
- Ⓛ - EXISTING AUDIBLE PEDESTRIAN INDICATOR      Ⓛ - PROPOSED AUDIBLE PEDESTRIAN INDICATOR
- Ⓛ - EXISTING SIGNAL SUPPORT      Ⓛ - PROPOSED SIGNAL SUPPORT
- Ⓛ - EXISTING JUNCTION BOX      Ⓛ - PROPOSED JUNCTION BOX
- Ⓛ - EXISTING LUMINAIRE      Ⓛ - PROPOSED LUMINAIRE
- Ⓛ - EXISTING DETECTOR      Ⓛ - PROPOSED DETECTOR
- \*\* INCIDENTAL TO ITEM 02895.001, AS PER MANUFACTURERS SPECIFICATIONS

**DETECTOR ZONE INFORMATION**

DETECTOR	DETECTION ZONE (S)	MODE	TYPE	ROUTE	PHASE	LOCATION MAST ARM
1	1/2 (6' x 60')	PRESENCE	RADAR (STOP BAR)	6TH AVENUE	8	2
2	3/4/5 (6' x 60')	PRESENCE	RADAR (STOP BAR)	5TH AVENUE	2	3
3	6 (6' x 60')	PRESENCE	RADAR (STOP BAR)	6TH AVENUE	4	5
4	7 (6' x 60')	PRESENCE	RADAR (STOP BAR)	5TH AVENUE	6	1

**TRANSIT PRIORITY PRE-EMPTION NOTES (TO BE INSTALLED BY OTHERS)**

- COORDINATE TRAFFIC CONTROLLER PROGRAMMING MODIFICATION WITH REPRESENTATIVES OF THE CITY OF PITTSBURGH AND DISTRICT TRAFFIC UNIT.
- INCLUDE A TRANSIT PRIORITY PHASE THAT WILL EXTEND THE INDICATED PHASE A MAXIMUM OF 10 SECONDS WHEN ACTIVATED BY A PORT AUTHORITY VEHICLE. DO NOT VIOLATE SIDE STREET PEDESTRIAN MINIMUM TIMINGS.
- MAINTAIN ALL YELLOW CLEARANCES AT ALL TIMES.
- PROCEED TO THE SUBSEQUENT INTERVAL AS DEFINED IN THE MOVEMENT, SEQUENCE AND TIMING DIAGRAM UPON COMPLETING THE GREEN EXTENSION INTERVAL.
- ONCE A TRANSIT CALL IS PLACED AND SATISFIED, THE CONTROLLER WILL NOT SATISFY ANOTHER CALL FOR 4 CYCLES.
- LOCATION OF BUS DETECTORS ARE TO BE FIELD ADJUSTED TO ACHIEVE MAXIMUM OPERATION.

**GENERAL NOTES**

THE CITY OF PITTSBURGH SHALL INSPECT THE NEW SIGNAL EQUIPMENT PRIOR TO ACTIVATION.  
 ALL TRAFFIC SIGNAL MAINTENANCE AND OPERATION RESPONSIBILITIES SHALL BE TURNED OVER TO THE CITY OF PITTSBURGH AFTER THE FOLLOWING CONDITIONS ARE IMPLEMENTED TO THE CITY'S SATISFACTION:

- PERMIT "AS-BUILT" TRAFFIC SIGNAL DRAWINGS ARE SUBMITTED AND APPROVED.
- ALL PUNCH LIST ITEMS ARE COMPLETED BY THE CONTRACTOR.
- AFTER THE 30-DAY CONTINUOUS UNINTERRUPTED SIGNAL OPERATION WITHOUT MALFUNCTIONS.

**CONSTRUCTION NOTES**

- ALL JUNCTION BOXES IN WALK AREAS TO BE CITY OF PITTSBURGH STANDARD CONCRETE JUNCTION BOX, TYPE 1.
- ALL JUNCTION BOXES IN NON-WALK AREAS TO BE CITY STANDARD JB-2 WITH BOTTOM.
- THERE SHALL BE NO SIGNAL WIRE OR FIBER CABLE SPLICING.
- SERVICE WIRE FROM THE POWER SOURCE TO THE CONTROLLER CABINET SHALL BE PLACED IN SECONDARY SEPARATE CONDUIT.
- STREET LIGHT CABLE IS NOT PERMITTED TO RUN THROUGH THE CONTROLLER CABINET AND SHALL BE PLACED IN SEPARATE CONDUIT.
- TRAFFIC SIGNAL CABLE SHALL BE PLACED IN DEDICATED CONDUIT.
- MOUNT DISCONNECT ON POLE NEAREST TO THE CONTROLLER CABINET EXCLUDING TYPE X POLES.
- REMOVE AND DISPOSE OF ALL EXISTING SIGNAL WIRING NO LONGER IN USE.
- REMOVE EXISTING SIGNAL EQUIPMENT NO LONGER IN USE AND RETURN TO THE CITY OF PITTSBURGH TRAFFIC CONTROL SHOP. COORDINATE DELIVERY OF EQUIPMENT WITH DELMAS MCELHANY, TRAFFIC CONTROL FOREMAN.

TS-313

COUNTY: ALLEGHENY  
 MUNICIPALITY: CITY OF PITTSBURGH  
 INTERSECTION: FIFTH AVENUE AND SIXTH AVENUE

APPROVED AND ACCEPTED: \_\_\_\_\_ DATE \_\_\_\_\_  
 CITY TRAFFIC ENGINEER

APPROVED AND ACCEPTED: \_\_\_\_\_ DATE \_\_\_\_\_  
 DISTRICT TRAFFIC ENGINEER



NO.	DATE	DESCRIPTION
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 PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT UPTOWN TO OAKLAND**  
 SIGNAL PLANS  
 WIRING, MOVEMENT, PHASING & SEQUENCE DIAGRAMS

**Port Authority** connecting people to life

CONTRACT NO. BRT-001  
 DWG. NO. SG5 SHT. 1065

TRAFFIC SIGNAL TABULATION

SIXTH AVENUE AND FIFTH AVENUE

ITEM NUMBER	MISCELLANEOUS			
UNIT	DESCRIPTION	QTY.	LOCATION	REMARKS
01882.002	TRAFFIC SIGNAL TIMING MODIFICATIONS	2	cc	
EACH				

DETECTORS

ITEM NUMBER	DESCRIPTION	SEN. NO.	QTY.	LOCATION
	DIGITAL WAVE RADAR DETECTION	①	1	△2
	DIGITAL WAVE RADAR DETECTION	②	1	△3
	DIGITAL WAVE RADAR DETECTION	③	1	△5
	DIGITAL WAVE RADAR DETECTION	④	1	△1

TRAFFIC SIGNAL SUPPORTS \*\*

POLE NO.	ITEM NUMBER	DESCRIPTION	QTY.	ROUTE	STATION	SIDE	OFFSET	MAST ARM																PEDESTAL		
								ARM "A"											ARM "C"					SHAFT	SIGNAL	
								H	K	SIGNAL LOCATION				SIGN LOCATION			W	G	X	Z	H	M	N			
										M	N	O	P	R	S	T								U	Y	
△1		TRAFFIC SIGNAL SUPPORT, 30' MAST ARM WITH LUMINAIRE ARM (30' MOUNTING HEIGHT), PAINTED GRAY	1	FIFTH AVE	429+64	L	28'	17'	10'	30'	28'	18'	10'	--	15'	--	--	--	5'	0°	--	30'	0°	--	--	--
△2		TRAFFIC SIGNAL SUPPORT, 50' MAST ARM WITH LUMINAIRE ARM (30' MOUNTING HEIGHT), PAINTED GRAY	1	SIXTH AVE	629+14	L	48'	17'	10'	50'	47'	37'	--	--	42'	--	--	--	24'	19°	--	30'	0°	--	--	--
△3		TRAFFIC SIGNAL SUPPORT, 18' MAST ARM WITH LUMINAIRE ARM (30' MOUNTING HEIGHT), PAINTED GRAY	1	FIFTH AVE	430+43	R	20'	17'	10'	18'	15'	7'	--	--	11'	4'	--	--	1'	0°	--	30'	0°	--	--	--
△4		TRAFFIC SIGNAL SUPPORT, 15' TYPE X, PAINTED GRAY	1	SIXTH AVE	629+77	L	31'	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	15'	--	10'
△5		TRAFFIC SIGNAL SUPPORT, 42' MAST ARM WITH LUMINAIRE ARM (30' MOUNTING HEIGHT), PAINTED GRAY	1	SIXTH AVE	630+04	L	39'	17'	10'	42'	38'	35'	23'	--	27'	18'	--	--	8'	5°	--	30'	0°	--	--	--
△6		TRAFFIC SIGNAL SUPPORT, 15' TYPE X, PAINTED GRAY	1	SIXTH AVE	629+99	R	60'	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	15'	--	10'

\*\* REFER TO TRAFFIC STANDARDS TC-8800 SERIES FOR LETTER DESIGNATION

TS-313



Gulf Tower  
707 Grant Street  
5th Floor  
Pittsburgh, PA 15219

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BUS RAPID TRANSIT UPTOWN TO OAKLAND SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	
Port Authority connecting people to life®	CONTRACT NO. BRT-001
DWG. NO. SG6	SHT. 1066



**SIGNS**

SIGN	STANDARD	DESCRIPTION	SIZE	QTY
A1	D3-4	500 Diamond St	78"x18"	1
A2	D3-4	600 Diamond St	78"x18"	1
B	D3-4	700 Sixth Ave	66"x18"	1
C	D3-4	500 Forbes Ave	78"x18"	1
D	R9-3	NO PEDESTRIAN CROSSING	18"x18"	4
E	R6-1	ONE WAY (TWO SIDED, CITY STANDARD)	36"x12"	4
F	R6-1	ONE WAY (TWO SIDED, CITY STANDARD)	36"x12"	1
G	R3-1	NO RIGHT TURN	30"x30"	4
H	R10-11	NO TURN ON RED	30"x36"	3
I	SPECIAL	BUS LANE SIGNAL	30"x30"	1
J	R3-2	NO LEFT TURN	30"x30"	9
K	R10-3E (MOD)	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER	9"x15"	21
L	R14-1	TRUCK ROUTE	30"x36"	2
M	R6-2-L	VERTICAL LEFT ONE WAY SIGN	30"x36"	1
N	R6-2-R	VERTICAL RIGHT ONE WAY SIGN	30"x36"	1
O	R3-11B (MOD)*	LEFT LANE BUSES ONLY	30"x36"	2
P	R10-6AL	STOP HERE ON RED (LEFT)	24"x30"	1
Q	R5-1	DO NOT ENTER	30"x30"	2

\* SIGN TABULATED AS PART OF THE SIGNING AND PAVEMENT MARKING PLAN.

**AUDIBLE PEDESTRIAN SIGNAL NOTES**

1. ALL PUSH BUTTONS SHALL BE EQUIPPED WITH LOCATOR TONES.
2. ALL WALK INTERVALS TO HAVE VERBAL MESSAGE DETAILING WALK DIRECTION.
3. VERBAL MESSAGE TO BE PLAYED DURING WALK INTERVAL WHEN BUTTON IS PRESSED.
4. ALL PEDESTRIAN PUSH BUTTONS TO BE LOCATED AT 42" ABOVE GROUND.
5. ALL PUSH BUTTONS TO BE EQUIPPED WITH VIBROTACTILE ARROW.
6. VIBROTACTILE ARROWS TO VIBRATE DURING WALK INTERVAL.
7. WALK AND DON'T WALK MESSAGE SHALL BE AUDIBLE THROUGH THE PUSH BUTTON SPEAKER.

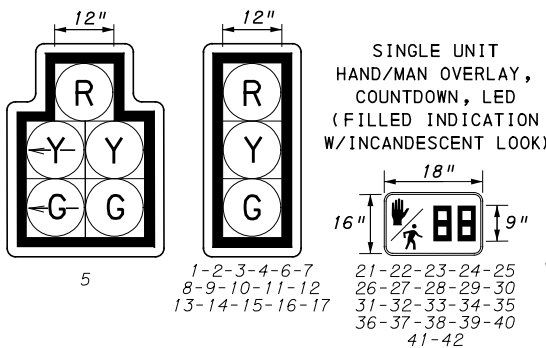
**SIGNAL ASSEMBLY NOTES**

1. ALL VEHICULAR/BICYCLE SIGNALS SHALL BE EQUIPPED WITH L.E.D LENSES, TUNNEL VISORS AND LOUVERED BLACK METAL BACKPLATES WITH 2" REFLECTIVE BORDERS.
2. MIN/MAX HEIGHT TO BOTTOM OF VEHICULAR SIGNALS 17'/18'.
3. MIN HORIZONTAL SPACING FOR VEHICULAR SIGNALS IS 8'.
4. MIN/MAX HEIGHT TO BOTTOM OF PEDESTRIAN SIGNALS 10'/12'.
5. FINAL SIGNAL HEAD PLACEMENT WILL BE DETERMINED BY REPRESENTATIVES OF THE CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE AND THE DISTRICT TRAFFIC UNIT PRIOR TO SIGNAL BEING TURNED ON.
6. ALL PEDESTRIAN SIGNALS SHALL BE PORTLAND ORANGE FULL "PEDESTRIAN HAND" AND WHITE "WALKING PERSON" SYMBOLS AND HAVE INCANDESCENT LOOK WITH COUNTDOWN TIMER.
7. PROVIDE AIRCRAFT STRANDED CABLE FOR MOUNTING SIGNAL AND SIGN BRACKET ASSEMBLIES TO MAST ARMS.
8. PROVIDE BLACK ALUMINUM HOUSINGS FOR ALL SIGNAL HEADS.
9. INSTALL POST MOUNTED SIGNAL HEADS WITH BOTTOMS NO GREATER THAN 15" ABOVE THE SIDEWALK OR PAVEMENT.
10. EXACT LOCATION OF TRAFFIC SIGNAL SUPPORTS SHALL BE DETERMINED BY REPRESENTATIVES OF THE CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE AND THE DISTRICT TRAFFIC UNIT PRIOR TO INSTALLATION.

**PAVEMENT MARKING NOTES**

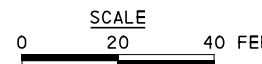
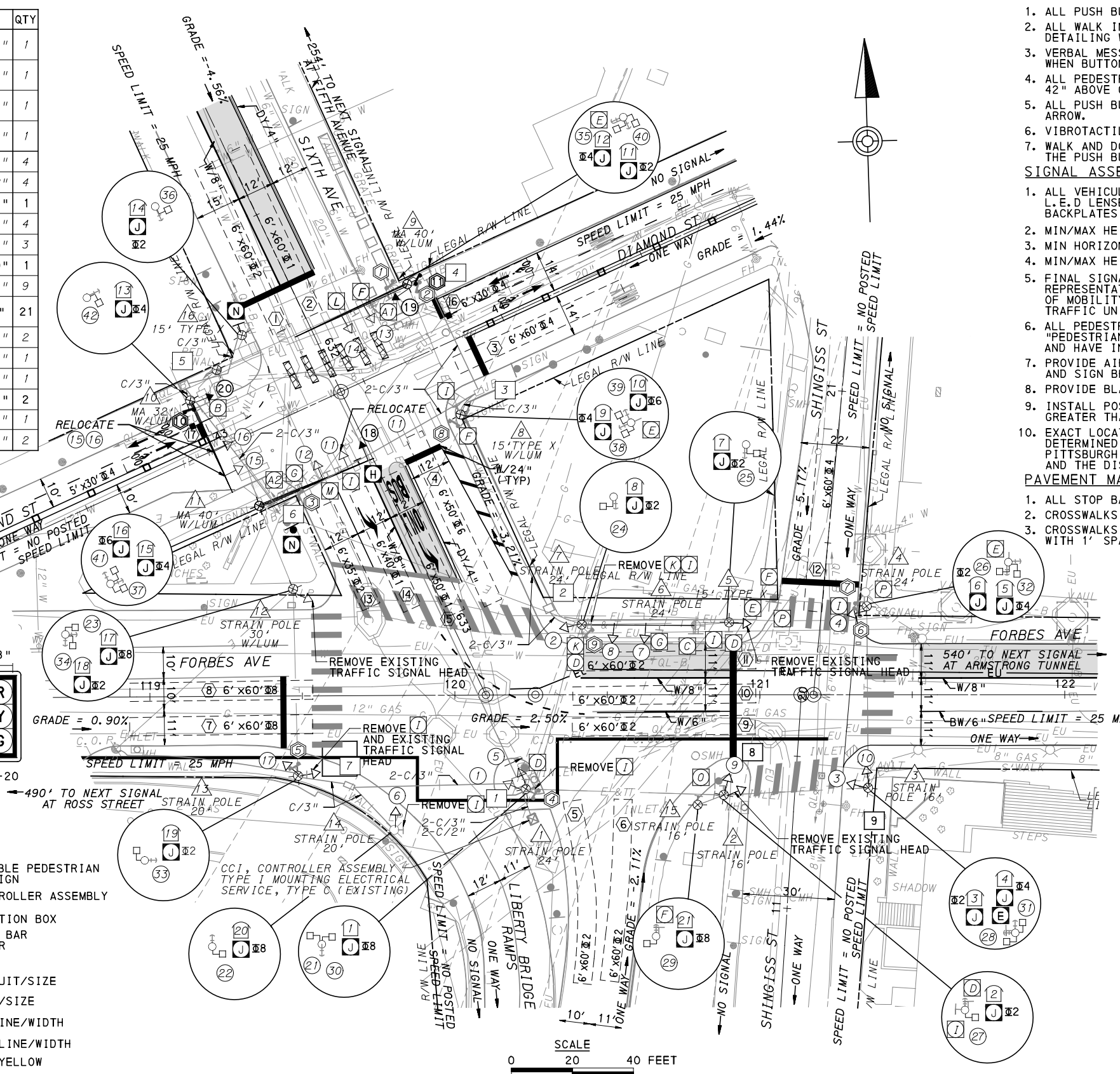
1. ALL STOP BARS ARE W/24".
2. CROSSWALKS ARE 10' X 24" KEYS WITH 3' TO 5' SPACING.
3. CROSSWALKS ACROSS BICYCLE LANES ARE 6' X 12" KEYS WITH 1' SPACING.

**SIGNAL HEADS**



**LEGEND**

- EXISTING MAST ARM
- EXISTING MAST ARM WITH LUMINAIRE ARM
- EXISTING PEDESTRIAN SIGNAL HEAD
- PROPOSED PEDESTRIAN SIGNAL HEAD
- EXISTING VEHICULAR/BICYCLE SIGNAL HEAD
- PROPOSED VEHICULAR/BICYCLE SIGNAL HEAD
- EXISTING PEDESTAL
- EXISTING SIGN
- PROPOSED SIGN
- PROPOSED STOP BAR VIDEO DETECTION ZONE
- EXISTING AUDIBLE PEDESTRIAN PUSH BUTTON/SIGN
- PROPOSED AUDIBLE PEDESTRIAN PUSH BUTTON/SIGN
- EXISTING CONTROLLER ASSEMBLY
- EXISTING JUNCTION BOX
- PROPOSED STOP BAR VIDEO DETECTOR
- C/2" CONDUIT/SIZE
- CL/2" LIGHTING CONDUIT/SIZE
- C/2"P POWER CONDUIT/SIZE
- W/6" SOLID WHITE LINE/WIDTH
- BW/6" BROKEN WHITE LINE/WIDTH
- DY/4" DOUBLE SOLID YELLOW LINE/WIDTH
- G/24" SOLID GREEN LINE/WIDTH



TS-338

COUNTY: ALLEGHENY

MUNICIPALITY: CITY OF PITTSBURGH

INTERSECTION: SIXTH AVENUE AND FORBES AVENUE AND LIBERTY BRIDGE RAMPS

APPROVED AND ACCEPTED:

CITY TRAFFIC ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_

APPROVED AND ACCEPTED:

DISTRICT TRAFFIC ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_



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**(NOT FOR CONSTRUCTION)**

DESIGNED	DWP
DRAWN	NEJ
CHECKED	AJR
IN CHARGE	JKM
DATE	05/01/24
SCALE	AS SHOWN

<b>PORT AUTHORITY OF ALLEGHENY COUNTY</b> PITTSBURGH PENNSYLVANIA	
BUS RAPID TRANSIT UPTOWN TO OAKLAND SIGNAL PLANS FORBES AVENUE/SIXTH AVENUE & DIAMOND STREET	
<b>Port Authority</b> connecting people to life	CONTRACT NO. BRT-001
DWG. NO. SG7	SHT. 1067

NO.	DATE	DESCRIPTION

MOVEMENT, PHASING AND SEQUENCE CHART

SIGNAL	PHASE 8				PHASE 1				PHASE 2+6					PHASE 4				FLASHING		
	1	2	3	4	1	2	3	-	1	2	3	4	5	1	2	3	4		-	
1-2-17	G	G	Y	R	R	R	R		R	R	R	R	R	R	R	R	R	R	R	R
3-4	G	G	G	G	G	G	G		G	G	G	Y	R	R	R	R	R	R	R	R
5	R	R	R	R	G/G	Y/Y	G	G	G	G	Y	R	R	G/G	Y/Y	R	R	R	R	R
6	R	R	R	R	G	G	G		G	G	Y	R	R	G	G	Y	R	R	R	R
7-8	R	R	R	R	R	R	R		G	G	Y	R	R	R	R	R	R	R	R	R
9-10	R	R	R	R	R	R	R		R	R	R	R	R	G	G	Y	R	R	R	R
11-12-13-14	R	R	R	R	G	G	G		G	G	Y	R	R	R	R	R	R	R	R	R
18	R	R	R	R	G	Y	R		R	R	R	R	R	R	R	R	R	R	R	R
15-16	G	G	Y	R	R	R	R		R	R	R	R	R	G	G	G	G	G	R	R
19-20	R	R	R	R	R	R	R		R	R	R	R	R	G	G	Y	R	R	R	R
21-22-23-24-29-30	W	FD	DW	DW	DW	DW	DW		DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	OFF
25-26-27-28	W	W	W	W	W	W	W		W	FD	DW	DW	DW	DW	DW	DW	DW	DW	DW	OFF
31-32	DW	DW	DW	DW	DW	DW	DW		DW	DW	DW	DW	DW	W	FD	DW	DW	DW	OFF	
33-34	DW	DW	DW	DW	W	W	W		W	W	W	W	W	W	FD	DW	DW	DW	OFF	
35-36-37-38	W	FD	DW	DW	DW	DW	DW		DW	DW	DW	DW	DW	W	W	W	W	W	OFF	
39-40-41-42	DW	DW	DW	DW	W	W	W		W	FD	DW	DW	DW	DW	DW	DW	DW	DW	OFF	
FIXED											5	4	2			4	2			
MINIMUM	10				7				10					10						
PASSAGE	3				3				3					3						
FREE (MAX)	33				9				27					27						
PEDESTRIAN	13	20			*				11	16				11	16					
MEMORY		PED RECALL				NON LOCKING				PED RECALL					PED RECALL					

\* = SET WALK FOR THE DURATION OF THE PHASE

DETECTOR ZONE INFORMATION

DETECTOR	DETECTION ZONE(S)	MODE	TYPE	ROUTE	PHASE	LOCATION MAST ARM
1	12 (6' x 60')	PRESENCE	RADAR (STOP BAR)	6TH AVENUE	2	9
2	3 (6' x 60')	PRESENCE	RADAR (STOP BAR)	DIAMOND STREET	4	9
3	13 (6' x 35')	PRESENCE	RADAR (STOP BAR)	6TH AVENUE	2	11
	14 (6' x 40')					
	15 (6' x 50')					
4	56 (6' x 60')	PRESENCE	RADAR (STOP BAR)	LIBERTY BRIDGE	2	11
5	78 (6' x 60')	PRESENCE	RADAR (STOP BAR)	FORBES AVENUE	8	13
6	910 (6' x 60')	PRESENCE	RADAR (STOP BAR)	FORBES AVENUE	2	14
7	12 (6' x 60')	PRESENCE	RADAR (STOP BAR)	SHINGISS STREET	4	14
8	4 (6' x 50')	PRESENCE	RADAR (STOP BAR)	6TH AVENUE	6	18
9	11 (6' x 60')	PRESENCE	RADAR (STOP BAR)	FORBES AVENUE	2	18
10	17 (5' x 30')	PRESENCE	RADAR (STOP BAR)	DIAMOND STREET	4	18
11	16 (6' x 30')	PRESENCE	RADAR (STOP BAR)	DIAMOND STREET	4	19

GENERAL NOTES

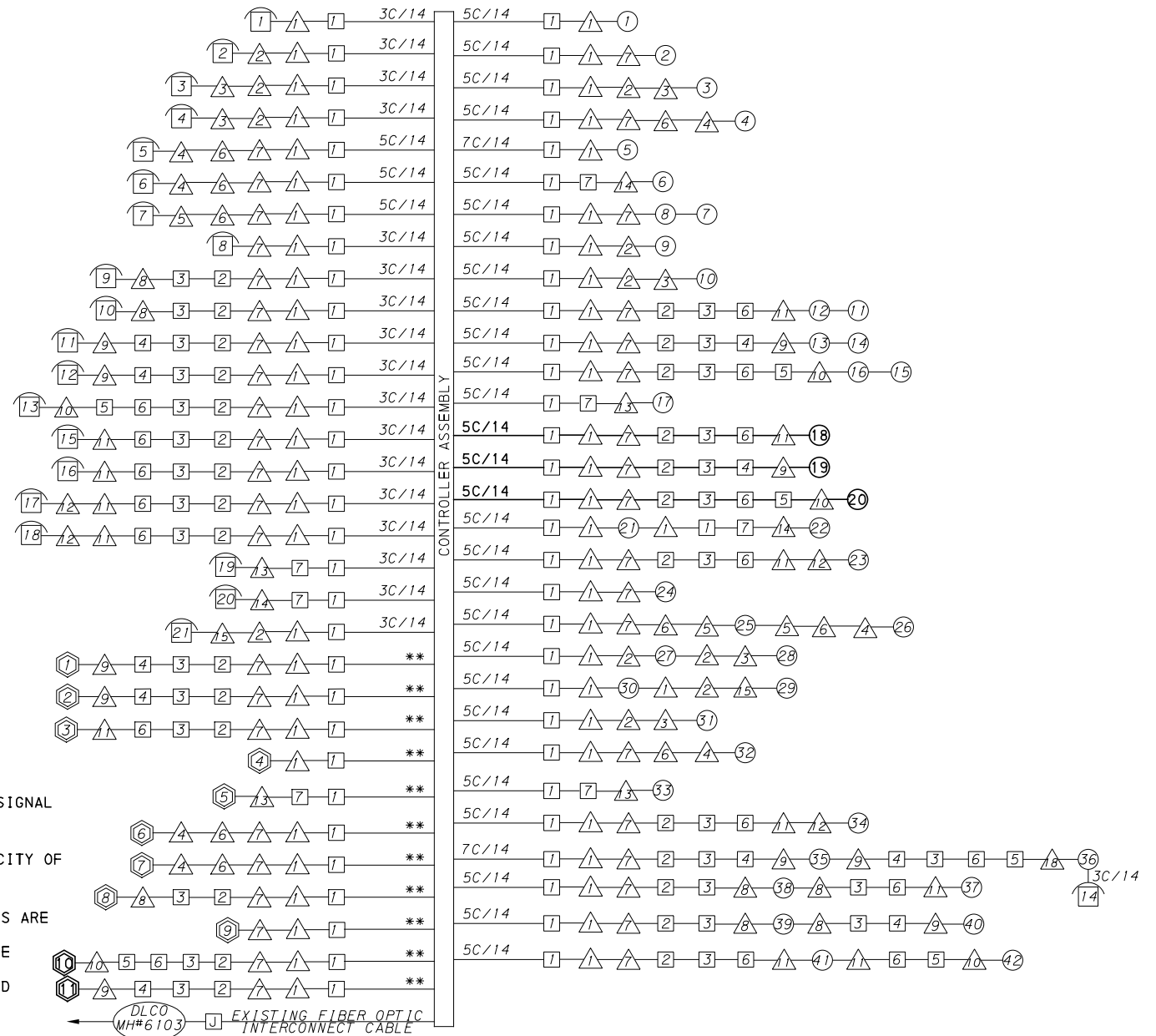
THE CITY OF PITTSBURGH SHALL INSPECT THE NEW SIGNAL EQUIPMENT PRIOR TO ACTIVATION.

ALL TRAFFIC SIGNAL MAINTENANCE AND OPERATION RESPONSIBILITIES SHALL BE TURNED OVER TO THE CITY OF PITTSBURGH AFTER THE FOLLOWING CONDITIONS ARE IMPLEMENTED TO THE CITY'S SATISFACTION:

1. PERMIT "AS-BUILT" TRAFFIC SIGNAL DRAWINGS ARE SUBMITTED AND APPROVED.
2. ALL PUNCH LIST ITEMS ARE COMPLETED BY THE CONTRACTOR.
3. AFTER THE 30-DAY CONTINUOUS UNINTERRUPTED SIGNAL OPERATION WITHOUT MALFUNCTIONS.

TRANSIT PRIORITY PRE-EMPTION NOTES (TO BE INSTALLED BY OTHERS)

1. COORDINATE TRAFFIC CONTROLLER PROGRAMMING MODIFICATION WITH REPRESENTATIVES OF THE CITY OF PITTSBURGH AND DISTRICT TRAFFIC UNIT.
2. INCLUDE A TRANSIT PRIORITY PHASE THAT WILL EXTEND THE INDICATED PHASE A MAXIMUM OF 10 SECONDS WHEN ACTIVATED BY A PORT AUTHORITY VEHICLE. DO NOT VIOLATE SIDE STREET PEDESTRIAN MINIMUM TIMINGS.
3. MAINTAIN ALL YELLOW CLEARANCES AT ALL TIMES.
4. PROCEED TO THE SUBSEQUENT INTERVAL AS DEFINED IN THE MOVEMENT, SEQUENCE AND TIMING DIAGRAM UPON COMPLETING THE GREEN EXTENSION INTERVAL.
5. ONCE A TRANSIT CALL IS PLACED AND SATISFIED, THE CONTROLLER WILL NOT SATISFY ANOTHER CALL FOR 4 CYCLES.
6. LOCATION OF BUS DETECTORS ARE TO BE FIELD ADJUSTED TO ACHIEVE MAXIMUM OPERATION.



CONSTRUCTION NOTES

1. ALL JUNCTION BOXES IN WALK AREAS TO BE CITY OF PITTSBURGH STANDARD CONCRETE JUNCTION BOX, TYPE 1.
2. ALL JUNCTION BOXES IN NON-WALK AREAS TO BE CITY STANDARD JB-2 WITH BOTTOM.
3. THERE SHALL BE NO SIGNAL WIRE OR FIBER CABLE SPLICING.
4. SERVICE WIRE FROM THE POWER SOURCE TO THE CONTROLLER CABINET SHALL BE PLACED IN SECONDARY SEPARATE CONDUIT.
5. STREET LIGHT CABLE IS NOT PERMITTED TO RUN THROUGH THE CONTROLLER CABINET AND SHALL BE PLACED IN SEPARATE CONDUIT.
6. TRAFFIC SIGNAL CABLE SHALL BE PLACED IN DEDICATED CONDUIT.
7. MOUNT DISCONNECT ON POLE NEAREST TO THE CONTROLLER CABINET EXCLUDING TYPE X POLES.
8. REMOVE AND DISPOSE OF ALL EXISTING SIGNAL WIRING NO LONGER IN USE.
9. REMOVE EXISTING SIGNAL EQUIPMENT NO LONGER IN USE AND RETURN TO THE CITY OF PITTSBURGH TRAFFIC CONTROL SHOP. COORDINATE DELIVERY OF EQUIPMENT WITH DELMAS MCELHANY, TRAFFIC CONTROL FOREMAN.

TS-338

COUNTY: ALLEGHENY
MUNICIPALITY: CITY OF PITTSBURGH
INTERSECTION: SIXTH AVENUE AND FORBES AVENUE AND LIBERTY BRIDGE RAMPS
APPROVED AND ACCEPTED:
CITY TRAFFIC ENGINEER _____ DATE _____
APPROVED AND ACCEPTED:
DISTRICT TRAFFIC ENGINEER _____ DATE _____



Gulf Tower  
707 Grant Street  
5th Floor  
Pittsburgh, PA 15219

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(NOT FOR CONSTRUCTION)

DESIGNED	DWP
DRAWN	NED
CHECKED	AJR
IN CHARGE	JKM
DATE	05/01/24
SCALE	AS SHOWN

PORT AUTHORITY OF ALLEGHENY COUNTY PITTSBURGH PENNSYLVANIA	
BUS RAPID TRANSIT UPTOWN TO OAKLAND SIGNAL PLANS WIRING, MOVEMENT, PHASING & SEQUENCE DIAGRAMS	
Port Authority connecting people to life	CONTRACT NO. BRT-001
DWG. NO. SG8	SHT. 1068

TRAFFIC SIGNAL TABULATION

SIXTH AVENUE AND FORBES AVENUE AND LIBERTY BRIDGE RAMPS

TRAFFIC SIGNAL SUPPORTS \*\*

POLE NO.	ITEM NUMBER UNIT	DESCRIPTION	QTY.	ROUTE	STATION	SIDE	OFFSET	H	MAST ARM												PEDESTAL							
									K	ARM "A"						ARM "C"						SHAFT	SIGNAL					
										L	M	N	O	P	R	S	T	U	Y	W	G		X	Z	H	M	N	
1		TRAFFIC SIGNAL SUPPORT, 24' STRAIN POLE		FORBES AVE	120+23	R	31'	24'	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2		TRAFFIC SIGNAL SUPPORT, 16' STRAIN POLE		FORBES AVE	120+79	R	36'	16'	10'	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3		TRAFFIC SIGNAL SUPPORT, 16' STRAIN POLE		FORBES AVE	121+36	R	31'	16'	10'	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4		TRAFFIC SIGNAL SUPPORT, 24' STRAIN POLE		FORBES AVE	121+35	L	29'	24'	10'	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
5		TRAFFIC SIGNAL SUPPORT, 15' TYPE X		FORBES AVE	120+90	L	24'	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	15'	--	10'	--	--
6		TRAFFIC SIGNAL SUPPORT, 24' STRAIN POLE		FORBES AVE	120+41	L	23'	24'	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
7		TRAFFIC SIGNAL SUPPORT, 24' STRAIN POLE		FORBES AVE	--	--	--	24'	10'	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
8		TRAFFIC SIGNAL SUPPORT, 15' TYPE X WITH LUMINAIRE ARM		SIXTH AVE	632+38	L	32'	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	15'	--	10'	--	--	--
9		TRAFFIC SIGNAL SUPPORT, 40' MAST ARM WITH LUMINAIRE ARM		SIXTH AVE	631+92	L	35'	17'	10'	40'	22'	14'	--	--	18'	12'	--	--	6'	--	--	--	--	--	--	--	--	--
10		TRAFFIC SIGNAL SUPPORT, 32' MAST ARM WITH LUMINAIRE ARM		DIAMOND ST	42+96	L	18'	17'	10'	32'	26'	17'	--	--	12'	--	--	2'	--	--	--	--	--	--	--	--	--	--
11		TRAFFIC SIGNAL SUPPORT, 40' MAST ARM		SIXTH AVE	632+37	R	40'	40'	10'	42'	37'	30'	21'	--	35'	27'	23'	13'	8'	--	--	30'	0°	--	--	--	--	--
12		TRAFFIC SIGNAL SUPPORT, 30' STRAIN POLE WITH LUMINAIRE ARM		SIXTH AVE	632+66	R	42'	30'	10'	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
13		TRAFFIC SIGNAL SUPPORT, 20' STRAIN POLE		FORBES AVE	119+48	R	26'	20'	10'	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
14		TRAFFIC SIGNAL SUPPORT, 20' STRAIN POLE		FORBES AVE	119+80	R	44'	20'	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
15		TRAFFIC SIGNAL SUPPORT, 16' STRAIN POLE		FORBES AVE	120+71	R	36'	16'	10'	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
16		TRAFFIC SIGNAL SUPPORT, 15' TYPE X, PAINTED GRAY		SIXTH AVE	631+83	R	21'	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	15'	--	10'	--	--	--

\*\* REFER TO TRAFFIC STANDARDS TC-8800 SERIES FOR LETTER DESIGNATION

DETECTORS

ITEM NUMBER	DESCRIPTION	SEN. NO.	QTY.	LOCATION
	DIGITAL WAVE RADAR DETECTION	1 2	2	9
	DIGITAL WAVE RADAR DETECTION	3	1	11
	DIGITAL WAVE RADAR DETECTION	4	1	1
	DIGITAL WAVE RADAR DETECTION	5	1	13
	DIGITAL WAVE RADAR DETECTION	6 7	2	4
	DIGITAL WAVE RADAR DETECTION	8	1	8
	DIGITAL WAVE RADAR DETECTION	9	1	7
02895.001 EACH	DIGITAL WAVE RADAR DETECTION	10	1	10
02895.001 EACH	DIGITAL WAVE RADAR DETECTION	11	1	9



NO.	DATE	DESCRIPTION
REVISIONS		

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(NOT FOR CONSTRUCTION)

DESIGNED	DWP
DRAWN	NED
CHECKED	AJR
IN CHARGE	JKM
DATE	05/01/24
SCALE	AS SHOWN

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT UPTOWN TO OAKLAND**  
SIGNAL PLANS  
TRAFFIC SIGNAL TABULATIONS

**Port Authority** connecting people to life®

CONTRACT NO. BRT-001  
DWG. NO. SG9 SHT. 1069



**TRAFFIC SIGNAL TABULATION**

SIXTH AVENUE AND FORBES AVENUE AND LIBERTY BRIDGE RAMPS

ITEM NUMBER	MISCELLANEOUS			
UNIT	DESCRIPTION	QTY.	LOCATION	REMARKS
01882.002 EACH	TRAFFIC SIGNAL TIMING MODIFICATIONS	2	cc	
02894.001 EACH	VEHICULAR SIGNAL HEAD, THREE 12" SECTIONS	1	19	BLACK TUNNEL VISORS BLACK ALUMINUM HOUSINGS BLACK METAL LOUVERED BACKPLATE SIGNAL LOUVERS
02894.006 EACH	VEHICULAR SIGNAL HEAD, THREE 8" SECTIONS	2	19 20	BLACK TUNNEL VISORS BLACK ALUMINUM HOUSINGS
02894.021 EACH	RESET VEHICULAR SIGNAL HEAD	3	11 15 16	
02894.031 EACH	REMOVE VEHICULAR SIGNAL HEAD	4	12 13 15 2	

**SIGNS**

SYMBOL	SERIES	SIZE	AREA EACH (SQ. FT)	DESCRIPTION	QUANTITY	02891.003 POST MOUNTED SIGNS, TYPE F		
						SF	SF	EACH
E	R6-1	36"x12"	3.0	ONE WAY (TWO SIDED, CITY STANDARD)	1	3.0		
H	SPECIAL	30"x30"	6.3	BUS LANE SIGNAL	1		6.3	
I	R3-2	30"x30"	6.3	NO LEFT TURN	4			4
J	R10-3E	9"x15"	0.9	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER (MOD)	21	18.9		
K	R14-1	30"x36"	7.5	TRUCK ROUTE	1			1
TOTAL						21.9	6.3	5

**TRENCH, CONDUIT, JUNCTION BOX, ELECTRICAL ITEMS**

DESCRIPTION	SIGNAL CABLE, 14 AWG, 5 CONDUCTOR
ITEM NUMBER	02900
UNIT	002
LOCATION	LF
COMPLETE INTERSECTION	1140
TOTAL	1140



Gulf Tower  
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<b>PORT AUTHORITY OF ALLEGHENY COUNTY</b> PITTSBURGH PENNSYLVANIA	
BUS RAPID TRANSIT UPTOWN TO OAKLAND SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	
<b>Port Authority</b> <small>connecting people to life</small>	CONTRACT NO. BRT-001
	DWG. NO. SG10 SHT. 1070

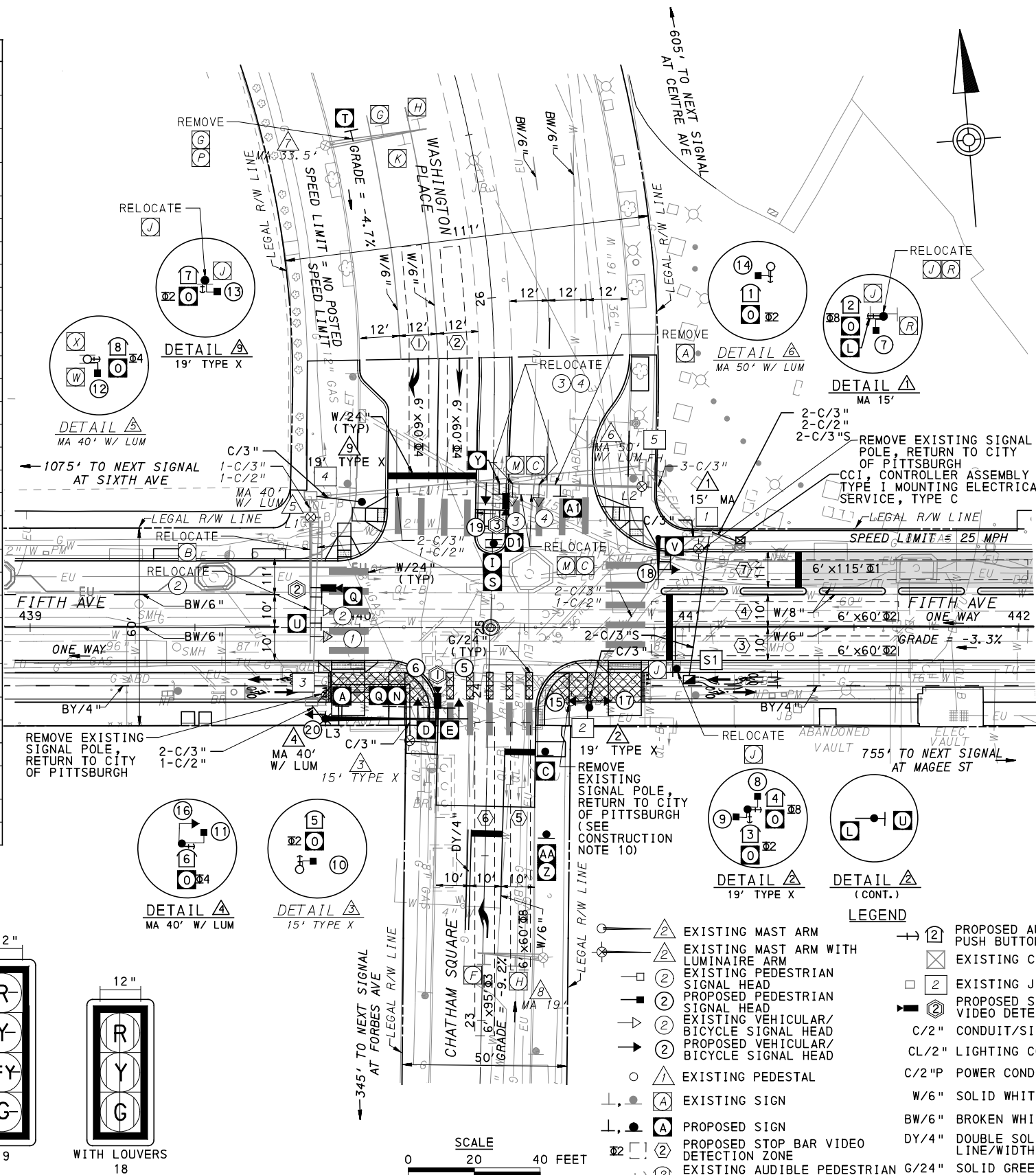
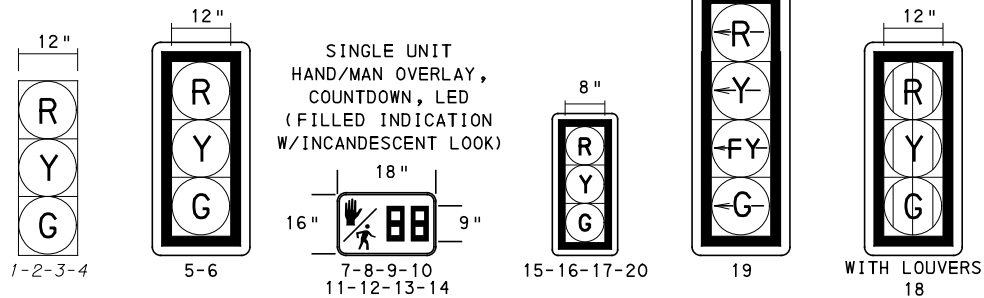
**SIGNS**

SIGN	STANDARD	DESCRIPTION	SIZE	QTY
A	SPECIAL	1000 900 FIFTH AVE	60"x18"	1
A	D3-4 *	1000 900 FIFTH AVE	60"x24"	1
A1	D3-4 *	900 1000 FIFTH AVE	60"x24"	1
B	SPECIAL	WASHINGTON PLACE CHATHAM SQUARE	144"x24"	1
C	R3-1	NO RIGHT TURN	30"x30"	1
C	R3-1	NO RIGHT TURN	24"x24"	1
D	R3-2	NO LEFT TURN	30"x30"	1
D1	R3-2	NO LEFT TURN	24"x24"	1
E	R3-4	NO U TURN	30"x30"	1
F	R3-5L	LEFT TURN ONLY	30"x36"	1
G	R3-5R	RIGHT TURN ONLY	30"x36"	2
H	R3-5S	STRAIGHT THROUGH	30"x36"	2
I	R4-7 **	KEEP RIGHT	24"x30"	1
J	R5-1	DO NOT ENTER	30"x30"	3
K	R5-1A	WRONG WAY	36"x24"	1
L	R6-1	ONE WAY (TWO SIDED, CITY STANDARD)	36"x12"	2
M	R6-2L	VERTICAL LEFT ONE WAY	30"x36"	1
N	R6-2R	VERTICAL RIGHT ONE WAY	30"x36"	1
O	R10-3E (MOD)	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER	9"x15"	8
P	R5-3-4	NO TRUCK OR BUSES	30"x24"	1
Q	R10-11	NO TURN ON RED	30"x36"	2
R	R14-1	TRUCK ROUTE	30"x36"	1
S	OM1-3 **	HAZARD MARKER	18"x18"	1
T	SPECIAL	PARKING LANE	30"x30"	1
U	R10-15AL (MOD)	TURNING TRAFFIC MUST YIELD TO BIKES AND PEDESTRIANS	30"x30"	2
V	SPECIAL	BUS LANE SIGNAL	30"x30"	1
W	R6-1L	HORIZONTAL LEFT ONE-WAY	36"x12"	1
X	R6-1R	HORIZONTAL RIGHT ONE-WAY	36"x12"	1
Y	R10-12A	LEFT TURN YIELD ON FLASHING YELLOW ARROW	30"x36"	1
Z	R10-6AL	STOP HERE ON RED (LEFT)	24"x30"	1
AA	R10-6-1	LEFT LANE PLAQUE	24"x18"	1

\* WHITE REFLECTORIZED LEGEND AND BORDER ON BLUE REFLECTORIZED BACKGROUND. UTILIZE 4" CLEARVIEW 3W FOR BLOCK/NEIGHBORHOOD AND 8" CLEARVIEW 3W FOR STREET NAME. ACTUAL WIDTH DETERMINED BY LETTER SPACING. COORDINATE BLOCKNUMBERS AND STREETNAME DETAILS WITH CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE.

\*\* POST MOUNTED SIGNS TABULATED IN SIGNING AND PAVEMENT MARKING PLANS.

**SIGNAL HEADS**



**AUDIBLE PEDESTRIAN SIGNAL NOTES**

1. ALL PUSH BUTTONS SHALL BE EQUIPPED WITH LOCATOR TONES.
2. ALL WALK INTERVALS TO HAVE VERBAL MESSAGE DETAILING WALK DIRECTION.
3. VERBAL MESSAGE TO BE PLAYED DURING WALK INTERVAL WHEN BUTTON IS PRESSED.
4. ALL PEDESTRIAN PUSH BUTTONS TO BE LOCATED AT 42" ABOVE GROUND.
5. ALL PUSH BUTTONS TO BE EQUIPPED WITH VIBROTACTILE ARROW.
6. VIBROTACTILE ARROWS TO VIBRATE DURING WALK INTERVAL.
7. WALK AND DON'T WALK MESSAGE SHALL BE AUDIBLE THROUGH THE PUSH BUTTON SPEAKER.

**SIGNAL ASSEMBLY NOTES**

1. ALL VEHICULAR/BICYCLE SIGNALS SHALL BE EQUIPPED WITH L.E.D LENSES, TUNNEL VISORS AND LOUVERED BLACK METAL BACKPLATES WITH 2" REFLECTIVE BORDERS.
2. MIN/MAX HEIGHT TO BOTTOM OF VEHICULAR SIGNALS 17' /18'.
3. MIN HORIZONTAL SPACING FOR VEHICULAR SIGNALS IS 8'.
4. MIN/MAX HEIGHT TO BOTTOM OF PEDESTRIAN SIGNALS 10' /12'.
5. FINAL SIGNAL HEAD PLACEMENT WILL BE DETERMINED BY REPRESENTATIVES OF THE CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE AND THE DISTRICT TRAFFIC UNIT PRIOR TO SIGNAL BEING TURNED ON.
6. ALL PEDESTRIAN SIGNALS SHALL BE PORTLAND ORANGE FULL "PEDESTRIAN HAND" AND WHITE "WALKING PERSON" SYMBOLS AND HAVE INCANDESCENT LOOK WITH COUNTDOWN TIMER.
7. PROVIDE AIRCRAFT STRANDED CABLE FOR MOUNTING SIGNAL AND SIGN BRACKET ASSEMBLIES TO MAST ARMS.
8. PROVIDE BLACK ALUMINUM HOUSINGS FOR ALL SIGNAL HEADS.
9. INSTALL POST MOUNTED SIGNAL HEADS WITH BOTTOMS NO GREATER THAN 15' ABOVE THE SIDEWALK OR PAVEMENT.
10. EXACT LOCATION OF TRAFFIC SIGNAL SUPPORTS SHALL BE DETERMINED BY REPRESENTATIVES OF THE CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE AND THE DISTRICT TRAFFIC UNIT PRIOR TO INSTALLATION.

**PAVEMENT MARKING NOTES**

1. ALL STOP BARS ARE W/24".
2. CROSSWALKS ARE 10' X 24" KEYS WITH 3' TO 5' SPACING.
3. CROSSWALKS ACROSS BICYCLE LANES ARE 6' X 12" KEYS WITH 1' SPACING.

**LEGEND**

▲	EXISTING MAST ARM	➔	PROPOSED AUDIBLE PEDESTRIAN PUSH BUTTON/SIGN
▲	EXISTING MAST ARM WITH LUMINAIRE ARM	⊗	EXISTING CONTROLLER ASSEMBLY
⊗	EXISTING PEDESTRIAN SIGNAL HEAD	⊠	EXISTING JUNCTION BOX
⊗	PROPOSED PEDESTRIAN SIGNAL HEAD	⊠	PROPOSED STOP BAR VIDEO DETECTOR
⊗	EXISTING VEHICULAR/BICYCLE SIGNAL HEAD	C/2"	CONDUIT/SIZE
⊗	PROPOSED VEHICULAR/BICYCLE SIGNAL HEAD	CL/2"	LIGHTING CONDUIT/SIZE
○	EXISTING PEDESTAL	C/2"P	POWER CONDUIT/SIZE
▲	EXISTING SIGN	W/6"	SOLID WHITE LINE/WIDTH
▲	PROPOSED SIGN	BW/6"	BROKEN WHITE LINE/WIDTH
⊠	PROPOSED STOP BAR VIDEO DETECTION ZONE	DY/4"	DOUBLE SOLID YELLOW LINE/WIDTH
➔	EXISTING AUDIBLE PEDESTRIAN PUSH BUTTON/SIGN	G/24"	SOLID GREEN LINE/WIDTH

TS-300

COUNTY: ALLEGHENY

MUNICIPALITY: CITY OF PITTSBURGH

INTERSECTION: FIFTH AVENUE AND WASHINGTON PLACE AND CHATHAM SQUARE

APPROVED AND ACCEPTED:

CITY TRAFFIC ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_

APPROVED AND ACCEPTED:

DISTRICT TRAFFIC ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_



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**(NOT FOR CONSTRUCTION)**

DESIGNED	DWP
DRAWN	NEJ
CHECKED	AJR
IN CHARGE	JKM
DATE	05/01/24
SCALE	AS SHOWN

PORT AUTHORITY OF ALLEGHENY COUNTY PITTSBURGH PENNSYLVANIA	
BUS RAPID TRANSIT UPTOWN TO OAKLAND SIGNAL PLANS FIFTH AVENUE & WASHINGTON PLACE	
Port Authority connecting people to life	CONTRACT NO. BRT-001
DWG. NO. SG11	SHT. 1071

**MOVEMENT, PHASING AND SEQUENCE CHART**

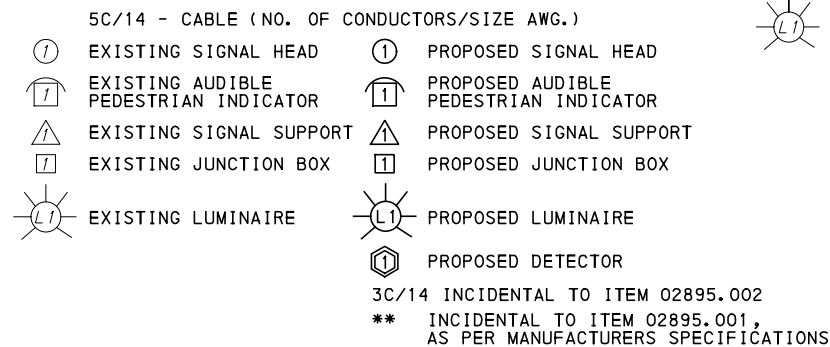
SIGNAL	PHASE 1				PHASE 2					PHASE 4+8					PHASE 3+8				NON LOCKING		
	1	2	3	-	1	2	3	4	5	1	2	3	4	5	1	2	3	4		-	
1-2	R	R	R		R	G	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R
3-4	R	R	R		R	R	R	R	R	R	G	G	Y	R	G	G	Y	R	R	R	R
5-6	R	R	R		R	R	R	R	R	R	G	G	Y	R	R	R	R	R	R	R	R
15-16-17-20	R	R	R		R	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R
18	G	Y	R		R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
19	-R	-R	-R		-R	-R	-R	-R	-R	-R	-R	-R	-R	-R	-G	-G	-Y	-R	-R	-R	-R
7-8	DW	DW	DW		DW	DW	DW	DW	DW	W	W	FD	DW	DW	W	FD	DW	DW	DW	OFF	OFF
9-10	DW	DW	DW		DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	OFF	OFF
11-12	DW	DW	DW		DW	DW	DW	DW	DW	W	W	FD	DW	DW	DW	DW	DW	DW	DW	OFF	OFF
13-14	DW	DW	DW		W	W	FD	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	OFF	OFF
FIXED		3	2					4	3				4.5	3.5				4.5	3.5		
MINIMUM	8					15					10				3						
PASSAGE	3					3					3				3						
FREE (MAX)	8					90					40				8						
PEDESTRIAN					3	7	19			3	7	14									
MEMORY	NON LOCKING				PED RECALL					PED RECALL					NON LOCKING						

- ① G IF FOLLOWED BY 3+8
- ② W IF FOLLOWED BY 3+8

**TRANSIT PRIORITY PRE-EMPTION NOTES (TO BE INSTALLED BY OTHERS)**

- COORDINATE TRAFFIC CONTROLLER PROGRAMMING MODIFICATION WITH REPRESENTATIVES OF THE CITY OF PITTSBURGH AND DISTRICT TRAFFIC UNIT.
- INCLUDE A TRANSIT PRIORITY PHASE THAT WILL EXTEND THE INDICATED PHASE A MAXIMUM OF 10 SECONDS WHEN ACTIVATED BY A PORT AUTHORITY VEHICLE. DO NOT VIOLATE SIDE STREET PEDESTRIAN MINIMUM TIMINGS.
- MAINTAIN ALL YELLOW CLEARANCES AT ALL TIMES.
- PROCEED TO THE SUBSEQUENT INTERVAL AS DEFINED IN THE MOVEMENT, SEQUENCE AND TIMING DIAGRAM UPON COMPLETING THE GREEN EXTENSION INTERVAL.
- ONCE A TRANSIT CALL IS PLACED AND SATISFIED, THE CONTROLLER WILL NOT SATISFY ANOTHER CALL FOR 4 CYCLES.
- LOCATION OF BUS DETECTORS ARE TO BE FIELD ADJUSTED TO ACHIEVE MAXIMUM OPERATION.

**WIRING DIAGRAM**



**DETECTOR ZONE INFORMATION**

DETECTOR	DETECTION ZONE(S)	MODE	TYPE	ROUTE	PHASE	LOCATION MAST ARM
①	①② (6' x 60')	PRESENCE	VIDEO (STOP BAR)	WASHINGTON PLACE	4	④
②	③④ (6' x 60')	PRESENCE	VIDEO (STOP BAR)	FIFTH AVE	2	⑤
	⑦ (6' x 115')	PRESENCE	VIDEO (STOP BAR)	FIFTH AVE	1	
③	⑤ (6' x 60')	PRESENCE	VIDEO (STOP BAR)	CHATHAM SQ	8	⑥
	⑥ (6' x 95')	PRESENCE	VIDEO (STOP BAR)	CHATHAM SQ	3	

**GENERAL NOTES**

THE CITY OF PITTSBURGH SHALL INSPECT THE NEW SIGNAL EQUIPMENT PRIOR TO ACTIVATION.

ALL TRAFFIC SIGNAL MAINTENANCE AND OPERATION RESPONSIBILITIES SHALL BE TURNED OVER TO THE CITY OF PITTSBURGH AFTER THE FOLLOWING CONDITIONS ARE IMPLEMENTED TO THE CITY'S SATISFACTION:

- PERMIT "AS-BUILT" TRAFFIC SIGNAL DRAWINGS ARE SUBMITTED AND APPROVED.
- ALL PUNCH LIST ITEMS ARE COMPLETED BY THE CONTRACTOR.
- AFTER THE 30-DAY CONTINUOUS UNINTERRUPTED SIGNAL OPERATION WITHOUT MALFUNCTIONS.

**CONSTRUCTION NOTES**

- ALL JUNCTION BOXES IN WALK AREAS TO BE CITY OF PITTSBURGH STANDARD CONCRETE JUNCTION BOX, TYPE 1.
- ALL JUNCTION BOXES IN NON-WALK AREAS TO BE CITY STANDARD JB-2 WITH BOTTOM.
- THERE SHALL BE NO SIGNAL WIRE OR FIBER CABLE SPLICING.
- SERVICE WIRE FROM THE POWER SOURCE TO THE CONTROLLER CABINET SHALL BE PLACED IN SECONDARY SEPARATE CONDUIT.
- STREET LIGHT CABLE IS NOT PERMITTED TO RUN THROUGH THE CONTROLLER CABINET AND SHALL BE PLACED IN SEPARATE CONDUIT.
- TRAFFIC SIGNAL CABLE SHALL BE PLACED IN DEDICATED CONDUIT.
- MOUNT DISCONNECT ON POLE NEAREST TO THE CONTROLLER CABINET EXCLUDING TYPE X POLES.
- REMOVE AND DISPOSE OF ALL EXISTING SIGNAL WIRING NO LONGER IN USE.
- REMOVE EXISTING SIGNAL EQUIPMENT NO LONGER IN USE AND RETURN TO THE CITY OF PITTSBURGH TRAFFIC CONTROL SHOP. COORDINATE DELIVERY OF EQUIPMENT WITH DELMAS MCELHANY, TRAFFIC CONTROL FOREMAN.
- SEE 01720 UTILITY COORDINATION FOR INFORMATION ON RELOCATION OF EXISTING SECURITY CAMERAS AND SHOT SPOTTERS.

TS-300

COUNTY: ALLEGHENY

MUNICIPALITY: CITY OF PITTSBURGH

INTERSECTION: FIFTH AVENUE AND WASHINGTON PLACE AND CHATHAM SQUARE

APPROVED AND ACCEPTED:

CITY TRAFFIC ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_

APPROVED AND ACCEPTED:

DISTRICT TRAFFIC ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_



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707 Grant Street  
5th Floor  
Pittsburgh, PA 15219

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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT UPTOWN TO OAKLAND**  
SIGNAL PLANS  
WIRING, MOVEMENT, PHASING & SEQUENCE DIAGRAMS

**Port Authority** connecting people to life

CONTRACT NO. BRT-001

DWG. NO. SG12      SHT. 1072



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**TRAFFIC SIGNAL TABULATION**

FIFTH AVENUE AND WASHINGTON PLACE AND CHATHAM SQUARE

ITEM NUMBER	MISCELLANEOUS			
UNIT	DESCRIPTION	QTY.	LOCATION	REMARKS
01882.002 EACH	TRAFFIC SIGNAL TIMING MODIFICATIONS	2	CC	
01883.002 EACH	TRAFFIC SIGNAL TIMING MODIFICATIONS	1	CC	
02212.009 LF	POLE FOUNDATION DRILLING, LESS THAN 30" DIAMETER	15	△△	
02212.010 LF	POLE FOUNDATION DRILLING, GREATER THAN 30" DIAMETER	23	△△	
02889.001 EACH	LED LUMINAIRE CITY STANDARD, GRAY	1	⊙	△
02890.001 EACH	TRAFFIC SIGNAL CONTROLLER ASSEMBLY, TYPE 2070 LC, WITH TYPE 332 BASE MOUNTED CABINET(MOD)	1	CC	332 CONTROLLER CABINET 8" RISER RE-ESTABLISH INTERCONNECT
02890.003 EACH	ETHERNET SWITCH	1	CC	
02894.001 EACH	VEHICULAR SIGNAL HEAD, THREE 12" SECTIONS	2	⑤⑥	BLACK TUNNEL VISORS BLACK ALUMINUM HOUSINGS BLACK METAL LOUVERED BACKPLATE
02894.001 EACH	VEHICULAR SIGNAL HEAD, THREE 12" SECTIONS	1	⑧	BLACK TUNNEL VISORS BLACK ALUMINUM HOUSINGS BLACK METAL LOUVERED BACKPLATE SIGNAL LOUVERS
02894.002 EACH	VEHICULAR SIGNAL HEAD, FOUR 12" SECTIONS	1	⑨	BLACK TUNNEL VISORS BLACK ALUMINUM HOUSINGS BLACK METAL LOUVERED BACKPLATE
02894.005 EACH	LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, TYPE A	8	⑦⑧⑨⑩ ⑪⑫⑬⑭	BLACK TUNNEL VISORS BLACK ALUMINUM HOUSINGS

ITEM NUMBER	MISCELLANEOUS (CONT.)			
UNIT	DESCRIPTION	QTY.	LOCATION	REMARKS
02894.006 EACH	VEHICULAR SIGNAL HEAD, THREE 8" SECTIONS	4	⑮⑯⑰⑱	BLACK TUNNEL VISORS BLACK ALUMINUM HOUSINGS BLACK METAL LOUVERED BACKPLATE
02894.021 EACH	RESET VEHICULAR SIGNAL HEAD	3	②③④	
02895.002 EACH	ACCESSIBLE PEDESTRIAN SIGNALS	8	①②③④ ⑤⑥⑦⑧	
02897.011 EACH	CONNECT TO EXISTING JUNCTION BOX	4	①②③④	

**DETECTORS**

ITEM NUMBER	DESCRIPTION	SEN. NO.	QTY.	LOCATION
02895.001 EACH	VIDEO DETECTION	①	1	△
02895.001 EACH	VIDEO DETECTION	②	1	△
02895.001 EACH	VIDEO DETECTION	③	1	△

**TRAFFIC SIGNAL SUPPORTS \*\***

POLE NO.	ITEM NUMBER	DESCRIPTION	QTY.	ROUTE	STATION	SIDE	OFFSET	MAST ARM																PEDESTAL				
								ARM "A"												ARM "C"				SHAFT	SIGNAL			
								H	K	SIGNAL LOCATION								SIGN LOCATION				W	G		X	Z	H	M
								L	M	N	O	P	R	S	T	U	Y											
①	02892.101 EACH	TRAFFIC SIGNAL SUPPORT, 15' MAST ARM, PAINTED GRAY	1	FIFTH AVE	440+92	L	27'	17'	10'	15'	10'	--	--	--	7'	--	--	--	--	--	--	--	--	--	--	--		
②	02892.002 EACH	TRAFFIC SIGNAL SUPPORT, 19' TYPE X, PAINTED GRAY	1	FIFTH AVE	440+69	R	24'	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	19'	--	10'			
③		TRAFFIC SIGNAL SUPPORT, 15' TYPE X		CHATHAM SQUARE	23+85	L	24'	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	15'	--	10'			
④	02892.100 EACH	TRAFFIC SIGNAL SUPPORT, 40' MAST ARM WITH LUMINAIRE (30' MOUNTING HEIGHT), PAINTED GRAY	1	FIFTH AVE	439+89	R	28'	17'	10'	40'	39'	27'	--	--	36'	30'	23'	18'	4'	270°	--	30'	0°	--	--	--		
⑤		TRAFFIC SIGNAL SUPPORT, 40' MAST ARM WITH LUMINAIRE ARM		FIFTH AVE	439+85	L	23'	17'	10'	40'	35'	27'	17'	--	32'	23'	--	--	6'	0°	--	30'	0°	--	--	--		
⑥		TRAFFIC SIGNAL SUPPORT, 50' MAST ARM WITH LUMINAIRE ARM		FIFTH AVE	440+86	L	43'	17'	10'	50'	47'	38'	30'	--	43'	37'	32'	--	24'	269°	--	30'	0°	--	--	--		
⑦		TRAFFIC SIGNAL SUPPORT, 33.5' MAST ARM		WASHINGTON PLACE	26+57	L	43'	17'	10'	33.5'	--	--	--	--	28'	22'	16'	7'	--	357°	--	--	--	--	--	--		
⑧		TRAFFIC SIGNAL SUPPORT, 19' MAST ARM		CHATHAM SQUARE	23+19	R	18'	17'	10'	19'	--	--	--	--	16'	7'	--	--	--	357°	--	--	--	--	--	--		
⑨	02892.002 EACH	TRAFFIC SIGNAL SUPPORT, 19' TYPE X, PAINTED GRAY	1	FIFTH AVE	440+01	L	38'	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	19'	--	10'			

\*\* REFER TO TRAFFIC STANDARDS TC-8800 SERIES FOR LETTER DESIGNATION

TS-300



Gulf Tower  
707 Grant Street  
5th Floor  
Pittsburgh, PA 15219

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**(NOT FOR CONSTRUCTION)**

DESIGNED	DWP
DRAWN	NED
CHECKED	AJR
IN CHARGE	JKM
DATE	05/01/24
SCALE	AS SHOWN

PORT AUTHORITY OF ALLEGHENY COUNTY	
PITTSBURGH	PENNSYLVANIA
BUS RAPID TRANSIT UPTOWN TO OAKLAND	
SIGNAL PLANS	
TRAFFIC SIGNAL TABULATIONS	
<b>Port Authority</b> connecting people to life™	CONTRACT NO. BRT-001
DWG. NO. SG13	SHT. 1073

TRAFFIC SIGNAL TABULATION

FIFTH AVENUE AND WASHINGTON PLACE AND CHATHAM SQUARE

SIGNS

TRENCH, CONDUIT, JUNCTION BOX, ELECTRICAL ITEMS

DESCRIPTION	ELECTRICAL SERVICE TYPE C (NEW)	TRENCH AND BACKFILL, TYPE I	TRENCH AND BACKFILL, TYPE IV	2 INCH CONDUIT	3 INCH CONDUIT	AWG 8, UNDERGROUND CABLE, COPPER, 1 CONDUCTOR	SIGNAL CABLE, 14 AWG, 5 CONDUCTOR	SIGNAL CABLE, 14 AWG, 7 CONDUCTOR
ITEM NUMBER	02896	02898	02898	02899	02899	02900	02900	02900
UNIT	EACH	LF	LF	LF	LF	LF	LF	LF
LOCATION								
CC TO	1	8		16	32			
1 TO	1	13			13			
2 TO	2	4			4			
1 TO	1							
5 TO	5							
4 TO	4							
4 TO	4	14			14			
4 TO	4							
3 TO	3	46			46			
3 TO	3	5		5	10			
1 TO	1	9	34		86			
COMPLETE INTERSECTION	1					560	1110	1200
TOTAL	1	99	34	21	205	560	1110	1200

S1 - TABULATED ON THE SYSTEMS PLAN.

SYMBOL	SERIES	SIZE	AREA EACH (SQ FT)	DESCRIPTION	QUANTITY	02891.001	02891.003	02891.007	02891.011	02891.013	02891.021	02891.033
						POST MOUNTED SIGNS, TYPE B	POST MOUNTED SIGNS, TYPE F	STRUCTURE MOUNTED FLAT SHEET ALUMINUM SIGN WITH STIFFENERS	RESET POST MOUNTED SIGNS, TYPE B	RESET POST MOUNTED SIGNS, TYPE F	RESET STRUCTURE MOUNTED FLAT SHEET ALUMINUM SIGN WITH STIFFENERS	REMOVE STRUCTURE MOUNTED FLAT SHEET ALUMINUM SIGNS
						SF	SF	SF	SF	SF	EACH	EACH
A	SPECIAL	60"x18"	7.5	1000 Fifth Ave 900	1							1
A	D3-4 *	60"x24"	10.0	1000 Fifth Ave 900	1			10.0				
A	D3-4 *	60"x24"	10.0	900 Fifth Ave 1000	1			10.0				
B	SPECIAL	144"x24"	24.0	Washington Place -> Chatham Square	1						1	
C	R3-1	30"x30"	6.3	NO RIGHT TURN	1						1	
C	R3-1	24"x24"	4.0	NO RIGHT TURN	1	4.0						
D	R3-2	30"x30"	6.3	NO LEFT TURN	1			6.3				
D	R3-2	24"x24"	4.0	NO LEFT TURN	1		4.0					
E	R3-4	30"x30"	6.3	NO U TURN	1			6.3				
G	R3-5R	30"x36"	7.5	RIGHT TURN ONLY	1							1
H	R3-5S	30"x36"	7.5	STRAIGHT THROUGH	1							1
J	R5-1	30"x30"	6.3	DO NOT ENTER	3				1	2		
L	R6-1	36"x12"	3.0	ONE WAY (TWO SIDED, CITY STANDARD)	2		6.0					
M	R6-2L	30"x36"	7.5	VERTICAL LEFT ONE WAY	1						1	
N	R6-2R	30"x36"	7.5	VERTICAL RIGHT ONE WAY	1			7.5				
O	R10-3E(MOD)	9"x15"	0.9	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER (MOD)	8			▲				
P	R5-3-4	30"x24"	5.0	NO TRUCKS OR BUSES	1							1
Q	R10-11	30"x36"	7.5	NO TURN ON RED	2			15.0				
R	R14-1	30"x36"	7.5	TRUCK ROUTE	1						1	
T	SPECIAL	30"x30"	6.3	PARKING LANE	1			6.3				
U	R10-15AL(MOD)	30"x30"	6.3	TURNING TRAFFIC MUST YIELD TO BIKES AND PEDESTRIANS	2		6.3	6.3				
V	SPECIAL	30"x30"	6.3	BUS LANE SIGNAL	1			6.3				
Y	R10-12A	30"x36"	7.5	LEFT TURN YIELD TO FLASHING YELLOW ARROW	1			7.5				
Z	R10-6AL	24"x30"	5.0	STOP HERE ON RED (LEFT)	1	5.0						
AA	R10-6-1	24"x18"	3.0	LEFT LANE PLAQUE	1		3.0					
TOTAL						9.0	19.3	81.5	1	2	4	4

▲ - INCIDENTAL TO ITEM 02895.002

\* WHITE REFLECTORIZED LEGEND AND BORDER ON BLUE REFLECTORIZED BACKGROUND. UTILIZE 4" CLEARVIEW 3W FOR BLOCK/NEIGHBORHOOD AND 8" CLEARVIEW 3W FOR STREET NAME. ACTUAL WIDTH DETERMINED BY LETTER SPACING. COORDINATE BLOCK NUMBERS AND STREET NAME DETAILS WITH CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE.



Gulf Tower  
707 Grant Street  
5th Floor  
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PORT AUTHORITY OF ALLEGHENY COUNTY PITTSBURGH PENNSYLVANIA	
BUS RAPID TRANSIT UPTOWN TO OAKLAND SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	
Port Authority connecting people to life	CONTRACT NO. BRT-001
DWG. NO. SG14	SHT. 1074

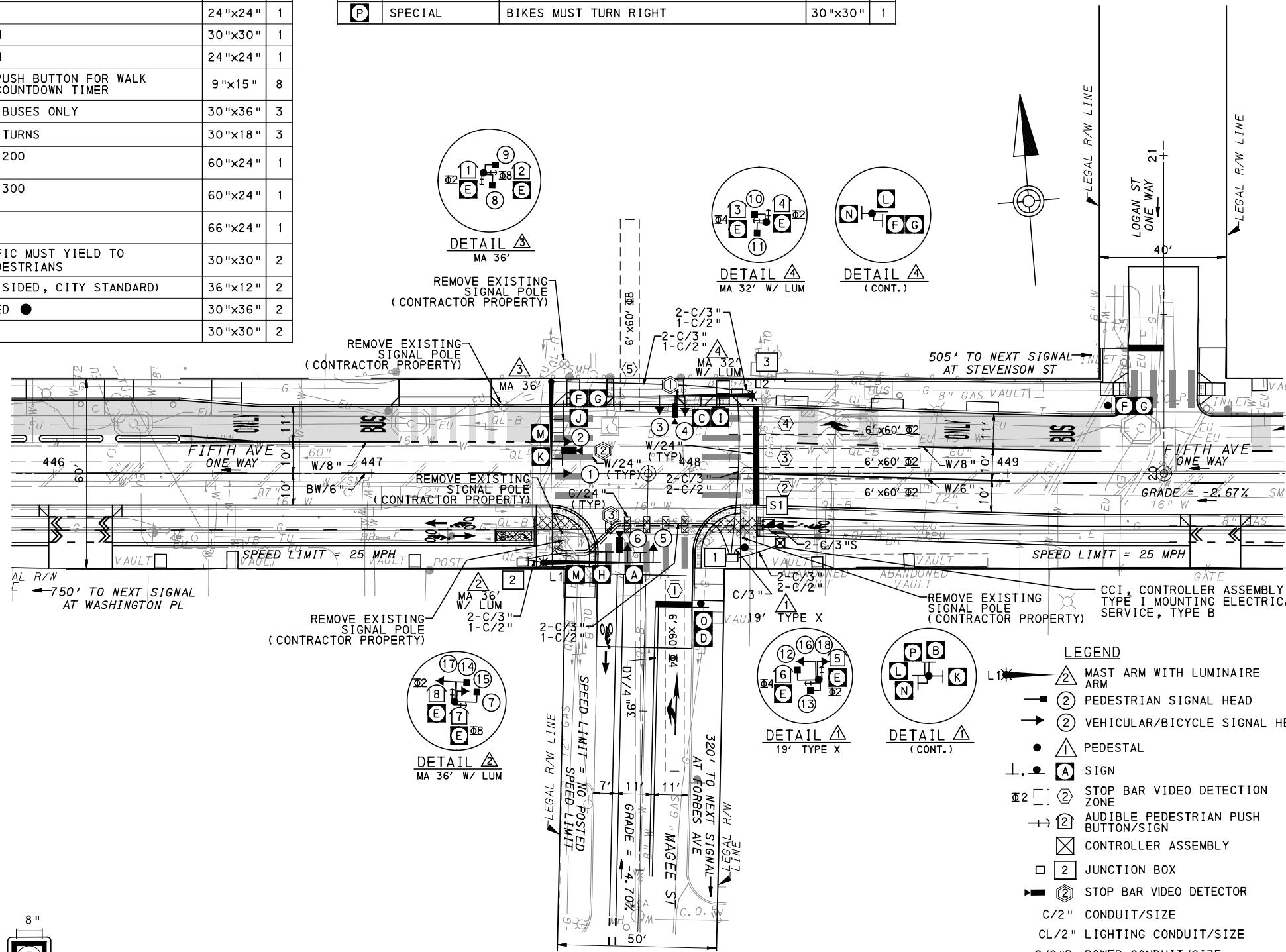
**SIGNS**

SIGN	STANDARD	DESCRIPTION	SIZE	QTY
A	R3-2	NO LEFT TURN	30"x30"	1
B	R3-2	NO LEFT TURN	24"x24"	1
C	R3-1	NO RIGHT TURN	30"x30"	1
D	R3-1	NO RIGHT TURN	24"x24"	1
E	R10-3E(MOD)	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER	9"x15"	8
F	R3-11B(MOD)**	RIGHT LANE - BUSES ONLY	30"x36"	3
G	SS-1**	EXCEPT RIGHT TURNS	30"x18"	3
H	D3-4*	1300 Uptown 1200 FIFTH AVE	60"x24"	1
I	D3-4*	1200 Uptown 1300 FIFTH AVE	60"x24"	1
J	D3-4*	100 Uptown MAGEE ST	66"x24"	1
K	R10-15AL(MOD)	TURNING TRAFFIC MUST YIELD TO BIKES AND PEDESTRIANS	30"x30"	2
L	R6-1	ONE WAY (TWO SIDED, CITY STANDARD)	36"x12"	2
M	R10-11	NO TURN ON RED ●	30"x36"	2
N	R5-1	DO NOT ENTER	30"x30"	2

SIGN	STANDARD	DESCRIPTION	SIZE	QTY
O	R10-6AL	STOP HERE ON RED (LEFT)	24"x30"	1
P	SPECIAL	BIKES MUST TURN RIGHT	30"x30"	1

\*WHITE REFLECTORIZED LEGEND AND BORDER ON BLUE REFLECTORIZED BACKGROUND. UTILIZE 4" CLEARVIEW 3W FOR BLOCK/NEIGHBORHOOD AND 8" CLEARVIEW 3W FOR STREET NAME. ACTUAL WIDTH DETERMINED BY LETTER SPACING. COORDINATE BLOCK NUMBERS AND STREETNAME DETAILS WITH CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE.

\*\*POST MOUNTED SIGNS TABULATED IN SIGNING AND PAVEMENT MARKING PLANS.

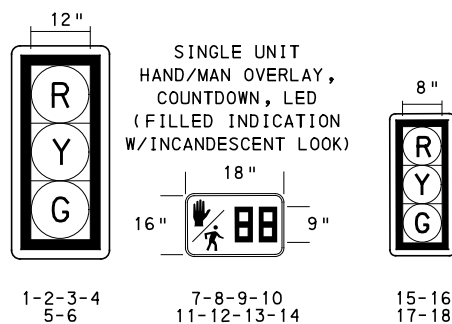


- AUDIBLE PEDESTRIAN SIGNAL NOTES**
1. ALL PUSH BUTTONS SHALL BE EQUIPPED WITH LOCATOR TONES.
  2. ALL WALK INTERVALS TO HAVE VERBAL MESSAGE DETAILING WALK DIRECTION.
  3. VERBAL MESSAGE TO BE PLAYED DURING WALK INTERVAL WHEN BUTTON IS PRESSED.
  4. ALL PEDESTRIAN PUSH BUTTONS TO BE LOCATED AT 42" ABOVE GROUND.
  5. ALL PUSH BUTTONS TO BE EQUIPPED WITH VIBROTACTILE ARROW.
  6. VIBROTACTILE ARROWS TO VIBRATE DURING WALK INTERVAL.
  7. WALK AND DON'T WALK MESSAGE SHALL BE AUDIBLE THROUGH THE PUSH BUTTON SPEAKER.

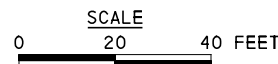
- SIGNAL ASSEMBLY NOTES**
1. ALL VEHICULAR/BICYCLE SIGNALS SHALL BE EQUIPPED WITH L.E.D LENSES, TUNNEL VISORS AND LOUVERED BLACK METAL BACKPLATES WITH 2" REFLECTIVE BORDERS.
  2. MIN/MAX HEIGHT TO BOTTOM OF VEHICULAR SIGNALS 17' /18'.
  3. MIN HORIZONTAL SPACING FOR VEHICULAR SIGNALS IS 8'.
  4. MIN/MAX HEIGHT TO BOTTOM OF PEDESTRIAN SIGNALS 10' /12'.
  5. FINAL SIGNAL HEAD PLACEMENT WILL BE DETERMINED BY REPRESENTATIVES OF THE CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE AND THE DISTRICT TRAFFIC UNIT PRIOR TO SIGNAL BEING TURNED ON.
  6. ALL PEDESTRIAN SIGNALS SHALL BE PORTLAND ORANGE FULL "PEDESTRIAN HAND" AND WHITE "WALKING PERSON" SYMBOLS AND HAVE INCANDESCENT LOOK WITH COUNTDOWN TIMER.
  7. PROVIDE AIRCRAFT STRANDED CABLE FOR MOUNTING SIGNAL AND SIGN BRACKET ASSEMBLIES TO MAST ARMS.
  8. PROVIDE BLACK ALUMINUM HOUSINGS FOR ALL SIGNAL HEADS.
  9. INSTALL POST MOUNTED SIGNAL HEADS WITH BOTTOMS NO GREATER THAN 15' ABOVE THE SIDEWALK OR PAVEMENT.
  10. EXACT LOCATION OF TRAFFIC SIGNAL SUPPORTS SHALL BE DETERMINED BY REPRESENTATIVES OF THE CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE AND THE DISTRICT TRAFFIC UNIT PRIOR TO INSTALLATION.

- PAVEMENT MARKING NOTES**
1. ALL STOP BARS ARE W/24".
  2. CROSSWALKS ARE 10' X 24" KEYS WITH 3' TO 5' SPACING.
  3. CROSSWALKS ACROSS BICYCLE LANES ARE 6' X 12" KEYS WITH 1' SPACING.

**SIGNAL HEADS**



- LEGEND**
- ▲ MAST ARM WITH LUMINAIRE ARM
  - ② PEDESTRIAN SIGNAL HEAD
  - ② VEHICULAR/BICYCLE SIGNAL HEAD
  - ▲ PEDESTAL
  - ▲ SIGN
  - ⊘2 STOP BAR VIDEO DETECTION ZONE
  - ➔ AUDIBLE PEDESTRIAN PUSH BUTTON/SIGN
  - ⊠ CONTROLLER ASSEMBLY
  - JUNCTION BOX
  - ➔ STOP BAR VIDEO DETECTOR
  - C/2" CONDUIT/SIZE
  - CL/2" LIGHTING CONDUIT/SIZE
  - C/2"P POWER CONDUIT/SIZE
  - W/6" SOLID WHITE LINE/WIDTH
  - BW/6" BROKEN WHITE LINE/WIDTH
  - DY/4" DOUBLE SOLID YELLOW LINE/WIDTH
  - G/24" SOLID GREEN LINE/WIDTH



TS-303

COUNTY: ALLEGHENY \_\_\_\_\_

MUNICIPALITY: CITY OF PITTSBURGH \_\_\_\_\_

INTERSECTION: FIFTH AVENUE \_\_\_\_\_  
AND MAGEE STREET \_\_\_\_\_

APPROVED AND ACCEPTED: \_\_\_\_\_

CITY TRAFFIC ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_

APPROVED AND ACCEPTED: \_\_\_\_\_

DISTRICT TRAFFIC ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_



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**(NOT FOR CONSTRUCTION)**

DESIGNED	DWP
DRAWN	NEJ
CHECKED	AJR
IN CHARGE	JKM
DATE	05/01/24
SCALE	AS SHOWN

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT UPTOWN TO OAKLAND**  
SIGNAL PLANS  
FIFTH AVENUE & MAGEE STREET

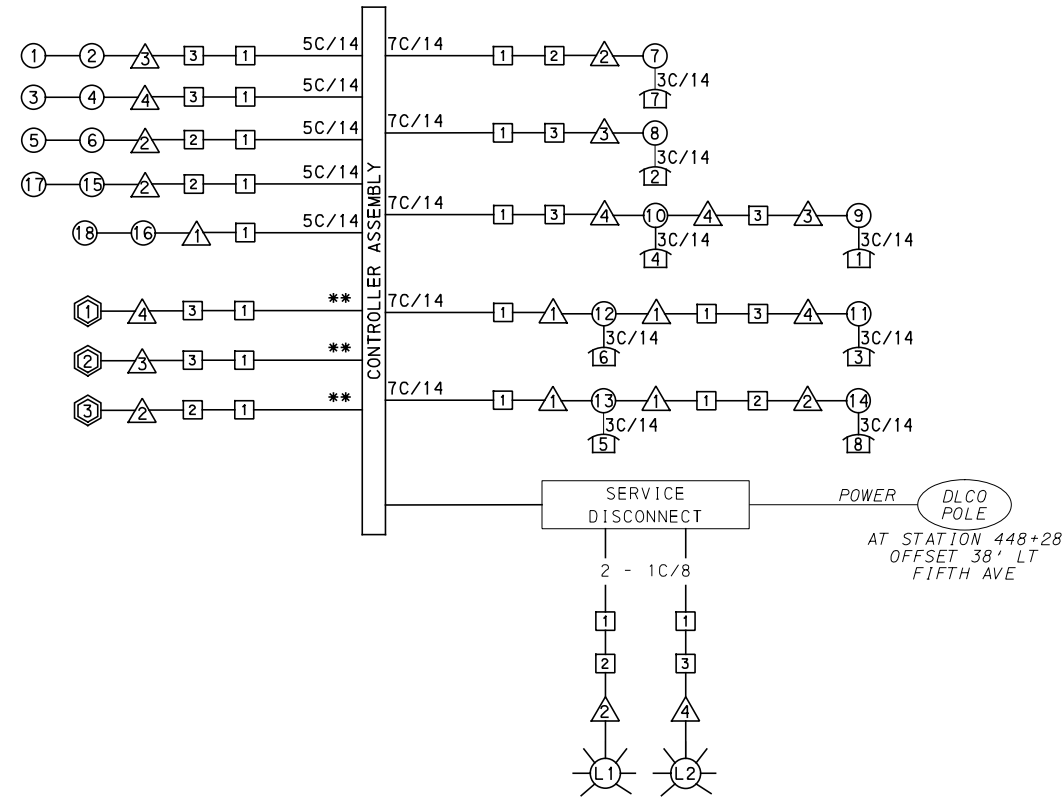
**Port Authority**  
connecting people to life™

CONTRACT NO. BRT-001

DWG. NO. SG15	SHT. 1075
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**MOVEMENT, PHASING AND SEQUENCE CHART**

SIGNAL	PHASE 2					PHASE 4+8					MOVEMENT
	INTERVAL	1	2	3	4	1	2	3	4	5	
1-2	G	G	Y	R	-	R	R	R	R	R	R
3-4	R	R	R	R	-	R	G	G	Y	R	R
5-6	R	R	R	R	-	R	G	G	Y	R	R
7-8-11-12	DW	DW	DW	DW	-	W	W	FD	DW	DW	OFF
9-10-13-14	W	FD	DW	DW	-	DW	DW	DW	DW	DW	OFF
15-16-17-18	G	G	Y	R	-	R	R	R	R	R	R
FIXED	3.5		2.5			4		2			
MINIMUM	10					10					
PASSAGE	3					3					
FREE (MAX)	54					24					
PEDESTRIAN	7	10				3	7	13			
MEMORY	PED RECALL					PED RECALL					



**WIRING DIAGRAM**

- 5C/14 - CABLE (NO. OF CONDUCTORS/SIZE AWG.)
- ① EXISTING SIGNAL HEAD      ① PROPOSED SIGNAL HEAD
- ① EXISTING AUDIBLE PEDESTRIAN INDICATOR      ① PROPOSED AUDIBLE PEDESTRIAN INDICATOR
- ① EXISTING SIGNAL SUPPORT      ① PROPOSED SIGNAL SUPPORT
- ① EXISTING JUNCTION BOX      ① PROPOSED JUNCTION BOX
- ① EXISTING LUMINAIRE      ① PROPOSED LUMINAIRE
- ① PROPOSED DETECTOR
- 3C/14 INCIDENTAL TO ITEM 02895.002
- \*\* INCIDENTAL TO ITEM 02895.001, AS PER MANUFACTURERS SPECIFICATIONS

**DETECTOR ZONE INFORMATION**

DETECTOR	DETECTION ZONE(S)	MODE	TYPE	ROUTE	PHASE	LOCATION MAST ARM
①	① (6' x 60')	PRESENCE	VIDEO (STOP BAR)	MAGEE ST	4	④
②	②③④ (6' x 60')	PRESENCE	VIDEO (STOP BAR)	FIFTH AVE	2	③
③	⑤ (6' x 60')	PRESENCE	VIDEO (STOP BAR)	MAGEE ST	8	②

**GENERAL NOTES**

- THE CITY OF PITTSBURGH SHALL INSPECT THE NEW SIGNAL EQUIPMENT PRIOR TO ACTIVATION.
- ALL TRAFFIC SIGNAL MAINTENANCE AND OPERATION RESPONSIBILITIES SHALL BE TURNED OVER TO THE CITY OF PITTSBURGH AFTER THE FOLLOWING CONDITIONS ARE IMPLEMENTED TO THE CITY'S SATISFACTION:
1. PERMIT "AS-BUILT" TRAFFIC SIGNAL DRAWINGS ARE SUBMITTED AND APPROVED.
  2. ALL PUNCH LIST ITEMS ARE COMPLETED BY THE CONTRACTOR.
  3. AFTER THE 30-DAY CONTINUOUS UNINTERRUPTED SIGNAL OPERATION WITHOUT MALFUNCTIONS.

**CONSTRUCTION NOTES**

1. ALL JUNCTION BOXES IN WALK AREAS TO BE CITY OF PITTSBURGH STANDARD CONCRETE JUNCTION BOX, TYPE 1.
2. ALL JUNCTION BOXES IN NON-WALK AREAS TO BE CITY STANDARD JB-2 WITH BOTTOM.
3. THERE SHALL BE NO SIGNAL WIRE OR FIBER CABLE SPLICING.
4. SERVICE WIRE FROM THE POWER SOURCE TO THE CONTROLLER CABINET SHALL BE PLACED IN SECONDARY SEPARATE CONDUIT.
5. STREET LIGHT CABLE IS NOT PERMITTED TO RUN THROUGH THE CONTROLLER CABINET AND SHALL BE PLACED IN SEPARATE CONDUIT.
6. TRAFFIC SIGNAL CABLE SHALL BE PLACED IN DEDICATED CONDUIT.
7. MOUNT DISCONNECT ON POLE NEAREST TO THE CONTROLLER CABINET EXCLUDING TYPE X POLES.
8. REMOVE AND DISPOSE OF ALL EXISTING SIGNAL WIRING NO LONGER IN USE.
9. REMOVE EXISTING SIGNAL EQUIPMENT NO LONGER IN USE AND RETURN TO THE CITY OF PITTSBURGH TRAFFIC CONTROL SHOP. COORDINATE DELIVERY OF EQUIPMENT WITH DELMAS MCELHANY, TRAFFIC CONTROL FOREMAN.

**TRANSIT PRIORITY PRE-EMPTION NOTES (TO BE INSTALLED BY OTHERS)**

1. COORDINATE TRAFFIC CONTROLLER PROGRAMMING MODIFICATION WITH REPRESENTATIVES OF THE CITY OF PITTSBURGH AND DISTRICT TRAFFIC UNIT.
2. INCLUDE A TRANSIT PRIORITY PHASE THAT WILL EXTEND THE INDICATED PHASE A MAXIMUM OF 10 SECONDS WHEN ACTIVATED BY A PORT AUTHORITY VEHICLE. DO NOT VIOLATE SIDE STREET PEDESTRIAN MINIMUM TIMINGS.
3. MAINTAIN ALL YELLOW CLEARANCES AT ALL TIMES.
4. PROCEED TO THE SUBSEQUENT INTERVAL AS DEFINED IN THE MOVEMENT, SEQUENCE AND TIMING DIAGRAM UPON COMPLETING THE GREEN EXTENSION INTERVAL.
5. ONCE A TRANSIT CALL IS PLACED AND SATISFIED, THE CONTROLLER WILL NOT SATISFY ANOTHER CALL FOR 4 CYCLES.
6. LOCATION OF BUS DETECTORS ARE TO BE FIELD ADJUSTED TO ACHIEVE MAXIMUM OPERATION.

TS-303

COUNTY: ALLEGHENY  
MUNICIPALITY: CITY OF PITTSBURGH  
INTERSECTION: FIFTH AVENUE AND MAGEE STREET

APPROVED AND ACCEPTED:  
CITY TRAFFIC ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_  
APPROVED AND ACCEPTED:  
DISTRICT TRAFFIC ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_



Gulf Tower  
707 Grant Street  
5th Floor  
Pittsburgh, PA 15219

NO.	DATE	DESCRIPTION
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DESIGNED	DWP
DRAWN	NED
CHECKED	AJR
IN CHARGE	JKM
DATE	05/01/24
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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT UPTOWN TO OAKLAND SIGNAL PLANS**  
WIRING, MOVEMENT, PHASING & SEQUENCE DIAGRAMS

**Port Authority** connecting people to life™

CONTRACT NO. BRT-001  
DWG. NO. SG16 SHT. 1076



TRAFFIC SIGNAL TABULATION

FIFTH AVENUE AND MAGEE STREET

MISCELLANEOUS				
ITEM NUMBER	DESCRIPTION	QTY.	LOCATION	REMARKS
01882.002 EACH	TRAFFIC SIGNAL TIMING MODIFICATIONS	2	CC	
02212.009 LF	POLE FOUNDATION DRILLING, LESS THAN 30" DIAMETER	8	△1	
02212.010 LF	POLE FOUNDATION DRILLING, GREATER THAN 30" DIAMETER	38	△2△3△4	
02889.002 EACH	LED LUMINAIRE CITY STANDARD, BLACK	2	☀☀	△2△4
02890.001 EACH	TRAFFIC SIGNAL CONTROLLER ASSEMBLY, TYPE 2070 LC, WITH TYPE 332 BASE MOUNTED CABINET(MOD)	1	CC	332 CONTROLLER CABINET 8" RISER RE-ESTABLISH INTERCONNECT
02890.003 EACH	ETHERNET SWITCH	1	CC	
02890.005 EACH	GPS TIME CLOCK	1	CC	
02894.001 EACH	VEHICULAR SIGNAL HEAD, THREE 12" SECTIONS	6	①②③ ④⑤⑥	BLACK TUNNEL VISORS BLACK ALUMINUM HOUSINGS BLACK METAL LOUVERED BACKPLATE
02894.005 EACH	LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, TYPE A	8	⑦⑧⑨⑩ ⑪⑫⑬⑭	BLACK TUNNEL VISORS BLACK ALUMINUM HOUSINGS
02894.006 EACH	VEHICULAR SIGNAL HEAD, THREE 8" SECTIONS	4	⑮⑯⑰⑱	BLACK TUNNEL VISORS BLACK ALUMINUM HOUSINGS BLACK METAL LOUVERED BACKPLATE
02895.002 EACH	ACCESSIBLE PEDESTRIAN SIGNALS	8	①②③④ ⑤⑥⑦⑧	

DETECTORS

ITEM NUMBER	DESCRIPTION	SEN. NO.	QTY.	LOCATION
02895.001 EACH	VIDEO DETECTION	①	1	△4
02895.001 EACH	VIDEO DETECTION	②	1	△3
02895.001 EACH	VIDEO DETECTION	③	1	△2

TRAFFIC SIGNAL SUPPORTS \*\*

POLE NO.	ITEM NUMBER	DESCRIPTION	QTY.	ROUTE	STATION	SIDE	OFFSET	MAST ARM																PEDESTAL				
								H	K	ARM "A"										ARM "C"				SHAFT	SIGNAL			
										L	SIGNAL LOCATION					SIGN LOCATION					W	G	X		Z	H	M	N
											M	N	O	P	R	S	T	U	Y									
△1	02892.004 EACH	TRAFFIC SIGNAL SUPPORT, 19' TYPE X, PAINTED BLACK	1	FIFTH AVE	448+17	R	23'	--	--	--	--	--	--	--	--	--	--	--	--	--	--	19'	--	10'				
△2	02892.210 EACH	TRAFFIC SIGNAL SUPPORT, 36' MAST ARM WITH LUMINAIRE ARM (30' MOUNTING HEIGHT), PAINTED BLACK	1	MAGEE ST	36+46	L	32'	17'	10'	36'	34'	26'	--	--	30'	6'	--	--	17'	1°	--	30'	0°	--	--	--		
△3	02892.606 EACH	TRAFFIC SIGNAL SUPPORT, 36' MAST ARM, PAINTED BLACK	1	FIFTH AVE	447+56	L	29'	17'	10'	36'	29'	19'	--	--	24'	16'	8'	--	12'	0°	--	30'	0°	--	--	--		
△4	02892.208 EACH	TRAFFIC SIGNAL SUPPORT, 32' MAST ARM WITH LUMINAIRE ARM (30' MOUNTING HEIGHT), PAINTED BLACK	1	FIFTH AVE	448+20	L	24'	17'	10'	32'	29'	21'	--	--	16'	--	--	--	10'	271°	--	30'	0°	--	--	--		

\*\* REFER TO TRAFFIC STANDARDS TC-8800 SERIES FOR LETTER DESIGNATION



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(NOT FOR CONSTRUCTION)

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PORT AUTHORITY OF ALLEGHENY COUNTY PITTSBURGH PENNSYLVANIA		
BUS RAPID TRANSIT UPTOWN TO OAKLAND SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS		
Port Authority connecting people to life	CONTRACT NO. BRT-001	
DWG. NO. SG17	SHT. 1077	

TRAFFIC SIGNAL TABULATION

FIFTH AVENUE AND MAGEE STREET

TRENCH, CONDUIT, JUNCTION BOX, ELECTRICAL ITEMS

DESCRIPTION	ELECTRICAL SERVICE TYPE B	CITY OF PITTSBURGH STANDARD CONCRETE JUNCTION BOX, TYPE I	TRENCH AND BACKFILL, TYPE II	TRENCH AND BACKFILL, TYPE IV	2 INCH CONDUIT	3 INCH CONDUIT	AWG 8, UNDERGROUND CABLE, COPPER, 1 CONDUCTOR	SIGNAL CABLE, 14 AWG, 5 CONDUCTOR	SIGNAL CABLE, 14 AWG, 7 CONDUCTOR
ITEM NUMBER	02896	02897	02898	02898	02899	02899	02900	02900	02900
UNIT	EACH	EACH	LF	LF	LF	LF	LF	LF	LF
LOCATION									
CC TO [1]			13		26	26			
[1] TO [1]		1	4			4			
[1] TO [2]			40	*	73	146			
[2] TO [2]		1	4		4	8			
[1] TO [3]			19	31	50	100			
[3] TO [4]		1	3		3	6			
[3] TO [3]			54		54	108			
CC TO [S1]			7			14			
COMPLETE INTERSECTION	1						530	680	720
TOTAL	1	3	144	31	210	412	530	680	720

[S1] - TABULATED ON THE SYSTEMS PLAN.

\* TYPE IV TRENCH TABULATED ON THE SYSTEMS PLAN.

SIGNS

SYMBOL	SERIES	SIZE	AREA EACH (SQ FT)	DESCRIPTION	QUANTITY	02891.001 POST MOUNTED SIGNS, TYPE B		
						SF	SF	SF
A	R3-2	30"X30"	6.3	NO LEFT TURN	1			6.3
B	R3-2	24"X24"	4.0	NO LEFT TURN	1		4.0	
C	R3-1	30"X30"	6.3	NO RIGHT TURN	1			6.3
D	R3-1	24"X24"	4.0	NO RIGHT TURN	1		4.0	
E	R10-3E(MOD)	9"X15"	0.9	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER (MOD)	8		▲	
F	R3-11B(MOD)	30"X36"	7.5	RIGHT LANE - BUSES ONLY	1			7.5
G	SS-1	30"X18"	3.8	EXCEPT RIGHT TURNS	3			11.4
H	D3-4*	60"X24"	10.0	1400 Uptown 1300 Fifth Ave	1			10.0
I	D3-4*	60"X24"	10.0	1300 Uptown 1400 Fifth Ave	1			10.0
J	D3-4*	66"X24"	11.0	100 Uptown Magee St	1			11.0
K	R10-15AL(MOD)	30"X30"	6.3	TURNING TRAFFIC MUST YIELD TO BIKES AND PEDESTRIANS	2		6.3	6.3
L	R6-1	36"X12"	3.0	ONE WAY (TWO SIDED, CITY STANDARD)	2		6.0	
M	R10-11	30"X36"	7.5	NO TURN ON RED ●	2			15.0
N	R5-1	30"X30"	6.3	DO NOT ENTER	2		12.6	
O	R10-6AL	24"X30"	5.0	STOP HERE ON RED (LEFT)	1	5.0		
P	SPECIAL	30"X30"	6.3	BIKES MUST TURN RIGHT	1		6.3	
TOTAL						5.0	39.2	83.8

▲ - INCIDENTAL TO ITEM 02895.002

\* WHITE REFLECTORIZED LEGEND AND BORDER ON BLUE REFLECTORIZED BACKGROUND. UTILIZE 4" CLEARVIEW 3W FOR BLOCK/NEIGHBORHOOD AND 8" CLEARVIEW 3W FOR STREET NAME. ACTUAL WIDTH DETERMINED BY LETTER SPACING. COORDINATE BLOCK NUMBERS AND STREET NAME DETAILS WITH CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE.

TS-303



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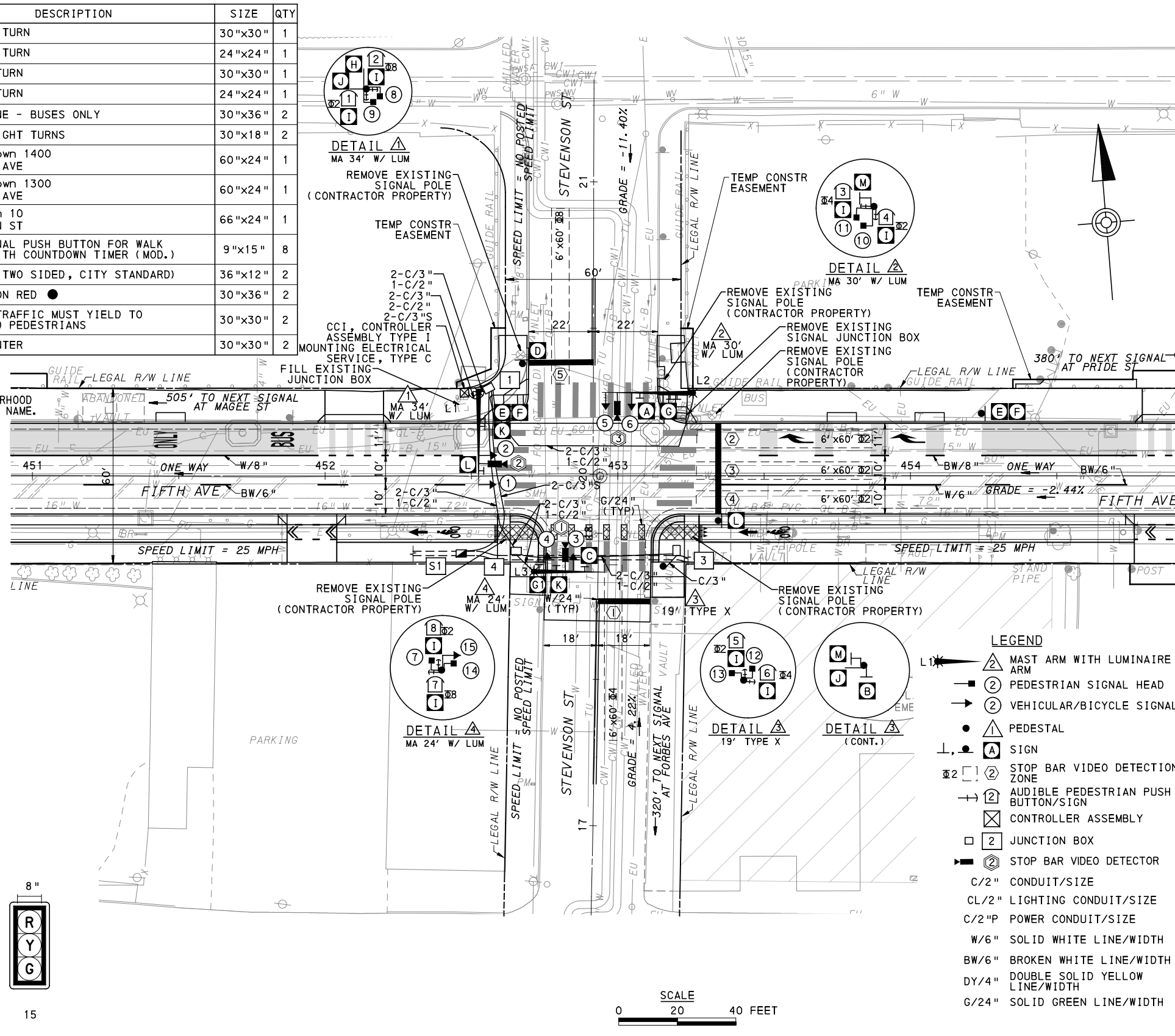
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BUS RAPID TRANSIT UPTOWN TO OAKLAND SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	
<b>Port Authority</b> <small>connecting people to life</small>	CONTRACT NO. BRT-001
	DWG. NO. SG18      SHT. 1078

**SIGNS**

SIGN	STANDARD	DESCRIPTION	SIZE	QTY
A	R3-1	NO RIGHT TURN	30"x30"	1
B	R3-1	NO RIGHT TURN	24"x24"	1
C	R3-2	NO LEFT TURN	30"x30"	1
D	R3-2	NO LEFT TURN	24"x24"	1
E	R3-11B(MOD)**	RIGHT LANE - BUSES ONLY	30"x36"	2
F	SS-1**	EXCEPT RIGHT TURNS	30"x18"	2
G	D3-4*	1300 Uptown 1400 FIFTH AVE	60"x24"	1
G1	D3-4*	1400 Uptown 1300 FIFTH AVE	60"x24"	1
H	D3-4*	20 Uptown 10 STEVENSON ST	66"x24"	1
I	R10-3E(MOD)	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER (MOD.)	9"x15"	8
J	R6-1	ONE WAY (TWO SIDED, CITY STANDARD)	36"x12"	2
K	R10-11	NO TURN ON RED	30"x36"	2
L	R10-15AL(MOD)	TURNING TRAFFIC MUST YIELD TO BIKES AND PEDESTRIANS	30"x30"	2
M	R5-1	DO NOT ENTER	30"x30"	2

\* WHITE REFLECTORIZED LEGEND AND BORDER ON BLUE REFLECTORIZED BACKGROUND. UTILIZE 4" CLEARVIEW 3W FOR BLOCK/NEIGHBORHOOD AND 8" CLEARVIEW 3W FOR STREET NAME. ACTUAL WIDTH DETERMINED BY LETTER SPACING. COORDINATE BLOCK NUMBERS AND STREET NAME DETAILS WITH CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE.

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**AUDIBLE PEDESTRIAN SIGNAL NOTES**

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2. ALL WALK INTERVALS TO HAVE VERBAL MESSAGE DETAILING WALK DIRECTION.
3. VERBAL MESSAGE TO BE PLAYED DURING WALK INTERVAL WHEN BUTTON IS PRESSED.
4. ALL PEDESTRIAN PUSH BUTTONS TO BE LOCATED AT 42" ABOVE GROUND.
5. ALL PUSH BUTTONS TO BE EQUIPPED WITH VIBROTACTILE ARROW.
6. VIBROTACTILE ARROWS TO VIBRATE DURING WALK INTERVAL.
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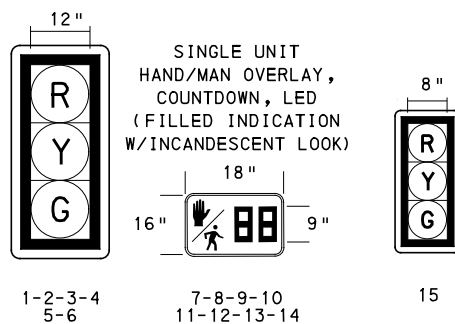
**SIGNAL ASSEMBLY NOTES**

1. ALL VEHICULAR/BICYCLE SIGNALS SHALL BE EQUIPPED WITH L.E.D LENSES, TUNNEL VISORS AND LOUVERED BLACK METAL BACKPLATES WITH 2" REFLECTIVE BORDERS.
2. MIN/MAX HEIGHT TO BOTTOM OF VEHICULAR SIGNALS 17'/18'.
3. MIN HORIZONTAL SPACING FOR VEHICULAR SIGNALS IS 8'.
4. MIN/MAX HEIGHT TO BOTTOM OF PEDESTRIAN SIGNALS 10'/12'.
5. FINAL SIGNAL HEAD PLACEMENT WILL BE DETERMINED BY REPRESENTATIVES OF THE CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE AND THE DISTRICT TRAFFIC UNIT PRIOR TO SIGNAL BEING TURNED ON.
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8. PROVIDE BLACK ALUMINUM HOUSINGS FOR ALL SIGNAL HEADS.
9. INSTALL POST MOUNTED SIGNAL HEADS WITH BOTTOMS NO GREATER THAN 15' ABOVE THE SIDEWALK OR PAVEMENT.
10. EXACT LOCATION OF TRAFFIC SIGNAL SUPPORTS SHALL BE DETERMINED BY REPRESENTATIVES OF THE CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE AND THE DISTRICT TRAFFIC UNIT PRIOR TO INSTALLATION.

**PAVEMENT MARKING NOTES**

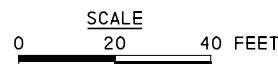
1. ALL STOP BARS ARE W/24".
2. CROSSWALKS ARE 10' X 24" KEYS WITH 3' TO 5' SPACING.
3. CROSSWALKS ACROSS BICYCLE LANES ARE 6' X 12" KEYS WITH 1' SPACING.

**SIGNAL HEADS**



**LEGEND**

- ▲ MAST ARM WITH LUMINAIRE ARM
- ② PEDESTRIAN SIGNAL HEAD
- ② VEHICULAR/BICYCLE SIGNAL HEAD
- ① PEDESTAL
- ▲ SIGN
- ② STOP BAR VIDEO DETECTION ZONE
- ➔ AUDIBLE PEDESTRIAN PUSH BUTTON/SIGN
- ⊠ CONTROLLER ASSEMBLY
- JUNCTION BOX
- ➔ STOP BAR VIDEO DETECTOR
- C/2" CONDUIT/SIZE
- CL/2" LIGHTING CONDUIT/SIZE
- C/2"P POWER CONDUIT/SIZE
- W/6" SOLID WHITE LINE/WIDTH
- BW/6" BROKEN WHITE LINE/WIDTH
- DY/4" DOUBLE SOLID YELLOW LINE/WIDTH
- G/24" SOLID GREEN LINE/WIDTH



TS-611

COUNTY: ALLEGHENY
MUNICIPALITY: CITY OF PITTSBURGH
INTERSECTION: FIFTH AVENUE AND STEVENSON STREET
APPROVED AND ACCEPTED:
CITY TRAFFIC ENGINEER _____ DATE _____
APPROVED AND ACCEPTED:
DISTRICT TRAFFIC ENGINEER _____ DATE _____



NO.	DATE	DESCRIPTION
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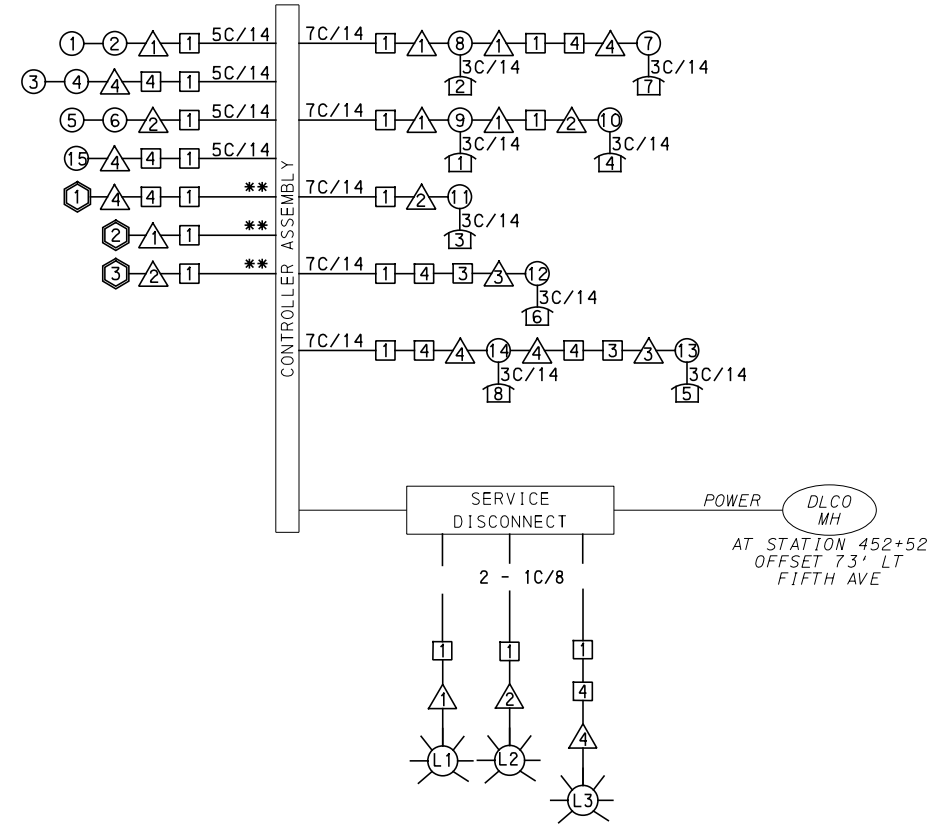
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DESIGNED	DWP
DRAWN	NEJ
CHECKED	AJR
IN CHARGE	JKM
DATE	05/01/24
SCALE	AS SHOWN

<b>PORT AUTHORITY OF ALLEGHENY COUNTY</b> PITTSBURGH PENNSYLVANIA	
<b>BUS RAPID TRANSIT UPTOWN TO OAKLAND</b> SIGNAL PLANS FIFTH AVENUE & STEVENSON STREET	
<b>Port Authority</b> <small>connecting people to life</small>	CONTRACT NO. BRT-001
DWG. NO. SG19	SHT. 1079

**MOVEMENT, PHASING AND SEQUENCE CHART**

SIGNAL	INTERVAL	PHASE 2					PHASE 4+8					FLASHING
		INTERVALS					INTERVALS					
		1	2	3	4	5	1	2	3	4	5	
1-2		R	G	G	Y	R	R	R	R	R	R	
3-4		R	R	R	R	R	R	G	G	Y	R	R
5-6		R	R	R	R	R	R	G	G	Y	R	R
7-8-11-12		DW	DW	DW	DW	DW	W	W	FD	DW	DW	OFF
9-10-13-14		W	W	FD	DW	DW	DW	DW	DW	DW	DW	OFF
15		R	G	G	Y	R	R	R	R	R	R	R
FIXED					3.5	2.5				4.5	2.5	
MINIMUM			10					10				
PASSAGE			3					3				
FREE (MAX)			50					27				
PEDESTRIAN		3	7	13			3	4	11			
MEMORY			PED RECALL				PED RECALL					



**WIRING DIAGRAM**

- 5C/14 - CABLE (NO. OF CONDUCTORS/SIZE AWG.)
- ① EXISTING SIGNAL HEAD      ① PROPOSED SIGNAL HEAD
- ① EXISTING AUDIBLE PEDESTRIAN INDICATOR      ① PROPOSED AUDIBLE PEDESTRIAN INDICATOR
- △ EXISTING SIGNAL SUPPORT      △ PROPOSED SIGNAL SUPPORT
- ① EXISTING JUNCTION BOX      ① PROPOSED JUNCTION BOX
- ⊙ EXISTING LUMINAIRE      ⊙ PROPOSED LUMINAIRE
- ① PROPOSED DETECTOR
- \*\* INCIDENTAL TO ITEM 02895.001, AS PER MANUFACTURERS SPECIFICATIONS
- 3C/14 INCIDENTAL TO ITEM 02895.002

**TRANSIT PRIORITY PRE-EMPTION NOTES (TO BE INSTALLED BY OTHERS)**

- COORDINATE TRAFFIC CONTROLLER PROGRAMMING MODIFICATION WITH REPRESENTATIVES OF THE CITY OF PITTSBURGH AND DISTRICT TRAFFIC UNIT.
- INCLUDE A TRANSIT PRIORITY PHASE THAT WILL EXTEND THE INDICATED PHASE A MAXIMUM OF 10 SECONDS WHEN ACTIVATED BY A PORT AUTHORITY VEHICLE. DO NOT VIOLATE SIDE STREET PEDESTRIAN MINIMUM TIMINGS.
- MAINTAIN ALL YELLOW CLEARANCES AT ALL TIMES.
- PROCEED TO THE SUBSEQUENT INTERVAL AS DEFINED IN THE MOVEMENT, SEQUENCE AND TIMING DIAGRAM UPON COMPLETING THE GREEN EXTENSION INTERVAL.
- ONCE A TRANSIT CALL IS PLACED AND SATISFIED, THE CONTROLLER WILL NOT SATISFY ANOTHER CALL FOR 4 CYCLES.
- LOCATION OF BUS DETECTORS ARE TO BE FIELD ADJUSTED TO ACHIEVE MAXIMUM OPERATION.

**DETECTOR ZONE INFORMATION**

DETECTOR	DETECTION ZONE(S)	MODE	TYPE	ROUTE	PHASE	LOCATION MAST ARM
①	⑤ (6' x 60')	PRESENCE	VIDEO (STOP BAR)	STEVENSON STREET	8	△
②	②③④ (6' x 60')	PRESENCE	VIDEO (STOP BAR)	5TH AVENUE	2	△
③	① (6' x 60')	PRESENCE	VIDEO (STOP BAR)	STEVENSON STREET	4	△

**GENERAL NOTES**

- THE CITY OF PITTSBURGH SHALL INSPECT THE NEW SIGNAL EQUIPMENT PRIOR TO ACTIVATION.
- ALL TRAFFIC SIGNAL MAINTENANCE AND OPERATION RESPONSIBILITIES SHALL BE TURNED OVER TO THE CITY OF PITTSBURGH AFTER THE FOLLOWING CONDITIONS ARE IMPLEMENTED TO THE CITY'S SATISFACTION:
- PERMIT "AS-BUILT" TRAFFIC SIGNAL DRAWINGS ARE SUBMITTED AND APPROVED.
  - ALL PUNCH LIST ITEMS ARE COMPLETED BY THE CONTRACTOR.
  - AFTER THE 30-DAY CONTINUOUS UNINTERRUPTED SIGNAL OPERATION WITHOUT MALFUNCTIONS.

**CONSTRUCTION NOTES**

- ALL JUNCTION BOXES IN WALK AREAS TO BE CITY OF PITTSBURGH STANDARD CONCRETE JUNCTION BOX, TYPE 1.
- ALL JUNCTION BOXES IN NON-WALK AREAS TO BE CITY STANDARD JB-2 WITH BOTTOM.
- THERE SHALL BE NO SIGNAL WIRE OR FIBER CABLE SPLICING.
- SERVICE WIRE FROM THE POWER SOURCE TO THE CONTROLLER CABINET SHALL BE PLACED IN SECONDARY SEPARATE CONDUIT.
- STREET LIGHT CABLE IS NOT PERMITTED TO RUN THROUGH THE CONTROLLER CABINET AND SHALL BE PLACED IN SEPARATE CONDUIT.
- TRAFFIC SIGNAL CABLE SHALL BE PLACED IN DEDICATED CONDUIT.
- MOUNT DISCONNECT ON POLE NEAREST TO THE CONTROLLER CABINET EXCLUDING TYPE X POLES.
- REMOVE AND DISPOSE OF ALL EXISTING SIGNAL WIRING NO LONGER IN USE.
- REMOVE EXISTING SIGNAL EQUIPMENT NO LONGER IN USE AND RETURN TO THE CITY OF PITTSBURGH TRAFFIC CONTROL SHOP. COORDINATE DELIVERY OF EQUIPMENT WITH DELMAS MCELHANY, TRAFFIC CONTROL FOREMAN.

TS-611

COUNTY: ALLEGHENY  
MUNICIPALITY: CITY OF PITTSBURGH  
INTERSECTION: FIFTH AVENUE AND STEVENSON STREET

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5th Floor  
Pittsburgh, PA 15219

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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT UPTOWN TO OAKLAND**  
SIGNAL PLANS  
WIRING, MOVEMENT, PHASING & SEQUENCE DIAGRAMS

**Port Authority** connecting people to life™

CONTRACT NO. BRT-001  
DWG. NO. SG20 SHT. 1080



TRAFFIC SIGNAL TABULATION

FIFTH AVENUE AND STEVENSON STREET

ITEM NUMBER	MISCELLANEOUS			
UNIT	DESCRIPTION	QTY.	LOCATION	REMARKS
01882.002 EACH	TRAFFIC SIGNAL TIMING MODIFICATIONS	2	CC	
02212.009 LF	POLE FOUNDATION DRILLING, LESS THAN 30" DIAMETER	8	△3	
02212.010 LF	POLE FOUNDATION DRILLING, GREATER THAN 30" DIAMETER	36	△1△2△4	
02889.002 EACH	LED LUMINAIRE CITY STANDARD, BLACK	3	☀☀☀	△1△2△4
02890.001 EACH	TRAFFIC SIGNAL CONTROLLER ASSEMBLY, TYPE 2070 LC, WITH TYPE 332 BASE MOUNTED CABINET(MOD)	1	CC	332 CONTROLLER CABINET 8" RISER RE-ESTABLISH INTERCONNECT
02890.003 EACH	ETHERNET SWITCH	1	CC	
02890.005 EACH	GPS TIME CLOCK	1	CC	
02894.001 EACH	VEHICULAR SIGNAL HEAD, THREE 12" SECTIONS	6	①②③ ④⑤⑥	BLACK TUNNEL VISORS BLACK ALUMINUM HOUSINGS BLACK METAL LOUVERED BACKPLATE
02894.005 EACH	LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, TYPE A	8	⑦⑧⑨⑩ ⑪⑫⑬⑭	BLACK TUNNEL VISORS BLACK ALUMINUM HOUSINGS
02894.006 EACH	VEHICLE SIGNAL HEAD, THREE 8" SECTIONS	1	⑮	BLACK TUNNEL VISORS BLACK ALUMINUM HOUSINGS BLACK METAL LOUVERED BACKPLATE
02895.002 EACH	ACCESSIBLE PEDESTRIAN SIGNALS	8	①②③④ ⑤⑥⑦⑧	

DETECTORS

ITEM NUMBER	DESCRIPTION	SEN. NO.	QTY.	LOCATION
02895.001 EACH	VIDEO DETECTION	①	1	△4
02895.001 EACH	VIDEO DETECTION	②	1	△1
02895.001 EACH	VIDEO DETECTION	③	1	△2

TRAFFIC SIGNAL SUPPORTS \*\*

POLE NO.	ITEM NUMBER	DESCRIPTION	QTY.	ROUTE	STATION	SIDE	OFFSET	MAST ARM												PEDESTAL						
								H	K	ARM "A"					ARM "C"				SHAFT	SIGNAL						
										L	SIGNAL LOCATION			SIGN LOCATION		W	G	X		Z	H	M	N			
											M	N	O	P	R									S	T	U
△1	02892.209 EACH	TRAFFIC SIGNAL SUPPORT, 34' MAST ARM WITH LUMINAIRE ARM (30' MOUNTING HEIGHT), PAINTED BLACK	1	FIFTH AVE	452+52	L	29'	17'	10'	34'	32'	22'	--	--	27'	9'	--	--	12'	0°	--	30'	0°	--	--	--
△2	02892.207 EACH	TRAFFIC SIGNAL SUPPORT, 30' MAST ARM WITH LUMINAIRE ARM (30' MOUNTING HEIGHT), PAINTED BLACK	1	STEVENSON ST	21+22	R	34'	17'	10'	30'	29'	21'	--	--	18'	--	--	--	6'	0°	--	30'	0°	--	--	--
△3	02892.004 EACH	TRAFFIC SIGNAL SUPPORT, 19' TYPE X, PAINTED BLACK	1	STEVENSON ST	17+88	R	22'	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	15'	--	10'
△4	02892.204 EACH	TRAFFIC SIGNAL SUPPORT, 24' MAST ARM WITH LUMINAIRE ARM (30' MOUNTING HEIGHT), PAINTED BLACK	1	STEVENSON ST	17+87	L	22'	17'	10'	24'	13'	4'	--	--	17'	7'	--	--	1'	0°	--	30'	0°	--	--	--

\*\* REFER TO TRAFFIC STANDARDS TC-8800 SERIES FOR LETTER DESIGNATION



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PORT AUTHORITY OF ALLEGHENY COUNTY PITTSBURGH PENNSYLVANIA		
BUS RAPID TRANSIT UPTOWN TO OAKLAND SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS		
Port Authority connecting people to life	CONTRACT NO. BRT-001	
DWG. NO. SG21	SHT. 1081	

**TRAFFIC SIGNAL TABULATION**

FIFTH AVENUE AND STEVENSON STREET

**TRENCH, CONDUIT, JUNCTION BOX, ELECTRICAL ITEMS**

DESCRIPTION	ELECTRICAL SERVICE TYPE C (NEW)	CITY OF PITTSBURGH STANDARD CONCRETE JUNCTION BOX, TYPE I	TRENCH AND BACKFILL, TYPE II	TRENCH AND BACKFILL, TYPE IV	2 INCH CONDUIT	3 INCH CONDUIT	AWG 8, UNDERGROUND CABLE, COPPER, 1 CONDUCTOR	SIGNAL CABLE, 14 AWG, 5 CONDUCTOR	SIGNAL CABLE, 14 AWG, 7 CONDUCTOR
ITEM NUMBER	02896	02897	02898	02898	02899	02899	02900	02900	02900
UNIT	EACH	EACH	LF	LF	LF	LF	LF	LF	LF
LOCATION									
CC TO 1		1	8		16	32			
1 TO 1			1		1	2			
1 TO 2			22	44	66	132			
1 TO 4		1	25	31**	56	112			
4 TO 4			8		8	16			
4 TO 3		1	15	*	52	104			
3 TO 3			5			5			
S1 TO 1			21	**		126			
COMPLETE INTERSECTION	1						620	450	700
TOTAL	1	3	105	75	199	529	620	450	700

S1 TABULATED ON THE SYSTEMS PLAN.

\* TYPE IV TRENCH TABULATED AS PART OF THE SYSTEMS PLAN.

\*\* CONDUIT PLACED IN A SHARED TRENCH.

**SIGNS**

SYMBOL	SERIES	SIZE	AREA EACH (SQ FT)	DESCRIPTION	QUANTITY	02891.001 POST MOUNTED SIGNS, TYPE B		
						SF	SF	SF
A	R3-1	30"x30"	6.3	NO RIGHT TURN	1			6.3
B	R3-1	24"x24"	4.0	NO RIGHT TURN	1		4.0	
C	R3-2	30"x30"	6.3	NO LEFT TURN	1			6.3
D	R3-2	24"x24"	4.0	NO LEFT TURN	1		4.0	
E	R3-11B(MOD)	30"x36"	7.5	RIGHT LANE - BUSES ONLY	2	7.5		7.5
F	SS-1	30"x18"	3.8	EXCEPT RIGHT TURNS	2		3.8	3.8
G	D3-4 *	60"x24"	10.0	1300 Uptown 1400 Fifth Ave	1			10.0
G1	D3-4 *	60"x24"	10.0	1400 Uptown 1300 Fifth Ave	1			10.0
H	D3-4 *	66"x24"	11.0	20 Uptown 10 Stevenson St	1			11.0
I	R10-3E(MOD)	9"x15"	0.9	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER (MOD.)	8		▲	
J	R6-1	36"x12"	3.0	ONE WAY (TWO SIDED, CITY STANDARD)	2		6.0	
K	R10-11	30"x36"	7.5	NO TURN ON RED ●	2			15.0
L	R10-15AL(MOD)	30"x30"	6.3	TURNING TRAFFIC MUST YIELD TO BIKES AND PEDESTRIANS	2	6.3		6.3
M	R5-1	30"x30"	6.3	DO NOT ENTER	2		12.6	
<b>TOTAL</b>						<b>13.8</b>	<b>30.4</b>	<b>76.2</b>

▲ - INCIDENTAL TO ITEM 02895.002

\* WHITE REFLECTORIZED LEGEND AND BORDER ON BLUE REFLECTORIZED BACKGROUND. UTILIZE 4" CLEARVIEW 3W FOR BLOCK/NEIGHBORHOOD AND 8" CLEARVIEW 3W FOR STREET NAME. ACTUAL WIDTH DETERMINED BY LETTER SPACING. COORDINATE BLOCK NUMBERS AND STREET NAME DETAILS WITH CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE.

TS-611



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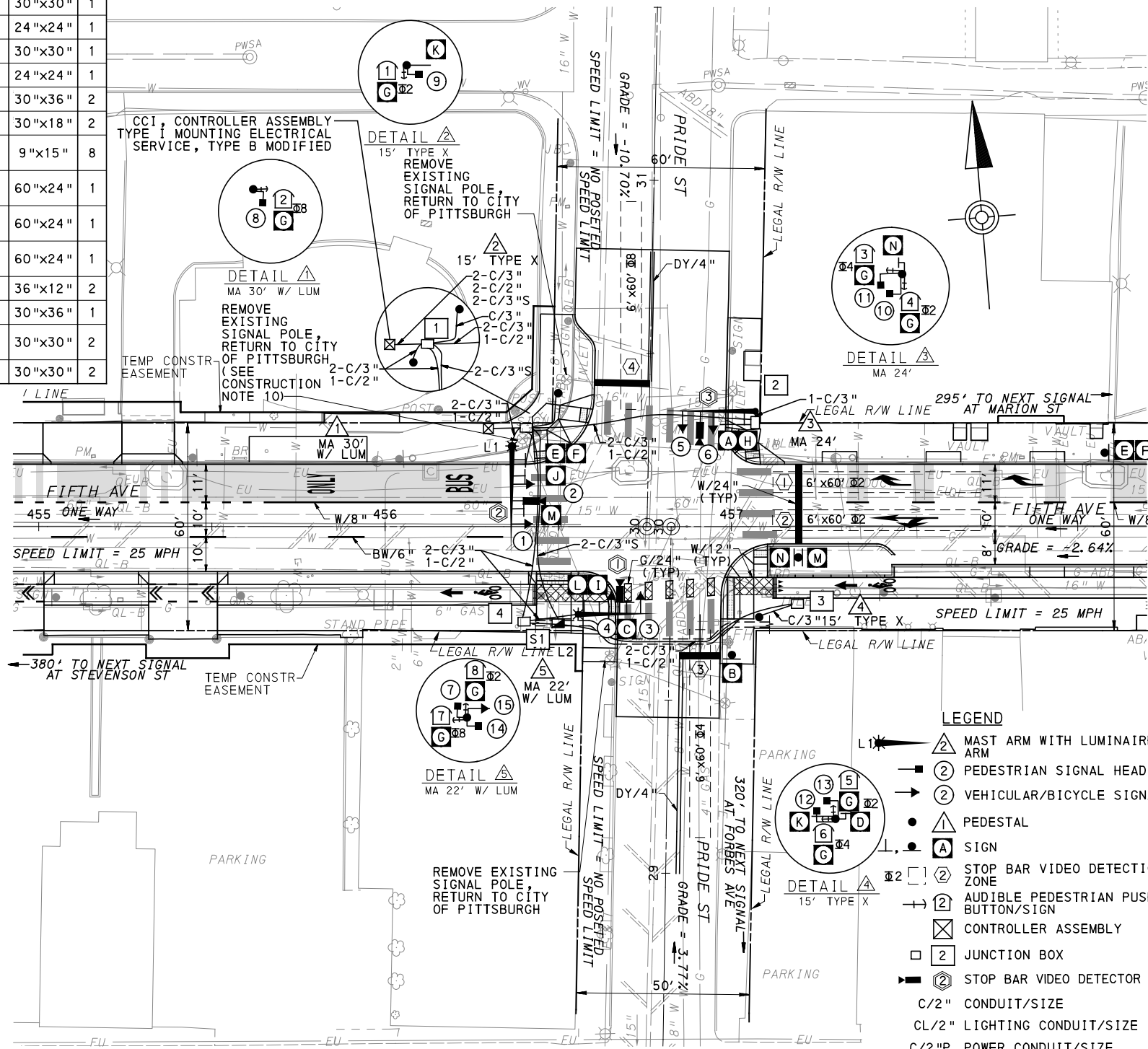
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<b>Port Authority</b> <small>connecting people to life</small>	CONTRACT NO. BRT-001
	DWG. NO. SG22      SHT. 1082

**SIGNS**

SIGN	STANDARD	DESCRIPTION	SIZE	QTY
A	R3-1	NO RIGHT TURN	30"x30"	1
B	R3-1	NO RIGHT TURN	24"x24"	1
C	R3-2	NO LEFT TURN	30"x30"	1
D	R3-2	NO LEFT TURN	24"x24"	1
E	R3-11B(MOD)**	RIGHT LANE - BUSES ONLY	30"x36"	2
F	SS-1**	EXCEPT RIGHT TURNS	30"x18"	2
G	R10-3E(MOD)	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER (MOD.)	9"x15"	8
H	D3-4*	1400 Uptown 1500 FIFTH AVE	60"x24"	1
I	D3-4*	1500 Uptown 1400 FIFTH AVE	60"x24"	1
J	D3-4*	20 Uptown 10 PRIDE ST	60"x24"	1
K	R6-1	ONE WAY (TWO SIDED, CITY STANDARD)	36"x12"	2
L	R10-11	NO TURN ON RED	30"x36"	1
M	R10-15AL(MOD)	TURNING TRAFFIC MUST YIELD TO BIKES AND PEDESTRIANS	30"x30"	2
N	R5-1	DO NOT ENTER	30"x30"	2

\* WHITE REFLECTORIZED LEGEND AND BORDER ON BLUE REFLECTORIZED BACKGROUND. UTILIZE 4" CLEARVIEW 3W FOR BLOCK/NEIGHBORHOOD AND 8" CLEARVIEW 3W FOR STREET NAME. ACTUAL WIDTH DETERMINED BY LETTER SPACING. COORDINATE BLOCK NUMBERS AND STREET NAME DETAILS WITH CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE.

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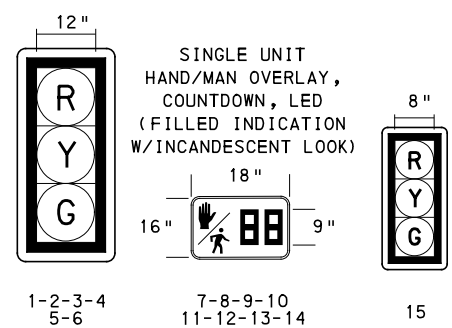


- AUDIBLE PEDESTRIAN SIGNAL NOTES**
1. ALL PUSH BUTTONS SHALL BE EQUIPPED WITH LOCATOR TONES.
  2. ALL WALK INTERVALS TO HAVE VERBAL MESSAGE DETAILING WALK DIRECTION.
  3. VERBAL MESSAGE TO BE PLAYED DURING WALK INTERVAL WHEN BUTTON IS PRESSED.
  4. ALL PEDESTRIAN PUSH BUTTONS TO BE LOCATED AT 42" ABOVE GROUND.
  5. ALL PUSH BUTTONS TO BE EQUIPPED WITH VIBROTACTILE ARROW.
  6. VIBROTACTILE ARROWS TO VIBRATE DURING WALK INTERVAL.
  7. WALK AND DON'T WALK MESSAGE SHALL BE AUDIBLE THROUGH THE PUSH BUTTON SPEAKER.

- SIGNAL ASSEMBLY NOTES**
1. ALL VEHICULAR/BICYCLE SIGNALS SHALL BE EQUIPPED WITH L.E.D LENSES, TUNNEL VISORS AND LOUVERED BLACK METAL BACKPLATES WITH 2" REFLECTIVE BORDERS.
  2. MIN/MAX HEIGHT TO BOTTOM OF VEHICULAR SIGNALS 17' /18'.
  3. MIN HORIZONTAL SPACING FOR VEHICULAR SIGNALS IS 8'.
  4. MIN/MAX HEIGHT TO BOTTOM OF PEDESTRIAN SIGNALS 10' /12'.
  5. FINAL SIGNAL HEAD PLACEMENT WILL BE DETERMINED BY REPRESENTATIVES OF THE CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE AND THE DISTRICT TRAFFIC UNIT PRIOR TO SIGNAL BEING TURNED ON.
  6. ALL PEDESTRIAN SIGNALS SHALL BE PORTLAND ORANGE FULL "PEDESTRIAN HAND" AND WHITE "WALKING PERSON" SYMBOLS AND HAVE INCANDESCENT LOOK WITH COUNTDOWN TIMER.
  7. PROVIDE AIRCRAFT STRANDED CABLE FOR MOUNTING SIGNAL AND SIGN BRACKET ASSEMBLIES TO MAST ARMS.
  8. PROVIDE BLACK ALUMINUM HOUSINGS FOR ALL SIGNAL HEADS.
  9. INSTALL POST MOUNTED SIGNAL HEADS WITH BOTTOMS NO GREATER THAN 15" ABOVE THE SIDEWALK OR PAVEMENT.
  10. EXACT LOCATION OF TRAFFIC SIGNAL SUPPORTS SHALL BE DETERMINED BY REPRESENTATIVES OF THE CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE AND THE DISTRICT TRAFFIC UNIT PRIOR TO INSTALLATION.

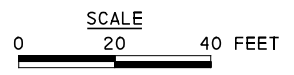
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**SIGNAL HEADS**



**LEGEND**

	MAST ARM WITH LUMINAIRE ARM
	PEDESTRIAN SIGNAL HEAD
	VEHICULAR/BICYCLE SIGNAL HEAD
	PEDESTAL
	SIGN
	STOP BAR VIDEO DETECTION ZONE
	AUDIBLE PEDESTRIAN PUSH BUTTON/SIGN
	CONTROLLER ASSEMBLY
	JUNCTION BOX
	STOP BAR VIDEO DETECTOR
	C/2" CONDUIT/SIZE
	CL/2" LIGHTING CONDUIT/SIZE
	C/2"P POWER CONDUIT/SIZE
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TS-311

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**AECOM**  
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 PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT UPTOWN TO OAKLAND**  
 SIGNAL PLANS  
 FIFTH AVENUE & PRIDE STREET

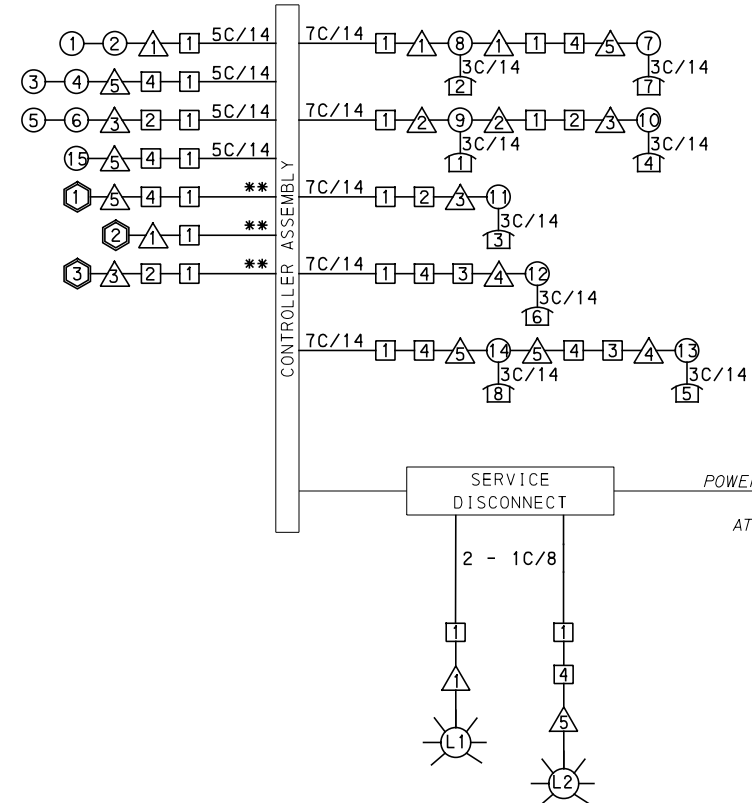
**Port Authority**  
 connecting people to life™

CONTRACT NO. BRT-001
DWG. NO. SG23
SHT. 1083



**MOVEMENT, PHASING AND SEQUENCE CHART**

SIGNAL	INTERVAL	PHASE 2					PHASE 4+8					EMERGENCY
		1	2	3	4	5	1	2	3	4	5	
1-2		R	G	G	Y	R	R	R	R	R	R	
3-4		R	R	R	R	R	R	G	G	Y	R	R
5-6		R	R	R	R	R	R	G	G	Y	R	R
7-8-11-12		DW	DW	DW	DW	DW	W	W	FD	DW	DW	OFF
9-10-13-14		W	W	FD	DW	DW	DW	DW	DW	DW	DW	OFF
15		R	G	G	Y	R	R	R	R	R	R	
FIXED					3.5	2.5					4.5	2.5
MINIMUM			10								10	
PASSAGE			3								3	
FREE (MAX)			60								17	
PEDESTRIAN		3	7	12			3	4	12			
MEMORY		PED RECALL					PED RECALL					



**WIRING DIAGRAM**

- 5C/14 - CABLE (NO. OF CONDUCTORS/SIZE AWG.)
- ① EXISTING SIGNAL HEAD      ① PROPOSED SIGNAL HEAD
- ① EXISTING AUDIBLE PEDESTRIAN INDICATOR      ① PROPOSED AUDIBLE PEDESTRIAN INDICATOR
- △ EXISTING SIGNAL SUPPORT      △ PROPOSED SIGNAL SUPPORT
- ① EXISTING JUNCTION BOX      ① PROPOSED JUNCTION BOX
- ⊙ EXISTING LUMINAIRE      ⊙ PROPOSED LUMINAIRE
- ① PROPOSED DETECTOR
- \*\* INCIDENTAL TO ITEM 02895.001, AS PER MANUFACTURERS SPECIFICATIONS
- 3C/14 INCIDENTAL TO ITEM 02895.002

**DETECTOR ZONE INFORMATION**

DETECTOR	DETECTION ZONE(S)	MODE	TYPE	ROUTE	PHASE	LOCATION MAST ARM
①	④ (6' x 60')	PRESENCE	RADAR (STOP BAR)	PRIDE STREET	8	△
②	①② (6' x 60')	PRESENCE	RADAR (STOP BAR)	5TH AVENUE	2	△
③	③ (6' x 60')	PRESENCE	RADAR (STOP BAR)	PRIDE STREET	4	△

**GENERAL NOTES**

- THE CITY OF PITTSBURGH SHALL INSPECT THE NEW SIGNAL EQUIPMENT PRIOR TO ACTIVATION.
- ALL TRAFFIC SIGNAL MAINTENANCE AND OPERATION RESPONSIBILITIES SHALL BE TURNED OVER TO THE CITY OF PITTSBURGH AFTER THE FOLLOWING CONDITIONS ARE IMPLEMENTED TO THE CITY'S SATISFACTION:
1. PERMIT "AS-BUILT" TRAFFIC SIGNAL DRAWINGS ARE SUBMITTED AND APPROVED.
  2. ALL PUNCH LIST ITEMS ARE COMPLETED BY THE CONTRACTOR.
  3. AFTER THE 30-DAY CONTINUOUS UNINTERRUPTED SIGNAL OPERATION WITHOUT MALFUNCTIONS.

**CONSTRUCTION NOTES**

1. ALL JUNCTION BOXES IN WALK AREAS TO BE CITY OF PITTSBURGH STANDARD CONCRETE JUNCTION BOX, TYPE 1.
2. ALL JUNCTION BOXES IN NON-WALK AREAS TO BE CITY STANDARD JB-2 WITH BOTTOM.
3. THERE SHALL BE NO SIGNAL WIRE OR FIBER CABLE SPLICING.
4. SERVICE WIRE FROM THE POWER SOURCE TO THE CONTROLLER CABINET SHALL BE PLACED IN SECONDARY SEPARATE CONDUIT.
5. STREET LIGHT CABLE IS NOT PERMITTED TO RUN THROUGH THE CONTROLLER CABINET AND SHALL BE PLACED IN SEPARATE CONDUIT.
6. TRAFFIC SIGNAL CABLE SHALL BE PLACED IN DEDICATED CONDUIT.
7. MOUNT DISCONNECT ON POLE NEAREST TO THE CONTROLLER CABINET EXCLUDING TYPE X POLES.
8. REMOVE AND DISPOSE OF ALL EXISTING SIGNAL WIRING NO LONGER IN USE.
9. REMOVE EXISTING SIGNAL EQUIPMENT NO LONGER IN USE AND RETURN TO THE CITY OF PITTSBURGH TRAFFIC CONTROL SHOP. COORDINATE DELIVERY OF EQUIPMENT WITH DELMAS MCELHANY, TRAFFIC CONTROL FOREMAN.
10. SEE 01720 UTILITY COORDINATION FOR INFORMATION ON RELOCATION OF EXISTING SECURITY CAMERAS AND SHOT SPOTTERS.

**TRANSIT PRIORITY PRE-EMPTION NOTES (TO BE INSTALLED BY OTHERS)**

1. COORDINATE TRAFFIC CONTROLLER PROGRAMMING MODIFICATION WITH REPRESENTATIVES OF THE CITY OF PITTSBURGH AND DISTRICT TRAFFIC UNIT.
2. INCLUDE A TRANSIT PRIORITY PHASE THAT WILL EXTEND THE INDICATED PHASE A MAXIMUM OF 10 SECONDS WHEN ACTIVATED BY A PORT AUTHORITY VEHICLE. DO NOT VIOLATE SIDE STREET PEDESTRIAN MINIMUM TIMINGS.
3. MAINTAIN ALL YELLOW CLEARANCES AT ALL TIMES.
4. PROCEED TO THE SUBSEQUENT INTERVAL AS DEFINED IN THE MOVEMENT, SEQUENCE AND TIMING DIAGRAM UPON COMPLETING THE GREEN EXTENSION INTERVAL.
5. ONCE A TRANSIT CALL IS PLACED AND SATISFIED, THE CONTROLLER WILL NOT SATISFY ANOTHER CALL FOR 4 CYCLES.
6. LOCATION OF BUS DETECTORS ARE TO BE FIELD ADJUSTED TO ACHIEVE MAXIMUM OPERATION.

TS-311

COUNTY: ALLEGHENY  
MUNICIPALITY: CITY OF PITTSBURGH  
INTERSECTION: FIFTH AVENUE AND PRIDE STREET

APPROVED AND ACCEPTED:  
\_\_\_\_\_  
CITY TRAFFIC ENGINEER      DATE

APPROVED AND ACCEPTED:  
\_\_\_\_\_  
DISTRICT TRAFFIC ENGINEER      DATE



NO.	DATE	DESCRIPTION
REVISIONS		

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**(NOT FOR CONSTRUCTION)**

DESIGNED	DWP
DRAWN	NED
CHECKED	AJR
IN CHARGE	JKM
DATE	05/01/24
SCALE	AS SHOWN

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT UPTOWN TO OAKLAND**  
**SIGNAL PLANS**  
**WIRING, MOVEMENT, PHASING & SEQUENCE DIAGRAMS**

**Port Authority** connecting people to life

CONTRACT NO. BRT-001  
DWG. NO. SG24      SHT. 1084

PLOTTED: 3/21/2024 5:16:29 PM

OPERATOR: "michael.mcgarry" FILE PATH: c:\pwworking\aecocom.com\d0207710\BRT\_01\_SIG07\_SHT03.dgn

TRAFFIC SIGNAL TABULATION

FIFTH AVENUE AND PRIDE STREET

ITEM NUMBER	MISCELLANEOUS			
UNIT	DESCRIPTION	QTY.	LOCATION	REMARKS
01882.002 EACH	TRAFFIC SIGNAL TIMING MODIFICATIONS	2	CC	
02212.009 LF	POLE FOUNDATION DRILLING, LESS THAN 30" DIAMETER	13	②④	
02212.010 LF	POLE FOUNDATION DRILLING, GREATER THAN 30" DIAMETER	34	①③⑤	
02889.002 EACH	LED LUMINAIRE CITY STANDARD, BLACK	2	☀☀	①⑤
02890.001 EACH	TRAFFIC SIGNAL CONTROLLER ASSEMBLY, TYPE 2070 LC, WITH TYPE 332 BASE MOUNTED CABINET(MOD)	1	CC	332 CONTROLLER CABINET 8" RISER RE-ESTABLISH INTERCONNECT
02890.003 EACH	ETHERNET SWITCH	1	CC	
02890.005 EACH	GPS TIME CLOCK	1	CC	
02894.001 EACH	VEHICULAR SIGNAL HEAD, THREE 12" SECTIONS	6	①②③ ④⑤⑥	BLACK TUNNEL VISORS BLACK ALUMINUM HOUSINGS BLACK METAL LOUVERED BACKPLATE
02894.005 EACH	LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, TYPE A	8	⑦⑧⑨⑩ ⑪⑫⑬⑭	BLACK TUNNEL VISORS BLACK ALUMINUM HOUSINGS
02894.006 EACH	VEHICULAR SIGNAL HEAD, THREE 8' SECTIONS	1	⑮	BLACK TUNNEL VISORS BLACK ALUMINUM HOUSINGS BLACK METAL LOUVERED BACKPLATE
02895.002 EACH	ACCESSIBLE PEDESTRIAN SIGNALS	8	①②③④ ⑤⑥⑦⑧	

ITEM NUMBER	DESCRIPTION	SEN. NO.	QTY.	LOCATION
02895.001 EACH	VIDEO DETECTION	①	1	⑤
02895.001 EACH	VIDEO DETECTION	②	1	①
02895.001 EACH	VIDEO DETECTION	③	1	③

TRAFFIC SIGNAL SUPPORTS \*\*

POLE NO.	ITEM NUMBER	DESCRIPTION	QTY.	ROUTE	STATION	SIDE	OFFSET	MAST ARM																PEDESTAL		
								ARM "A"												ARM "C"				SHAFT		SIGNAL
								H	K	SIGNAL LOCATION				SIGN LOCATION				W	G	X	Z	H	M	N		
								L	M	N	O	P	R	S	T	U	Y									
①	02892.207 EACH	TRAFFIC SIGNAL SUPPORT, 30' MAST ARM WITH LUMINAIRE ARM (30' MOUNTING HEIGHT), PAINTED BLACK	1	FIFTH AVE	456+36	L	23'	17'	10'	30'	23'	11'	--	--	18'	4'	--	--	8'	0°	--	30'	0°	--	--	--
②	02892.003 EACH	TRAFFIC SIGNAL SUPPORT, 15' TYPE X, PAINTED BLACK	1	PRIDE ST	30+38	L	26'	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	15'	--	10'
③	02892.603 EACH	TRAFFIC SIGNAL SUPPORT, 24' MAST ARM, PAINTED BLACK	1	PRIDE ST	30+34	R	31'	17'	10'	24'	21'	12'	--	--	8'	--	--	--	3'	2°	--	--	--	--	--	--
④	02892.003 EACH	TRAFFIC SIGNAL SUPPORT, 15' TYPE X, PAINTED BLACK	1	PRIDE ST	29+75	R	26'	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	15'	--	10'
⑤	02892.203 EACH	TRAFFIC SIGNAL SUPPORT, 22' MAST ARM WITH LUMINAIRE ARM (30' MOUNTING HEIGHT), PAINTED BLACK	1	PRIDE ST	29+75	L	26'	17'	10'	22'	18'	10'	--	--	14'	1'	--	--	6'	2°	--	30'	0°	--	--	--

\*\* REFER TO TRAFFIC STANDARDS TC-8800 SERIES FOR LETTER DESIGNATION

TS-311



Gulf Tower  
707 Grant Street  
5th Floor  
Pittsburgh, PA 15219

NO.	DATE	DESCRIPTION
REVISIONS		

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(NOT FOR CONSTRUCTION)

DESIGNED	DWP
DRAWN	NED
CHECKED	AJR
IN CHARGE	JKM
DATE	05/01/24
SCALE	AS SHOWN

PORT AUTHORITY OF ALLEGHENY COUNTY PITTSBURGH PENNSYLVANIA	
BUS RAPID TRANSIT UPTOWN TO OAKLAND SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	
Port Authority connecting people to life	CONTRACT NO. BRT-001
DWG. NO. SG25	SHT. 1085

TRAFFIC SIGNAL TABULATION

FIFTH AVENUE AND PRIDE STREET

TRENCH, CONDUIT, JUNCTION BOX, ELECTRICAL ITEMS

DESCRIPTION	ELECTRICAL SERVICE TYPE B	CITY OF PITTSBURGH STANDARD CONCRETE JUNCTION BOX, TYPE I	TRENCH AND BACKFILL, TYPE II	TRENCH AND BACKFILL, TYPE IV	2 INCH CONDUIT	3 INCH CONDUIT	AWG 8, UNDERGROUND CABLE, COPPER, 1 CONDUCTOR	SIGNAL CABLE, 14 AWG, 5 CONDUCTOR	SIGNAL CABLE, 14 AWG, 7 CONDUCTOR
ITEM NUMBER	02896	02897	02898	02898	02899	02899	02900	02900	02900
UNIT	EACH	EACH	LF	LF	LF	LF	LF	LF	LF
LOCATION									
CC TO	1	8			16	32			
1 TO 1			5		10	20			
1 TO 2			14			14			
1 TO 2		1	25	39	64	128			
2 TO 3			2			2			
1 TO 4		1	24	31**	55	110			
4 TO 5			13		13	26			
4 TO 3		1	54	*	79	158			
3 TO 4			9			9			
S1 TO 1			19	**		140			
COMPLETE INTERSECTION	1						380	470	820
TOTAL	1	4	173	70	237	639	380	470	820

- S1 SYSTEMS JUNCTION BOX TABULATED AS PART OF THE SYSTEMS PLAN.
- \* TYPE IV TRENCH TABULATED AS PART OF THE SYSTEMS PLAN.
- \*\* CONDUIT PLACED IN A SHARED TRENCH.

SIGNS

SYMBOL	SERIES	SIZE	AREA EACH (SQ FT)	DESCRIPTION	QUANTITY	02891.001 POST MOUNTED SIGNS, TYPE B		
						SF	SF	SF
A	R3-1	30"x30"	6.3	NO RIGHT TURN	1			6.3
B	R3-1	24"x24"	4.0	NO RIGHT TURN	1	4.0		
C	R3-2	30"x30"	6.3	NO LEFT TURN	1			6.3
D	R3-2	24"x24"	4.0	NO LEFT TURN	1		4.0	
E	R3-11B(MOD)	30"x36"	7.5	RIGHT LANE - BUSES ONLY	2	7.5	7.5	
F	SS-1	30"x18"	3.8	EXCEPT RIGHT TURNS	2		7.6	
G	R10-3E(MOD)	9"x15"	0.9	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER (MOD.)	8		▲	
H	D3-4 *	60"x24"	10.0	1400 Uptown 1500 Fifth Ave	1			10.0
I	D3-4 *	60"x24"	10.0	1300 Uptown 1400 Fifth Ave	1			10.0
J	D3-4 *	60"x24"	10.0	20 Uptown 10 Pride St	1			10.0
K	R6-1	36"x12"	3.0	ONE WAY (TWO SIDED, CITY STANDARD)	2		6.0	
L	R10-11	30"x36"	7.5	NO TURN ON RED ●	1			7.5
M	R10-15AL(MOD)	30"x30"	6.3	TURNING TRAFFIC MUST YIELD TO BIKES AND PEDESTRIANS	2		6.3	6.3
N	R5-1	30"x30"	6.3	DO NOT ENTER	2		12.6	
TOTAL						11.5	44.0	56.4

- ▲ - INCIDENTAL TO ITEM 02895.002
- \* WHITE REFLECTORIZED LEGEND AND BORDER ON BLUE REFLECTORIZED BACKGROUND. UTILIZE 4" CLEARVIEW 3W FOR BLOCK/NEIGHBORHOOD AND 8" CLEARVIEW 3W FOR STREET NAME. ACTUAL WIDTH DETERMINED BY LETTER SPACING. COORDINATE BLOCK NUMBERS AND STREET NAME DETAILS WITH CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE.



Gulf Tower  
707 Grant Street  
5th Floor  
Pittsburgh, PA 15219

NO.	DATE	DESCRIPTION
REVISIONS		

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(NOT FOR CONSTRUCTION)

DESIGNED	DWP
DRAWN	NEE
CHECKED	AJR
IN CHARGE	JKM
DATE	05/01/24
SCALE	AS SHOWN

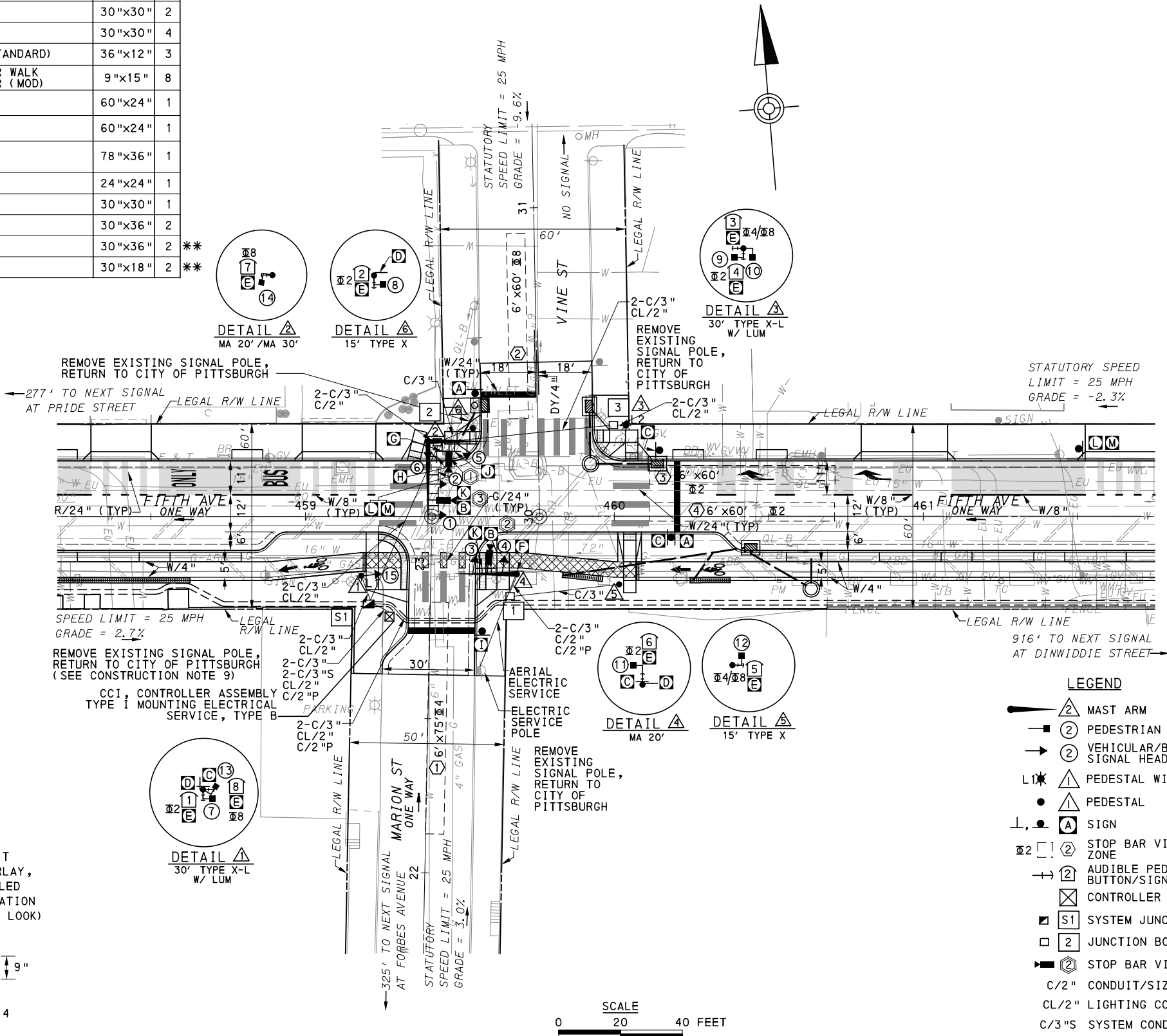
<b>PORT AUTHORITY OF ALLEGHENY COUNTY</b> PITTSBURGH PENNSYLVANIA	
BUS RAPID TRANSIT UPTOWN TO OAKLAND SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	
<b>Port Authority</b> <small>connecting people to life</small>	CONTRACT NO. BRT-001
	DWG. NO. SG26   SHT. 1086

**SIGNS**

SIGN	STANDARD	DESCRIPTION	SIZE	QTY
A	R3-2	NO LEFT TURN	24"x24"	2
B	R3-2	NO LEFT TURN	30"x30"	2
C	R5-1	DO NOT ENTER	30"x30"	4
D	R6-1	ONE-WAY (TWO SIDED, CITY STANDARD)	36"x12"	3
E	R10-3E(MOD)	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER (MOD)	9"x15"	8
F	D3-4 *	1600 Uptown 1500 Fifth Ave	60"x24"	1
G	D3-4 *	1500 Uptown 1600 Fifth Ave	60"x24"	1
H	D3-5 *	10 Uptown 10 Marion St Vine St	78"x36"	1
I	R3-1	NO RIGHT TURN	24"x24"	1
J	R3-1	NO RIGHT TURN	30"x30"	1
K	R10-11	NO TURN ON RED	30"x36"	2
L	R3-11B(MOD)	RIGHT LANE - BUSES ONLY	30"x36"	2
M	SS-1	EXCEPT RIGHT TURNS	30"x18"	2

\* WHITE REFLECTORIZED LEGEND AND BORDER ON BLUE REFLECTORIZED BACKGROUND. UTILIZE 4" CLEARVIEW 3W FOR BLOCK/NEIGHBORHOOD AND 8" CLEARVIEW 3W FOR STREET NAME. ACTUAL WIDTH DETERMINED BY LETTER SPACING. COORDINATE BLOCK NUMBERS AND STREET NAME DETAILS WITH CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE.

\*\* POST MOUNTED SIGNS TABULATED AS PART OF THE SIGNING AND PAVEMENT MARKING PLAN.

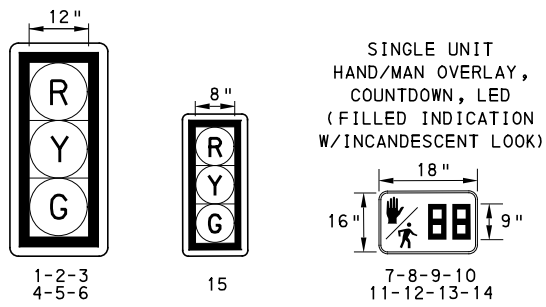


- AUDIBLE PEDESTRIAN SIGNAL NOTES**
1. ALL PUSH BUTTONS SHALL BE EQUIPPED WITH LOCATOR TONES.
  2. ALL WALK INTERVALS TO HAVE VERBAL MESSAGE DETAILING WALK DIRECTION.
  3. VERBAL MESSAGE TO BE PLAYED DURING WALK INTERVAL WHEN BUTTON IS PRESSED.
  4. ALL PEDESTRIAN PUSH BUTTONS TO BE LOCATED AT 42" ABOVE GROUND.
  5. ALL PUSH BUTTONS TO BE EQUIPPED WITH VIBROTACTILE ARROW.
  6. VIBROTACTILE ARROWS TO VIBRATE DURING WALK INTERVAL.
  7. WALK AND DON'T WALK MESSAGE SHALL BE AUDIBLE THROUGH THE PUSH BUTTON SPEAKER.

- SIGNAL ASSEMBLY NOTES**
1. ALL VEHICULAR/BICYCLE SIGNALS SHALL BE EQUIPPED WITH L.E.D LENSES, TUNNEL VISORS AND LOUVERED BLACK METAL BACKPLATES WITH 2" REFLECTIVE BORDERS.
  2. MIN/MAX HEIGHT TO BOTTOM OF VEHICULAR SIGNALS 17' /18'.
  3. MIN HORIZONTAL SPACING FOR VEHICULAR SIGNALS IS 8'.
  4. MIN/MAX HEIGHT TO BOTTOM OF PEDESTRIAN SIGNALS 10' /12'.
  5. FINAL SIGNAL HEAD PLACEMENT WILL BE DETERMINED BY REPRESENTATIVES OF THE CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE AND THE DISTRICT TRAFFIC UNIT PRIOR TO SIGNAL BEING TURNED ON.
  6. ALL PEDESTRIAN SIGNALS SHALL BE PORTLAND ORANGE FULL "PEDESTRIAN HAND" AND WHITE "WALKING PERSON" SYMBOLS AND HAVE INCANDESCENT LOOK WITH COUNTDOWN TIMER.
  7. PROVIDE AIRCRAFT STRANDED CABLE FOR MOUNTING SIGNAL AND SIGN BRACKET ASSEMBLIES TO MAST ARMS.
  8. PROVIDE BLACK ALUMINUM HOUSINGS FOR ALL SIGNAL HEADS.
  9. INSTALL POST MOUNTED SIGNAL HEADS WITH BOTTOMS NO GREATER THAN 15' ABOVE THE SIDEWALK OR PAVEMENT.
  10. EXACT LOCATION OF TRAFFIC SIGNAL SUPPORTS SHALL BE DETERMINED BY REPRESENTATIVES OF THE CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE AND THE DISTRICT TRAFFIC UNIT PRIOR TO INSTALLATION.

- PAVEMENT MARKING NOTES**
1. ALL STOP BARS ARE W/24".
  2. CROSSWALKS ARE 10' X 24" KEYS WITH 3' TO 5' SPACING.
  3. CROSSWALKS ACROSS BICYCLE LANES ARE 6' X 12" KEYS WITH 1' SPACING.

**SIGNAL HEADS**



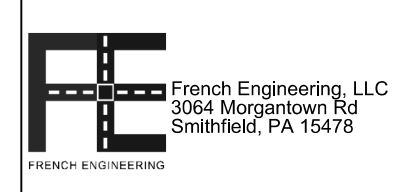
**LEGEND**

- ▲ MAST ARM
  - ② PEDESTRIAN SIGNAL HEAD
  - ② VEHICULAR/BICYCLE SIGNAL HEAD
  - ▲ PEDESTAL WITH LUMINAIRE
  - ▲ PEDESTAL
  - ▲ SIGN
  - ② STOP BAR VIDEO DETECTION ZONE
  - ➔ AUDIBLE PEDESTRIAN PUSH BUTTON/SIGN
  - ☒ CONTROLLER ASSEMBLY
  - ☐ S1 SYSTEM JUNCTION BOX
  - ☐ 2 JUNCTION BOX
  - ② STOP BAR VIDEO DETECTOR
  - C/2" CONDUIT/SIZE
  - CL/2" LIGHTING CONDUIT/SIZE
  - C/3"S SYSTEM CONDUIT/SIZE
  - C/2"P POWER CONDUIT/SIZE
- W/6" SOLID WHITE LINE/WIDTH  
R/24" SOLID RED LINE/WIDTH  
DY/4" DOUBLE SOLID YELLOW LINE/WIDTH  
G/24" SOLID GREEN LINE/WIDTH
- TS-589

COUNTY: ALLEGHENY  
MUNICIPALITY: CITY OF PITTSBURGH  
INTERSECTION: FIFTH AVENUE AND MARION STREET AND VINE STREET

APPROVED AND ACCEPTED: \_\_\_\_\_ DATE \_\_\_\_\_  
CITY TRAFFIC ENGINEER

APPROVED AND ACCEPTED: \_\_\_\_\_ DATE \_\_\_\_\_  
DISTRICT TRAFFIC ENGINEER



NO.	DATE	DESCRIPTION
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**(NOT FOR CONSTRUCTION)**

DESIGNED	LJF
DRAWN	WLZ
CHECKED	MSF
IN CHARGE	LJF
DATE	05/01/24
SCALE	AS SHOWN

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH, PENNSYLVANIA

**BUS RAPID TRANSIT UPTOWN TO OAKLAND**  
SIGNAL PLANS  
FIFTH AVENUE & MARION STREET/VINE STREET

**Port Authority** connecting people to life®

CONTRACT NO. BRT-001  
DWG. NO. SG27 SHT. 1087

**MOVEMENT, PHASING AND SEQUENCE CHART**

SIGNAL	PHASE 2					PHASE 4					PHASE 8				
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
1-2	G	G	Y	R		R	R	R			R	R	R	R	
3-4	R	R	R	R		R	R	R			G	G	Y	R	
5-6	R	R	R	R		G	Y	R			R	R	R	R	
7-11	W	FD	DW	DW		DW	DW	DW			DW	DW	DW	DW	OFF
8-9	W	FD	DW	DW		DW	DW	DW			DW	DW	DW	DW	OFF
10-12	DW	DW	DW	DW		W	W	W			W	FD	DW	DW	OFF
13-14	DW	DW	DW	DW		DW	DW	DW			W	FD	DW	DW	OFF
15	G	G	Y	R		R	R	R			R	R	R	R	
FIXED	X		4	3		X	4.5	2.5			X	4.5	2.5		
MINIMUM	10					10					10				
PASSAGE															
FREE (MAX)	37					14					18				
PEDESTRIAN	7 11					①					7 12				
MEMORY	PED-RECALL					MINIMUM RECALL					PED-RECALL				

NOTES:  
 ① PEDESTRIAN PHASE TO START IN PHASE 4 AND BE COMPLETED IN PHASE 8

**DETECTOR ZONE INFORMATION**

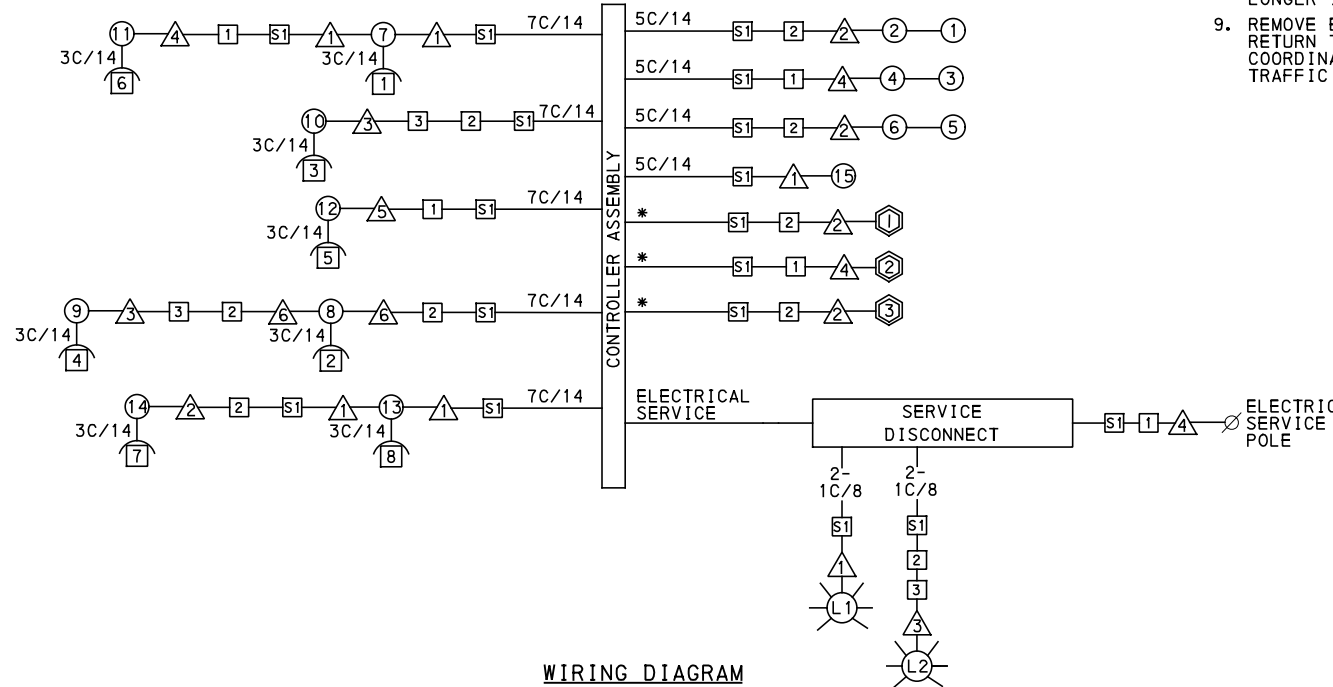
DETECTOR	DETECTION ZONE(S)	MODE	TYPE	ROUTE	PHASE	LOCATION MAST ARM
①	① (6' x75')	PRESENCE	VIDEO (STOP BAR)	MARION STREET	4	②
②	② (6' x60')	PRESENCE	VIDEO (STOP BAR)	VINE STREET	8	④
③	③④ (6' x60')	PRESENCE	VIDEO (STOP BAR)	FIFTH AVENUE	2	②

**GENERAL NOTES**

- THE CITY OF PITTSBURGH SHALL INSPECT THE NEW SIGNAL EQUIPMENT PRIOR TO ACTIVATION.
- ALL TRAFFIC SIGNAL MAINTENANCE AND OPERATION RESPONSIBILITIES SHALL BE TURNED OVER TO THE CITY OF PITTSBURGH AFTER THE FOLLOWING CONDITIONS ARE IMPLEMENTED TO THE CITY'S SATISFACTION:
1. PERMIT "AS-BUILT" TRAFFIC SIGNAL DRAWINGS ARE SUBMITTED AND APPROVED.
  2. ALL PUNCH LIST ITEMS ARE COMPLETED BY THE CONTRACTOR.
  3. AFTER THE 30-DAY CONTINUOUS UNINTERRUPTED SIGNAL OPERATION WITHOUT MALFUNCTIONS.

**CONSTRUCTION NOTES**

1. ALL JUNCTION BOXES IN WALK AREAS TO BE CITY OF PITTSBURGH STANDARD CONCRETE JUNCTION BOX, TYPE 1.
2. ALL JUNCTION BOXES IN NON-WALK AREAS TO BE CITY STANDARD JB-2 WITH BOTTOM.
3. THERE SHALL BE NO SIGNAL WIRE OR FIBER CABLE SPLICING.
4. SERVICE WIRE FROM THE POWER SOURCE TO THE CONTROLLER CABINET SHALL BE PLACED IN SECONDARY SEPARATE CONDUIT.
5. STREET LIGHT CABLE IS NOT PERMITTED TO RUN THROUGH THE CONTROLLER CABINET AND SHALL BE PLACED IN SEPARATE CONDUIT.
6. TRAFFIC SIGNAL CABLE SHALL BE PLACED IN DEDICATED CONDUIT.
7. MOUNT DISCONNECT ON POLE NEAREST TO THE CONTROLLER CABINET EXCLUDING TYPE X POLES.
8. REMOVE AND DISPOSE OF ALL EXISTING SIGNAL WIRING NO LONGER IN USE.
9. REMOVE EXISTING SIGNAL EQUIPMENT NO LONGER IN USE AND RETURN TO THE CITY OF PITTSBURGH TRAFFIC CONTROL SHOP. COORDINATE DELIVERY OF EQUIPMENT WITH DELMAS MCELHANY, TRAFFIC CONTROL FOREMAN.



**WIRING DIAGRAM**

5C/14 - CABLE (NO. OF CONDUCTORS/SIZE AWG.)

① PROPOSED DETECTOR      ① PROPOSED SIGNAL HEAD  
 ① PROPOSED AUDIBLE PEDESTRIAN INDICATOR      △ PROPOSED SIGNAL SUPPORT  
 Ⓛ PROPOSED LUMINAIRE      ① PROPOSED JUNCTION BOX  
 Ⓜ PROPOSED SYSTEM JUNCTION BOX

3C/14 INCIDENTAL TO ITEM 02895.002  
 \* INCIDENTAL TO ITEM 02895.001, AS PER MANUFACTURERS SPECIFICATIONS

**TRANSIT PRIORITY PRE-EMPTION NOTES (TO BE INSTALLED BY OTHERS)**

1. COORDINATE TRAFFIC CONTROLLER PROGRAMMING MODIFICATION WITH REPRESENTATIVES OF THE CITY OF PITTSBURGH AND DISTRICT TRAFFIC UNIT.
2. INCLUDE A TRANSIT PRIORITY PHASE THAT WILL EXTEND THE INDICATED PHASE A MAXIMUM OF 10 SECONDS WHEN ACTIVATED BY A PORT AUTHORITY VEHICLE. DO NOT VIOLATE SIDE STREET PEDESTRIAN MINIMUM TIMINGS.
3. MAINTAIN ALL YELLOW CLEARANCES AT ALL TIMES.
4. PROCEED TO THE SUBSEQUENT INTERVAL AS DEFINED IN THE MOVEMENT, SEQUENCE AND TIMING DIAGRAM UPON COMPLETING THE GREEN EXTENSION INTERVAL.
5. ONCE A TRANSIT CALL IS PLACED AND SATISFIED, THE CONTROLLER WILL NOT SATISFY ANOTHER CALL FOR 4 CYCLES.
6. LOCATION OF BUS DETECTORS ARE TO BE FIELD ADJUSTED TO ACHIEVE MAXIMUM OPERATION.

TS-589

COUNTY: ALLEGHENY
MUNICIPALITY: CITY OF PITTSBURGH
INTERSECTION: FIFTH AVENUE AND MARION STREET AND VINE STREET
APPROVED AND ACCEPTED:
CITY TRAFFIC ENGINEER _____ DATE _____
APPROVED AND ACCEPTED:
DISTRICT TRAFFIC ENGINEER _____ DATE _____

<p>Gulf Tower 707 Grant Street 5th Floor Pittsburgh, PA 15219</p>	<p>French Engineering, LLC 3064 Morgantown Rd Smithfield, PA 15478</p>	THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE FEDERAL TRANSIT ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1984, AS AMENDED, FOR THE PORT AUTHORITY OF ALLEGHENY COUNTY, PENNSYLVANIA.	<p><b>(NOT FOR CONSTRUCTION)</b></p>	DESIGNED: LUF DRAWN: WLZ CHECKED: MSF IN CHARGE: LUF DATE: 05/01/24 SCALE: AS SHOWN	PORT AUTHORITY OF ALLEGHENY COUNTY PITTSBURGH PENNSYLVANIA BUS RAPID TRANSIT UPTOWN TO OAKLAND SIGNAL PLANS WIRING, MOVEMENT, PHASING & SEQUENCE DIAGRAMS
				CONTRACT NO. BRT-001 DWG. NO. SG28      SHT. 1088	







TRAFFIC SIGNAL TABULATION

FIFTH AVENUE AND MARION STREET AND VINE STREET

TRENCH, CONDUIT, JUNCTION BOX, ELECTRICAL ITEMS

DESCRIPTION	ELECTRICAL SERVICE TYPE B	CITY OF PITTSBURGH STANDARD CONCRETE JUNCTION BOX, TYPE 1	TRENCH AND BACKFILL, TYPE II	TRENCH AND BACKFILL, TYPE IV	2 INCH CONDUIT	3 INCH CONDUIT	AWG 8, UNDERGROUND CABLE, COPPER, 1 CONDUCTOR	SIGNAL CABLE, 14 AWG, 5 CONDUCTOR	SIGNAL CABLE, 14 AWG, 7 CONDUCTOR
ITEM NUMBER	02896	02897	02898	02898	02899	02899	02900	02900	02900
UNIT	EACH	EACH	LF	LF	LF	LF	LF	LF	LF
LOCATION									
CC TO S1			9		18	36			
1 TO S1		1	29	22*	102	102			
2 TO S1		1	30	28	58	116			
3 TO 2		1	22	36	58	116			
1 TO S1			10		10	20			
2 TO 2			4		4	8			
3 TO 3			4		4	8			
4 TO 1			8		16	16			
5 TO 1			36			36			
6 TO 2			13			13			
COMPLETE INTERSECTION	1						500	475	835
TOTAL	1	3	165	64	270	471	500	475	835

\* TYPE IV TRENCH TABULATED AS PART OF THE SYSTEMS PLAN.

S1 - TABULATED ON SYSTEMS PLAN

SIGNS

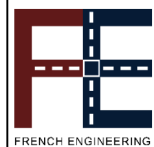
SYMBOL	SERIES	SIZE	AREA EACH (SQ FT)	DESCRIPTION	QUANTITY	02891.001 POST MOUNTED SIGNS, TYPE B		
						SF	SF	SF
A	R3-2	24"x24"	4.0	NO LEFT TURN	2	4.0	4.0	
B	R3-2	30"x30"	6.3	NO LEFT TURN	2			12.6
C	R5-1	30"x30"	6.3	DO NOT ENTER	4	12.6	12.6	
D	R6-1	36"x12"	3.0	ONE-WAY (TWO SIDED, CITY STANDARD)	3		9.0	
E	R10-3E (MOD)	9"x15"	0.9	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER (MOD)	8			▲
F	D3-4*	60"x24"	10.0	1600 Uptown 1500 Fifth Ave	1			10.0
G	D3-4*	60"x24"	10.0	1500 Uptown 1600 Fifth Ave	1			10.0
H	D3-5*	78"x36"	19.5	10 Uptown 10 ← Marion St Vine St →	1			19.5
I	R3-1	24"x24"	4.0	NO RIGHT TURN	1	4.0		
J	R3-1	30"x30"	6.3	NO RIGHT TURN	1			6.3
K	R10-11	30"x36"	7.5	NO TURN ON RED ●	2			15.0
L	R3-11B(MOD)	30"x36"	7.5	RIGHT LANE - BUSES ONLY	1			7.5
M	SS-1	30"x18"	3.8	EXCEPT RIGHT TURNS	1			3.8
TOTAL						20.6	25.6	84.7

▲ - INCIDENTAL TO ITEM 02895.002

\* WHITE REFLECTORIZED LEGEND AND BORDER ON BLUE REFLECTORIZED BACKGROUND. UTILIZE 4" CLEARVIEW 3W FOR BLOCK/NEIGHBORHOOD AND 8" CLEARVIEW 3W FOR STREET NAME. ACTUAL WIDTH DETERMINED BY LETTER SPACING. COORDINATE BLOCK NUMBERS AND STREET NAME DETAILS WITH CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE.



Gulf Tower  
707 Grant Street  
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Smithfield, PA 15478

NO.	DATE	DESCRIPTION
REVISIONS		

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(NOT FOR CONSTRUCTION)

DESIGNED	LJF
DRAWN	WLZ
CHECKED	MSF
IN CHARGE	LJF
DATE	05/01/24
SCALE	AS SHOWN

PORT AUTHORITY OF ALLEGHENY COUNTY PITTSBURGH PENNSYLVANIA	
BUS RAPID TRANSIT UPTOWN TO OAKLAND SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	
Port Authority connecting people to life™	CONTRACT NO. BRT-001
DWG. NO. SG30	SHT. 1090

**SIGNS**

SIGN	STANDARD	DESCRIPTION	SIZE	QTY
A	R3-2	NO LEFT TURN	24"x24"	1
B	R3-2	NO LEFT TURN	30"x30"	1
C	R5-1	DO NOT ENTER	30"x30"	2
D	R6-1	ONE-WAY (TWO SIDED, CITY STANDARD)	36"x12"	2
E	R10-3E(MOD)	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER (MOD)	9"x15"	6
F	D3-4*	1800 Uptown 1700 Fifth Ave	60"x24"	1
G	D3-4*	Uptown 100 Dinwiddie St	72"x24"	1
H	R10-11	NO TURN ON RED ●	30"x36"	2
I	R3-11B(MOD)	RIGHT LANE - BUSES ONLY	30"x36"	2
J	SS-1	EXCEPT RIGHT TURNS	30"x18"	2

\*\* POST MOUNTED SIGNS TABULATED AS PART OF THE SIGNING AND PAVEMENT MARKING PLAN.

\* WHITE REFLECTORIZED LEGEND AND BORDER ON BLUE REFLECTORIZED BACKGROUND. UTILIZE 4" CLEARVIEW 3W FOR BLOCK/NEIGHBORHOOD AND 8" CLEARVIEW 3W FOR STREET NAME. ACTUAL WIDTH DETERMINED BY LETTER SPACING. COORDINATE BLOCK NUMBERS AND STREET NAME DETAILS WITH CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE.

**AUDIBLE PEDESTRIAN SIGNAL NOTES**

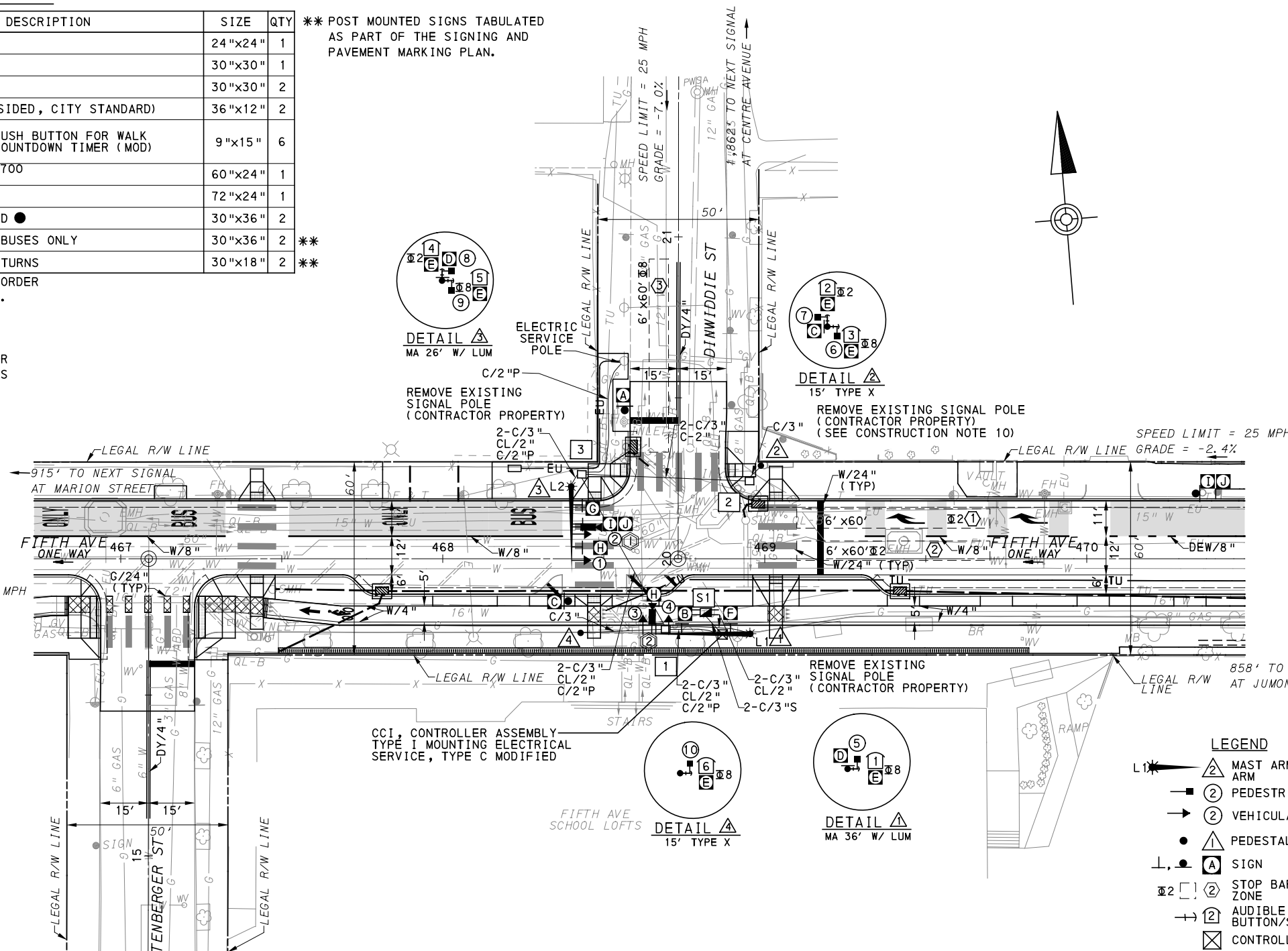
1. ALL PUSH BUTTONS SHALL BE EQUIPPED WITH LOCATOR TONES.
2. ALL WALK INTERVALS TO HAVE VERBAL MESSAGE DETAILING WALK DIRECTION.
3. VERBAL MESSAGE TO BE PLAYED DURING WALK INTERVAL WHEN BUTTON IS PRESSED.
4. ALL PEDESTRIAN PUSH BUTTONS TO BE LOCATED AT 42" ABOVE GROUND.
5. ALL PUSH BUTTONS TO BE EQUIPPED WITH VIBROTACTILE ARROW.
6. VIBROTACTILE ARROWS TO VIBRATE DURING WALK INTERVAL.
7. WALK AND DON'T WALK MESSAGE SHALL BE AUDIBLE THROUGH THE PUSH BUTTON SPEAKER.

**SIGNAL ASSEMBLY NOTES**

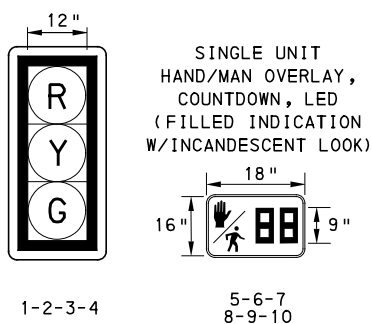
1. ALL VEHICULAR/BICYCLE SIGNALS SHALL BE EQUIPPED WITH L.E.D LENSES, TUNNEL VISORS AND LOUVERED BLACK METAL BACKPLATES WITH 2" REFLECTIVE BORDERS.
2. MIN/MAX HEIGHT TO BOTTOM OF VEHICULAR SIGNALS 17' /18'.
3. MIN HORIZONTAL SPACING FOR VEHICULAR SIGNALS IS 8'.
4. MIN/MAX HEIGHT TO BOTTOM OF PEDESTRIAN SIGNALS 10' /12'.
5. FINAL SIGNAL HEAD PLACEMENT WILL BE DETERMINED BY REPRESENTATIVES OF THE CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE AND THE DISTRICT TRAFFIC UNIT PRIOR TO SIGNAL BEING TURNED ON.
6. ALL PEDESTRIAN SIGNALS SHALL BE PORTLAND ORANGE FULL "PEDESTRIAN HAND" AND WHITE "WALKING PERSON" SYMBOLS AND HAVE INCANDESCENT LOOK WITH COUNTDOWN TIMER.
7. PROVIDE AIRCRAFT STRANDED CABLE FOR MOUNTING SIGNAL AND SIGN BRACKET ASSEMBLIES TO MAST ARMS.
8. PROVIDE BLACK ALUMINUM HOUSINGS FOR ALL SIGNAL HEADS.
9. INSTALL POST MOUNTED SIGNAL HEADS WITH BOTTOMS NO GREATER THAN 15' ABOVE THE SIDEWALK OR PAVEMENT.
10. EXACT LOCATION OF TRAFFIC SIGNAL SUPPORTS SHALL BE DETERMINED BY REPRESENTATIVES OF THE CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE AND THE DISTRICT TRAFFIC UNIT PRIOR TO INSTALLATION.

**PAVEMENT MARKING NOTES**

1. ALL STOP BARS ARE W/24".
2. CROSSWALKS ARE 10' X 24" KEYS WITH 3' TO 5' SPACING.
3. CROSSWALKS ACROSS BICYCLE LANES ARE 6' X 12" KEYS WITH 1' SPACING.

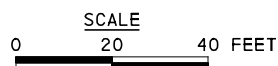


**SIGNAL HEADS**



**LEGEND**

- ▲ MAST ARM WITH LUMINAIRE ARM
- ⊙ PEDESTRIAN SIGNAL HEAD
- ⊙ VEHICULAR/BICYCLE SIGNAL HEAD
- PEDESTAL
- ▲ SIGN
- ⊙ STOP BAR VIDEO DETECTION ZONE
- ➔ AUDIBLE PEDESTRIAN PUSH BUTTON/SIGN
- ⊠ CONTROLLER ASSEMBLY
- JUNCTION BOX
- ➔ STOP BAR VIDEO DETECTOR
- C/2" CONDUIT/SIZE
- CL/2" LIGHTING CONDUIT/SIZE
- C/2"P POWER CONDUIT/SIZE
- W/6" SOLID WHITE LINE/WIDTH
- DY/4" DOUBLE SOLID YELLOW LINE/WIDTH
- G/24" SOLID GREEN LINE/WIDTH
- DEW/8" DOTTED EXTENSION WHITE LINE/WIDTH
- C/3"S SYSTEM CONDUIT/SIZE
- ⊠ S1 SYSTEM JUNCTION BOX



TS-260

COUNTY: ALLEGHENY  
MUNICIPALITY: CITY OF PITTSBURGH  
INTERSECTION: FIFTH AVENUE AND  
DINWIDDIE STREET

APPROVED AND ACCEPTED:  
CITY TRAFFIC ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_  
APPROVED AND ACCEPTED:  
DISTRICT TRAFFIC ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_



NO.	DATE	DESCRIPTION
REVISIONS		

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**(NOT FOR CONSTRUCTION)**

DESIGNED	LJF
DRAWN	WLZ
CHECKED	MSF
IN CHARGE	LJF
DATE	05/01/24
SCALE	AS SHOWN

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA  
**BUS RAPID TRANSIT UPTOWN TO OAKLAND**  
**SIGNAL PLANS**  
**FIFTH AVENUE & DINWIDDIE STREET**

**Port Authority** connecting people to life  
CONTRACT NO. BRT-001  
DWG. NO. SG31 SHT. 1091

**MOVEMENT, PHASING AND SEQUENCE CHART**

SIGNAL	PHASE 2					PHASE 8					FLASHER
	1	2	3	4	5	1	2	3	4	5	
1-2	G	G	Y	R		R	R	R	R		R
3-4	R	R	R	R		G	G	Y	R		R
5-6	DW	DW	DW	DW		W	FD	DW	DW		OFF
7-8	W	FD	DW	DW		DW	DW	DW	DW		OFF
9-10	DW	DW	DW	DW		W	FD	DW	DW		OFF
FIXED	3.5 2.5					4 2					
MINIMUM	18					18					
PASSAGE	3					3					
FREE (MAX)	60					18					
PEDESTRIAN	7	10				7	11				
MEMORY	MINIMUM RECALL					PED-RECALL					

**DETECTOR ZONE INFORMATION**

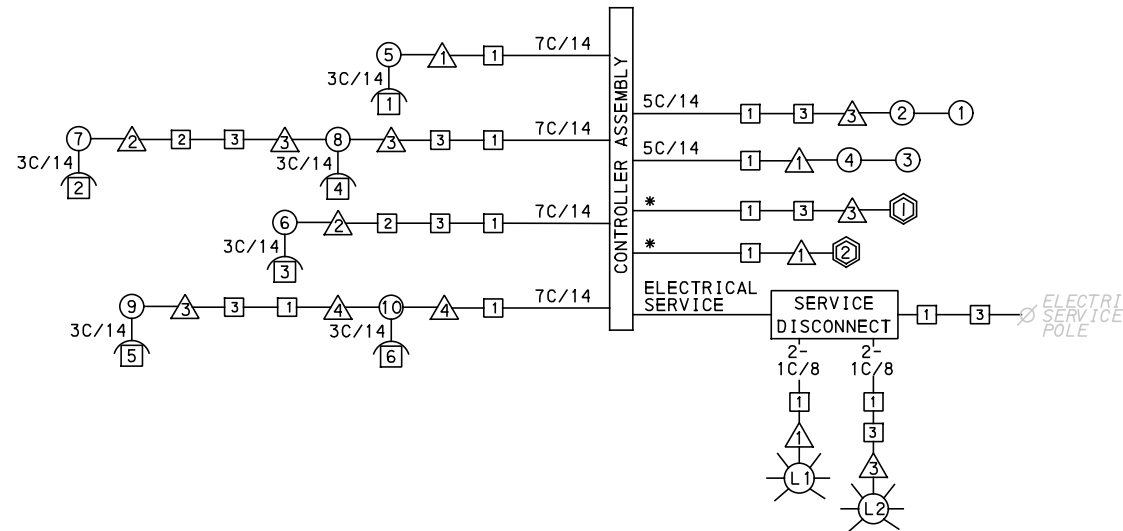
DETECTOR	DETECTION ZONE(S)	MODE	TYPE	ROUTE	PHASE	LOCATION MAST ARM
①	① ② (6' x 60')	PRESENCE	VIDEO (STOP BAR)	FIFTH AVENUE	2	△
②	③ (6' x 60')	PRESENCE	VIDEO (STOP BAR)	DINWIDDIE STREET	8	△

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**CONSTRUCTION NOTES**

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2. ALL JUNCTION BOXES IN NON-WALK AREAS TO BE CITY STANDARD JB-2 WITH BOTTOM.
3. THERE SHALL BE NO SIGNAL WIRE OR FIBER CABLE SPLICING.
4. SERVICE WIRE FROM THE POWER SOURCE TO THE CONTROLLER CABINET SHALL BE PLACED IN SECONDARY SEPARATE CONDUIT.
5. STREET LIGHT CABLE IS NOT PERMITTED TO RUN THROUGH THE CONTROLLER CABINET AND SHALL BE PLACED IN SEPARATE CONDUIT.
6. TRAFFIC SIGNAL CABLE SHALL BE PLACED IN DEDICATED CONDUIT.
7. MOUNT DISCONNECT ON POLE NEAREST TO THE CONTROLLER CABINET EXCLUDING TYPE X POLES.
8. REMOVE AND DISPOSE OF ALL EXISTING SIGNAL WIRING NO LONGER IN USE.
9. REMOVE EXISTING SIGNAL EQUIPMENT NO LONGER IN USE AND RETURN TO THE CITY OF PITTSBURGH TRAFFIC CONTROL SHOP. COORDINATE DELIVERY OF EQUIPMENT WITH DELMAS MCELHANY, TRAFFIC CONTROL FOREMAN.
10. SEE 01720 UTILITY COORDINATION FOR INFORMATION ON RELOCATION OF EXISTING SECURITY CAMERAS AND SHOT SPOTTERS.



**WIRING DIAGRAM**

- 5C/14 - CABLE (NO. OF CONDUCTORS/SIZE AWG.)
- ① PROPOSED DETECTOR
  - ② PROPOSED AUDIBLE PEDESTRIAN INDICATOR
  - ③ PROPOSED SIGNAL HEAD
  - △ PROPOSED SIGNAL SUPPORT
  - ⊞ PROPOSED LUMINAIRE
  - ⊞ PROPOSED JUNCTION BOX
- 3C/14 INCIDENTAL TO ITEM 02895.002
- \* INCIDENTAL TO ITEM 02895.001, AS PER MANUFACTURERS SPECIFICATIONS

**TRANSIT PRIORITY PRE-EMPTION NOTES (TO BE INSTALLED BY OTHERS)**

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3. MAINTAIN ALL YELLOW CLEARANCES AT ALL TIMES.
4. PROCEED TO THE SUBSEQUENT INTERVAL AS DEFINED IN THE MOVEMENT, SEQUENCE AND TIMING DIAGRAM UPON COMPLETING THE GREEN EXTENSION INTERVAL.
5. ONCE A TRANSIT CALL IS PLACED AND SATISFIED, THE CONTROLLER WILL NOT SATISFY ANOTHER CALL FOR 4 CYCLES.
6. LOCATION OF BUS DETECTORS ARE TO BE FIELD ADJUSTED TO ACHIEVE MAXIMUM OPERATION.

TS-260

COUNTY: ALLEGHENY  
 MUNICIPALITY: CITY OF PITTSBURGH  
 INTERSECTION: FIFTH AVENUE AND  
 DINWIDDIE STREET

APPROVED AND ACCEPTED:  
 CITY TRAFFIC ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_  
 APPROVED AND ACCEPTED:  
 DISTRICT TRAFFIC ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_



Gulf Tower  
 707 Grant Street  
 5th Floor  
 Pittsburgh, PA 15219



French Engineering, LLC  
 3064 Morgantown Rd  
 Smithfield, PA 15478

NO.	DATE	DESCRIPTION
REVISIONS		

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DESIGNED	LJF
DRAWN	WLZ
CHECKED	MSF
IN CHARGE	LJF
DATE	05/01/24
SCALE	AS SHOWN

<b>PORT AUTHORITY OF ALLEGHENY COUNTY</b> PITTSBURGH PENNSYLVANIA	
BUS RAPID TRANSIT UPTOWN TO OAKLAND SIGNAL PLANS WIRING, MOVEMENT, PHASING & SEQUENCE DIAGRAMS	
<b>Port Authority</b> connecting people to life	CONTRACT NO. BRT-001
DWG. NO. SG32	SHT. 1092

TRAFFIC SIGNAL TABULATION

FIFTH AVENUE AND DINWIDDIE STREET

ITEM NUMBER	MISCELLANEOUS			
UNIT	DESCRIPTION	QTY.	LOCATION	REMARKS
01882.002 EACH	TRAFFIC SIGNAL TIMING MODIFICATIONS	2	CC	
02212.009 LF	POLE FOUNDATION DRILLING, LESS THAN 30" DIAMETER	13	△△	
02212.010 LF	POLE FOUNDATION DRILLING, 30" DIAMETER OR GREATER	24	△△	
02889.002 EACH	LED LUMINAIRE CITY STANDARD, BLACK	2	☀ ☀	△ △
02890.001 EACH	TRAFFIC SIGNAL CONTROLLER ASSEMBLY, TYPE 2070 LC WITH TYPE 332 BASE MOUNTED CABINET	1	CC	332 CONTROLLER CABINET 8" RISER RE-ESTABLISH INTERCONNECT
02890.003 EACH	ETHERNET SWITCH	1	CC	
02890.005 EACH	GPS TIME CLOCK	1	CC	
02894.001 EACH	VEHICULAR SIGNAL HEAD, THREE 12" SECTIONS	4	①②③④	BLACK TUNNEL VISORS BLACK ALUMINUM HOUSINGS BLACK METAL LOUVERED BACKPLATE
02894.005 EACH	LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, TYPE A	6	⑤⑥⑦ ⑧⑨⑩	BLACK TUNNEL VISORS BLACK ALUMINUM HOUSINGS
02895.002 EACH	ACCESSIBLE PEDESTRIAN SIGNALS	6	①②③ ④⑤⑥	

DETECTORS				
ITEM NUMBER	DESCRIPTION	SEN. NO.	QTY.	LOCATION
02895.001 EACH	VIDEO DETECTION	①	1	△
02895.001 EACH	VIDEO DETECTION	②	1	△

TRAFFIC SIGNAL SUPPORTS \*\*

POLE NO.	ITEM NUMBER	DESCRIPTION	QTY.	ROUTE	STATION	SIDE	OFFSET	MAST ARM																PEDESTAL		
								ARM "A"												ARM "C"				SHAFT	SIGNAL	
								H	K	SIGNAL LOCATION				SIGN LOCATION				W	G	X	Z	H	M		N	
								L	M	N	O	P	R	S	T	U	Y									
①	02892.210 EACH	TRAFFIC SIGNAL SUPPORT, 36' MAST ARM WITH LUMINAIRE ARM (30' MOUNTING HEIGHT), PAINTED BLACK	1	FIFTH AVE	468+95	RT	23'	17'	10'	36'	32'	24'			28'	20'			5'	90°	6'	30'	225°			
②	02892.003 EACH	TRAFFIC SIGNAL SUPPORT, 15' TYPE X, PAINTED BLACK	1	FIFTH AVE	468+99	LT	29'																15'		10'	
③	02892.205 EACH	TRAFFIC SIGNAL SUPPORT, 26' MAST ARM WITH LUMINAIRE ARM (30' MOUNTING HEIGHT), PAINTED BLACK	1	FIFTH AVE	468+40	LT	22'	17'	10'	26'	22'	14'			18'	11'			5'	0°	6'	30'	90°			
④	02892.003 EACH	TRAFFIC SIGNAL SUPPORT, 15' TYPE X, PAINTED BLACK	1	FIFTH AVE	468+43	RT	23'																15'		10'	

\*\* REFER TO PENNDOT TC-8800 TRAFFIC STANDARDS-SIGNALS FOR LETTER DESIGNATION



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CHECKED	MSF
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SCALE	AS SHOWN

<b>PORT AUTHORITY OF ALLEGHENY COUNTY</b> PITTSBURGH PENNSYLVANIA	
BUS RAPID TRANSIT UPTOWN TO OAKLAND SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	
	CONTRACT NO. BRT-001 DWG. NO. SG33 SHT. 1093

TRAFFIC SIGNAL TABULATION

FIFTH AVENUE AND DINWIDDIE STREET

TRENCH, CONDUIT, JUNCTION BOX, ELECTRICAL ITEMS

DESCRIPTION	ELECTRICAL SERVICE, TYPE C (NEW)	CITY OF PITTSBURGH STANDARD CONCRETE JUNCTION BOX, TYPE 1	TRENCH AND BACKFILL, TYPE II	TRENCH AND BACKFILL, TYPE IV	2 INCH CONDUIT	3 INCH CONDUIT	AWG 8, UNDERGROUND CABLE, COPPER, 1 CONDUCTOR	SIGNAL CABLE, 14 AWG, 5 CONDUCTOR	SIGNAL CABLE, 14 AWG, 7 CONDUCTOR
ITEM NUMBER	02896	02897	02898	02898	02899	02899	02900	02900	02900
UNIT	EACH	EACH	LF	LF	LF	LF	LF	LF	LF
LOCATION									
CC TO 1		1	18		36	36			
CC TO S1			9			18			
1 TO 3		1	22	33	110	110			
2 TO 3		1	22	30	52	104			
△ TO 1			26		26	52			
△ TO 2			6			6			
△ TO 3			6		12	12			
△ TO 1			27			27			
STATION 20+62 LT TO 3			42		42				
COMPLETE INTERSECTION	1						450	300	650
TOTAL	1	3	178	63	278	365	450	300	650

S1 - TABULATED ON SYSTEMS PLAN

SIGNS

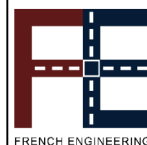
SYMBOL	SERIES	SIZE	AREA EACH (SQ FT)	DESCRIPTION	QUANTITY	02891.001 POST MOUNTED SIGNS, TYPE B		
						SF	SF	SF
A	R3-2	24"X24"	4.0	NO LEFT TURN	1	4.0		
B	R3-2	30"X30"	6.3	NO LEFT TURN	1			6.3
C	R5-1	30"X30"	6.3	DO NOT ENTER	2	6.3	6.3	
D	R6-1	36"X12"	3.0	ONE-WAY (TWO SIDED, CITY STANDARD)	2		6.0	
E	R10-3E (MOD)	9"X15"	0.9	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER (MOD)	6			▲
F	D3-4*	60"X24"	10.0	1800 Uptown 1700 Fifth Ave	1			10.0
G	D3-4*	72"X24"	12.0	Uptown 100 Dinwiddie St	1			12.0
H	R10-11	30"X36"	7.5	NO TURN ON RED ●	2			15.0
I	R3-11B (MOD)	30"X36"	7.5	RIGHT LANE - BUSES ONLY	1			7.5
J	SS-1	30"X18"	3.8	EXCEPT BUSES	1			3.8
TOTAL						10.3	12.3	54.6

▲ - INCIDENTAL TO ITEM 02895.002

\* WHITE REFLECTORIZED LEGEND AND BORDER ON BLUE REFLECTORIZED BACKGROUND. UTILIZE 4" CLEARVIEW 3W FOR BLOCK/NEIGHBORHOOD AND 8" CLEARVIEW 3W FOR STREET NAME. ACTUAL WIDTH DETERMINED BY LETTER SPACING. COORDINATE BLOCK NUMBERS AND STREET NAME DETAILS WITH CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE.



Gulf Tower  
 707 Grant Street  
 5th Floor  
 Pittsburgh, PA 15219



French Engineering, LLC  
 3064 Morgantown Rd  
 Smithfield, PA 15478

NO.	DATE	DESCRIPTION
REVISIONS		

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(NOT FOR CONSTRUCTION)

DESIGNED	LJF
DRAWN	WLZ
CHECKED	MSF
IN CHARGE	LJF
DATE	05/01/24
SCALE	AS SHOWN

PORT AUTHORITY OF ALLEGHENY COUNTY PITTSBURGH PENNSYLVANIA	
BUS RAPID TRANSIT UPTOWN TO OAKLAND SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	
Port Authority connecting people to life	CONTRACT NO. BRT-001
DWG. NO. SG34	SHT. 1094



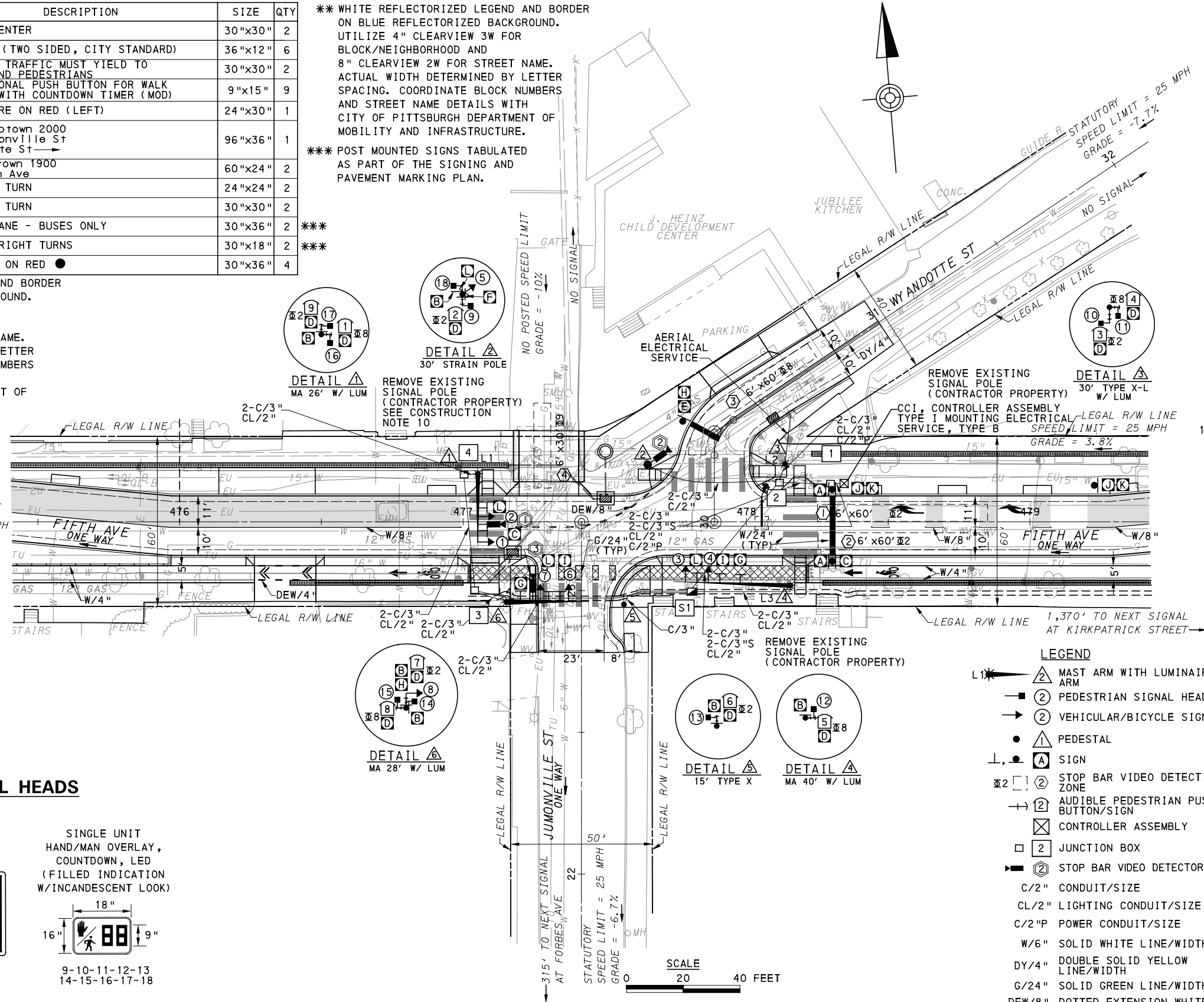
**SIGNS**

SIGN	STANDARD	DESCRIPTION	SIZE	QTY
A	R5-1	DO NOT ENTER	30"x30"	2
B	R6-1	ONE-WAY (TWO SIDED, CITY STANDARD)	36"x12"	6
C	R10-15AL(MOD)	TURNING TRAFFIC MUST YIELD TO BIKES AND PEDESTRIANS	30"x30"	2
D	R10-3E(MOD)	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER (MOD)	9"x15"	9
E	R10-6AL	STOP HERE ON RED (LEFT)	24"x30"	1
F	D3-5**	100 Uptown 2000 ← Jumonville St Wyandotte St →	96"x36"	1
G	D3-4*	2000 Uptown 1900 Fifth Ave	60"x24"	2
H	R3-2	NO LEFT TURN	24"x24"	2
I	R3-2	NO LEFT TURN	30"x30"	2
J	R3-11B(MOD)	RIGHT LANE - BUSES ONLY	30"x36"	2
K	SS-1	EXCEPT RIGHT TURNS	30"x18"	2
L	R10-11	NO TURN ON RED ●	30"x36"	4

\*\* WHITE REFLECTORIZED LEGEND AND BORDER ON BLUE REFLECTORIZED BACKGROUND. UTILIZE 4" CLEARVIEW 3W FOR BLOCK/NEIGHBORHOOD AND 8" CLEARVIEW 2W FOR STREET NAME. ACTUAL WIDTH DETERMINED BY LETTER SPACING. COORDINATE BLOCK NUMBERS AND STREET NAME DETAILS WITH CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE.

\*\*\* POST MOUNTED SIGNS TABULATED AS PART OF THE SIGNING AND PAVEMENT MARKING PLAN.

\* WHITE REFLECTORIZED LEGEND AND BORDER ON BLUE REFLECTORIZED BACKGROUND. UTILIZE 4" CLEARVIEW 3W FOR BLOCK/NEIGHBORHOOD AND 8" CLEARVIEW 3W FOR STREET NAME. ACTUAL WIDTH DETERMINED BY LETTER SPACING. COORDINATE BLOCK NUMBERS AND STREET NAME DETAILS WITH CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE.



**AUDIBLE PEDESTRIAN SIGNAL NOTES**

1. ALL PUSH BUTTONS SHALL BE EQUIPPED WITH LOCATOR TONES.
2. ALL WALK INTERVALS TO HAVE VERBAL MESSAGE DETAILING WALK DIRECTION.
3. VERBAL MESSAGE TO BE PLAYED DURING WALK INTERVAL WHEN BUTTON IS PRESSED.
4. ALL PEDESTRIAN PUSH BUTTONS TO BE LOCATED AT 42" ABOVE GROUND.
5. ALL PUSH BUTTONS TO BE EQUIPPED WITH VIBROTACTILE ARROW.
6. VIBROTACTILE ARROWS TO VIBRATE DURING WALK INTERVAL.
7. WALK AND DON'T WALK MESSAGE SHALL BE AUDIBLE THROUGH THE PUSH BUTTON SPEAKER.

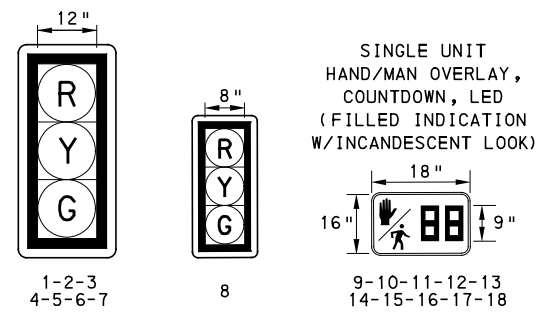
**SIGNAL ASSEMBLY NOTES**

1. ALL VEHICULAR/BICYCLE SIGNALS SHALL BE EQUIPPED WITH L.E.D LENSES, TUNNEL VISORS AND LOUVERED BLACK METAL BACKPLATES WITH 2" REFLECTIVE BORDERS.
2. MIN/MAX HEIGHT TO BOTTOM OF VEHICULAR SIGNALS 17' /18'.
3. MIN HORIZONTAL SPACING FOR VEHICULAR SIGNALS IS 8'.
4. MIN/MAX HEIGHT TO BOTTOM OF PEDESTRIAN SIGNALS 10' /12'.
5. FINAL SIGNAL HEAD PLACEMENT WILL BE DETERMINED BY REPRESENTATIVES OF THE CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE AND THE DISTRICT TRAFFIC UNIT PRIOR TO SIGNAL BEING TURNED ON.
6. ALL PEDESTRIAN SIGNALS SHALL BE PORTLAND ORANGE FULL "PEDESTRIAN HAND" AND WHITE "WALKING PERSON" SYMBOLS AND HAVE INCANDESCENT LOOK WITH COUNTDOWN TIMER.
7. PROVIDE AIRCRAFT STRANDED CABLE FOR MOUNTING SIGNAL AND SIGN BRACKET ASSEMBLIES TO MAST ARMS.
8. PROVIDE BLACK ALUMINUM HOUSINGS FOR ALL SIGNAL HEADS.
9. INSTALL POST MOUNTED SIGNAL HEADS WITH BOTTOMS NO GREATER THAN 15' ABOVE THE SIDEWALK OR PAVEMENT.
10. EXACT LOCATION OF TRAFFIC SIGNAL SUPPORTS SHALL BE DETERMINED BY REPRESENTATIVES OF THE CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE AND THE DISTRICT TRAFFIC UNIT PRIOR TO INSTALLATION.

**PAVEMENT MARKING NOTES**

1. ALL STOP BARS ARE W/24".
2. CROSSWALKS ARE 10' X 24" KEYS WITH 3' TO 5' SPACING.
3. CROSSWALKS ACROSS BICYCLE LANES ARE 6' X 12" KEYS WITH 1' SPACING.

**SIGNAL HEADS**



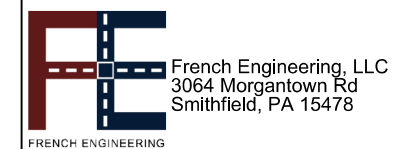
**LEGEND**

- ▲ MAST ARM WITH LUMINAIRE ARM
- ② PEDESTRIAN SIGNAL HEAD
- ② VEHICULAR/BICYCLE SIGNAL HEAD
- ▲ PEDESTAL
- ▲ SIGN
- ② STOP BAR VIDEO DETECTION ZONE
- ② AUDIBLE PEDESTRIAN PUSH BUTTON/SIGN
- ⊠ CONTROLLER ASSEMBLY
- ⊠ JUNCTION BOX
- ② STOP BAR VIDEO DETECTOR
- C/2" CONDUIT/SIZE
- CL/2" LIGHTING CONDUIT/SIZE
- C/2"P POWER CONDUIT/SIZE
- W/6" SOLID WHITE LINE/WIDTH
- DY/4" DOUBLE SOLID YELLOW LINE/WIDTH
- G/24" SOLID GREEN LINE/WIDTH
- DEW/8" DOTTED EXTENSION WHITE LINE/WIDTH
- C/3"S SYSTEM CONDUIT/SIZE
- ⊠ S1 SYSTEM JUNCTION BOX
- L1\* ▲ PEDESTAL WITH LUMINAIRE

TS-554

COUNTY: ALLEGHENY  
MUNICIPALITY: CITY OF PITTSBURGH  
INTERSECTION: FIFTH AVENUE AND JUMONVILLE STREET AND WYANDOTTE STREET

APPROVED AND ACCEPTED:  
CITY TRAFFIC ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_  
APPROVED AND ACCEPTED:  
DISTRICT TRAFFIC ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_



NO.	DATE	DESCRIPTION
REVISIONS		

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**(NOT FOR CONSTRUCTION)**

DESIGNED	LJF
DRAWN	WZ
CHECKED	MSF
IN CHARGE	LJF
DATE	05/01/24
SCALE	AS SHOWN

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA  
**BUS RAPID TRANSIT UPTOWN TO OAKLAND**  
**SIGNAL PLANS**  
**FIFTH AVENUE & JUMONVILLE STREET/WYANDOTTE ST**

**Port Authority** connecting people to life™  
CONTRACT NO. BRT-001  
DWG. NO. SG35 SHT. 1095

**MOVEMENT, PHASING AND SEQUENCE CHART**

SIGNAL	PHASE 2					PHASE 8					PHASE 9					FLASHING
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	
1-2	G	G	Y	R		R	R	R	R	R	R	R	R	R	R	R
3-4-5	R	R	R	R		R	G	G	Y	R	R	R	R	R	R	R
6-7	R	R	R	R		R	R	R	R	R	G	G	Y	R		R
8	G	G	Y	R		R	R	R	R	R	R	R	R	R	R	R
9-10	W	FD	DW	DW		DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	OFF
11-12	DW	DW	DW	DW		W	W	FD	DW	DW	DW	DW	DW	DW	DW	OFF
13-14	W	FD	DW	DW		DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	OFF
15-16	DW	DW	DW	DW		W	W	FD	DW	DW	DW	DW	DW	DW	DW	OFF
17-18	W	FD	DW	DW		DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	OFF
FIXED			3	4				4	3				5	2		
MINIMUM		30					10					5				
PASSAGE		3					3					3				
FREE (MAX)		58					17					8				
PEDESTRIAN	7	23				3	4	10								
MEMORY																

**DETECTOR ZONE INFORMATION**

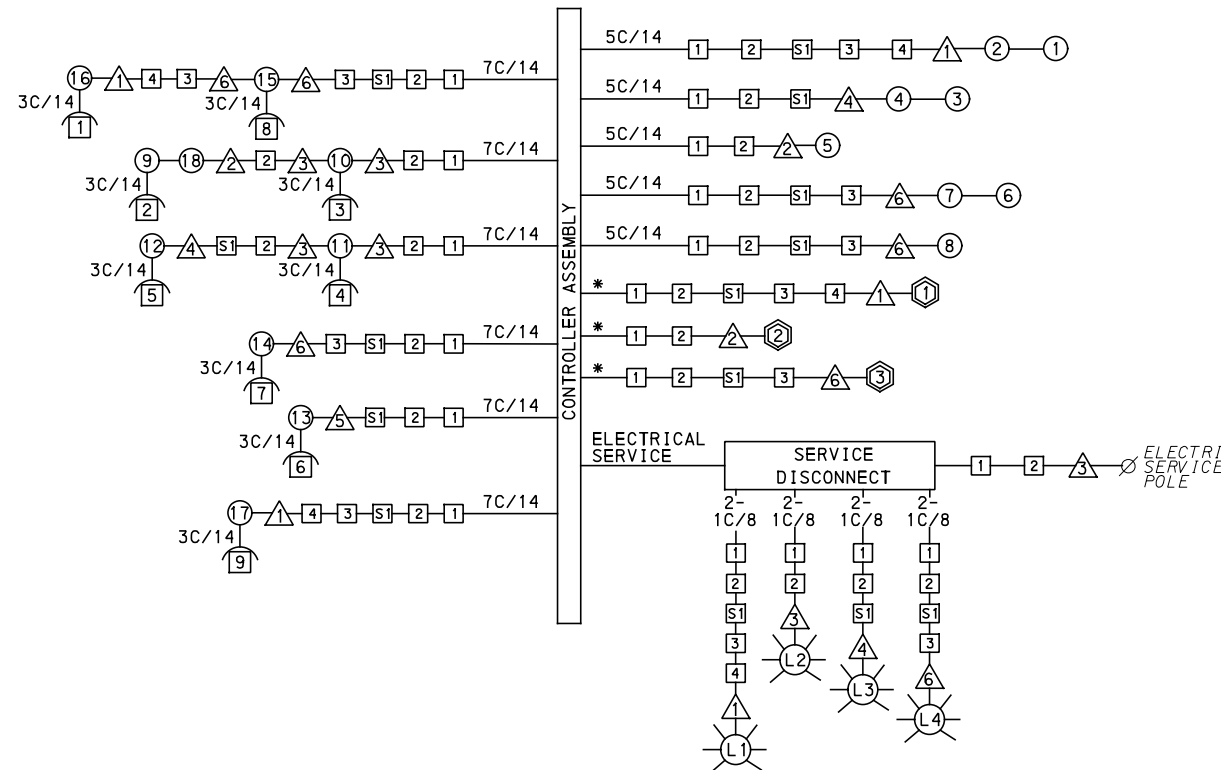
DETECTOR	DETECTION ZONE(S)	MODE	TYPE	ROUTE	PHASE	LOCATION
①	① ② (6' x 60')	PRESENCE	VIDEO (STOP BAR)	FIFTH AVENUE	2	▲
②	③ (6' x 60')	PRESENCE	VIDEO (STOP BAR)	WYANDOTTE STREET	8	▲
③	④ (6' x 30')	PRESENCE	VIDEO (STOP BAR)	DRIVEWAY	9	▲

**GENERAL NOTES**

- THE CITY OF PITTSBURGH SHALL INSPECT THE NEW SIGNAL EQUIPMENT PRIOR TO ACTIVATION.
- ALL TRAFFIC SIGNAL MAINTENANCE AND OPERATION RESPONSIBILITIES SHALL BE TURNED OVER TO THE CITY OF PITTSBURGH AFTER THE FOLLOWING CONDITIONS ARE IMPLEMENTED TO THE CITY'S SATISFACTION:
1. PERMIT "AS-BUILT" TRAFFIC SIGNAL DRAWINGS ARE SUBMITTED AND APPROVED.
  2. ALL PUNCH LIST ITEMS ARE COMPLETED BY THE CONTRACTOR.
  3. AFTER THE 30-DAY CONTINUOUS UNINTERRUPTED SIGNAL OPERATION WITHOUT MALFUNCTIONS.

**CONSTRUCTION NOTES**

1. ALL JUNCTION BOXES IN WALK AREAS TO BE CITY OF PITTSBURGH STANDARD CONCRETE JUNCTION BOX, TYPE 1.
2. ALL JUNCTION BOXES IN NON-WALK AREAS TO BE CITY STANDARD JB-2 WITH BOTTOM.
3. THERE SHALL BE NO SIGNAL WIRE OR FIBER CABLE SPLICING.
4. SERVICE WIRE FROM THE POWER SOURCE TO THE CONTROLLER CABINET SHALL BE PLACED IN SECONDARY SEPARATE CONDUIT.
5. STREET LIGHT CABLE IS NOT PERMITTED TO RUN THROUGH THE CONTROLLER CABINET AND SHALL BE PLACED IN SEPARATE CONDUIT.
6. TRAFFIC SIGNAL CABLE SHALL BE PLACED IN DEDICATED CONDUIT.
7. MOUNT DISCONNECT ON POLE NEAREST TO THE CONTROLLER CABINET EXCLUDING TYPE X POLES.
8. REMOVE AND DISPOSE OF ALL EXISTING SIGNAL WIRING NO LONGER IN USE.
9. REMOVE EXISTING SIGNAL EQUIPMENT NO LONGER IN USE AND RETURN TO THE CITY OF PITTSBURGH TRAFFIC CONTROL SHOP. COORDINATE DELIVERY OF EQUIPMENT WITH DELMAS MCELHANY, TRAFFIC CONTROL FOREMAN.
10. SEE 01720 UTILITY COORDINATION FOR INFORMATION ON RELOCATION OF EXISTING SECURITY CAMERAS AND SHOT SPOTTERS.



**WIRING DIAGRAM**

5C/14 - CABLE (NO. OF CONDUCTORS/SIZE AWG.)

- ① PROPOSED DETECTOR
- ① PROPOSED AUDIBLE PEDESTRIAN INDICATOR
- ▲ PROPOSED SIGNAL SUPPORT
- Ⓛ PROPOSED LUMINAIRE
- Ⓜ PROPOSED JUNCTION BOX
- Ⓜ PROPOSED SYSTEM JUNCTION BOX

3C/14 INCIDENTAL TO ITEM 02895.002

\*INCIDENTAL TO ITEM 02895.001, AS PER MANUFACTURERS SPECIFICATIONS

**TRANSIT PRIORITY PRE-EMPTION NOTES (TO BE INSTALLED BY OTHERS)**

1. COORDINATE TRAFFIC CONTROLLER PROGRAMMING MODIFICATION WITH REPRESENTATIVES OF THE CITY OF PITTSBURGH AND DISTRICT TRAFFIC UNIT.
2. INCLUDE A TRANSIT PRIORITY PHASE THAT WILL EXTEND THE INDICATED PHASE A MAXIMUM OF 10 SECONDS WHEN ACTIVATED BY A PORT AUTHORITY VEHICLE. DO NOT VIOLATE SIDE STREET PEDESTRIAN MINIMUM TIMINGS.
3. MAINTAIN ALL YELLOW CLEARANCES AT ALL TIMES.
4. PROCEED TO THE SUBSEQUENT INTERVAL AS DEFINED IN THE MOVEMENT, SEQUENCE AND TIMING DIAGRAM UPON COMPLETING THE GREEN EXTENSION INTERVAL.
5. ONCE A TRANSIT CALL IS PLACED AND SATISFIED, THE CONTROLLER WILL NOT SATISFY ANOTHER CALL FOR 4 CYCLES.
6. LOCATION OF BUS DETECTORS ARE TO BE FIELD ADJUSTED TO ACHIEVE MAXIMUM OPERATION.

TS-554

COUNTY: ALLEGHENY

MUNICIPALITY: CITY OF PITTSBURGH

INTERSECTION: FIFTH AVENUE AND JUMONVILLE STREET AND WYANDOTTE STREET

APPROVED AND ACCEPTED:

CITY TRAFFIC ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_

APPROVED AND ACCEPTED:

DISTRICT TRAFFIC ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_



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DRAWN	WLZ
CHECKED	MSF
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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
 PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT UPTOWN TO OAKLAND**  
 SIGNAL PLANS  
 WIRING, MOVEMENT, PHASING & SEQUENCE DIAGRAMS

**Port Authority** connecting people to life

CONTRACT NO. BRT-001

DWG. NO. SG36 SHT. 1096

TRAFFIC SIGNAL TABULATION

FIFTH AVENUE AND JUMONVILLE STREET AND WYANDOTTE STREET

MISCELLANEOUS				
ITEM NUMBER	DESCRIPTION	QTY.	LOCATION	REMARKS
01882.002 EACH	TRAFFIC SIGNAL TIMING MODIFICATIONS	2	CC	
02212.009 LF	POLE FOUNDATION DRILLING, LESS THAN 30" DIAMETER	15	③ ⑤	
02212.010 LF	POLE FOUNDATION DRILLING, 30" DIAMETER OR GREATER	48	① ② ④ ⑥	
02889.002 EACH	LED LUMINAIRE CITY STANDARD, BLACK	4	① ② ③ ④	① ③ ④ ⑥
02890.001 EACH	TRAFFIC SIGNAL CONTROLLER ASSEMBLY, TYPE 2070 LC WITH TYPE 332 BASE MOUNTED CABINET	1	CC	332 CONTROLLER CABINET 8" RISER RE-ESTABLISH INTERCONNECT
02890.003 EACH	ETHERNET SWITCH	1	CC	
02890.005 EACH	GPS TIME CLOCK	1	CC	
02894.001 EACH	VEHICULAR SIGNAL HEAD, THREE 12" SECTIONS	7	① ② ③ ④ ⑤ ⑥ ⑦	BLACK TUNNEL VISORS BLACK ALUMINUM HOUSINGS BLACK METAL LOUVERED BACKPLATE
02894.005 EACH	LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, TYPE A	10	⑨ ⑩ ⑪ ⑫ ⑬ ⑭ ⑮ ⑯ ⑰ ⑱	BLACK TUNNEL VISORS BLACK ALUMINUM HOUSINGS
02894.006 EACH	VEHICULAR SIGNAL HEAD, THREE 8" SECTIONS	1	⑧	BLACK TUNNEL VISORS BLACK ALUMINUM HOUSINGS BLACK METAL LOUVERED BACKPLATE
02895.002 EACH	ACCESSIBLE PEDESTRIAN SIGNALS	9	① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨	

DETECTORS				
ITEM NUMBER	DESCRIPTION	SEN. NO.	QTY.	LOCATION
02895.001 EACH	VIDEO DETECTION	①	1	①
02895.001 EACH	VIDEO DETECTION	②	1	②
02895.001 EACH	VIDEO DETECTION	③	1	⑥

TRAFFIC SIGNAL SUPPORTS \*\*

POLE NO.	ITEM NUMBER	DESCRIPTION	QTY.	ROUTE	STATION	SIDE	OFFSET	MAST ARM												PEDESTAL								
								ARM "A"												SHAFT	SIGNAL							
								H	K	SIGNAL LOCATION				SIGN LOCATION				W	G		X	Z	H	M	N			
										L	M	N	O	P	R	S	T									U	Y	
①	02892.205 EACH	TRAFFIC SIGNAL SUPPORT, 26' MAST ARM WITH LUMINAIRE ARM (30' MOUNTING HEIGHT), PAINTED BLACK	1	FIFTH AVE	477+05	LT	17'	17'	10'	26'	23'	14'																
②	02892.011 EACH	TRAFFIC SIGNAL SUPPORT, STRAIN POLE, 2,000 POUNDS DESIGN TENSION, PAINTED BLACK	1	FIFTH AVE	477+65	LT	20'																		30'	12'	10'	
③	02892.005 EACH	TRAFFIC SIGNAL SUPPORT, 30' TYPE X-L WITH LUMINAIRE ARM, PAINTED BLACK	1	FIFTH AVE	478+14	LT	20'																		30'		10'	
④	02892.213 EACH	TRAFFIC SIGNAL SUPPORT, 40' MAST ARM WITH LUMINAIRE ARM (30' MOUNTING HEIGHT), PAINTED BLACK	1	FIFTH AVE	478+15	RT	22'	17'	10'	40'	36'	28'																
⑤	02892.003 EACH	TRAFFIC SIGNAL SUPPORT, 15' TYPE X, PAINTED BLACK	1	FIFTH AVE	477+57	RT	29'																		15'		10'	
⑥	02892.206 EACH	TRAFFIC SIGNAL SUPPORT, 28' MAST ARM WITH LUMINAIRE ARM (30' MOUNTING HEIGHT), PAINTED BLACK	1	FIFTH AVE	477+15	RT	28'	17'	10'	28'	21'	11'																

\*\* REFER TO PENNDOT TC-8800 TRAFFIC STANDARDS-SIGNALS FOR LETTER DESIGNATION



Gulf Tower  
707 Grant Street  
5th Floor  
Pittsburgh, PA 15219



French Engineering, LLC  
3064 Morgantown Rd  
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DRAWN	WLZ
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DATE	05/01/24
SCALE	AS SHOWN

PORT AUTHORITY OF ALLEGHENY COUNTY PITTSBURGH PENNSYLVANIA	
BUS RAPID TRANSIT UPTOWN TO OAKLAND SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	
Port Authority connecting people to life	CONTRACT NO. BRT-001
DWG. NO. SG37	SHT. 1097

TRAFFIC SIGNAL TABULATION

FIFTH AVENUE AND JUMONVILLE STREET AND WYANDOTTE STREET

TRENCH, CONDUIT, JUNCTION BOX, ELECTRICAL ITEMS

DESCRIPTION	ELECTRICAL SERVICE, TYPE B	CITY OF PITTSBURGH STANDARD CONCRETE JUNCTION BOX, TYPE 1	TRENCH AND BACKFILL, TYPE II	TRENCH AND BACKFILL, TYPE IV	2 INCH CONDUIT	3 INCH CONDUIT	AWG 8, UNDERGROUND CABLE, COPPER, 1 CONDUCTOR	SIGNAL CABLE, 14 AWG, 5 CONDUCTOR	SIGNAL CABLE, 14 AWG, 7 CONDUCTOR
ITEM NUMBER	02896	02897	02898	02898	02899	02899	02900	02900	02900
UNIT	EACH	EACH	LF	LF	LF	LF	LF	LF	LF
LOCATION									
CC TO 1		1	5		10	20			
1 TO 2		1	18		36	72			
S1 TO 2			22	28	50	200			
S1 TO 3		1	52	26*	78	156			
4 TO 3		1	20	21	41	82			
1 TO 4			5		5	10			
2 TO 2			17	30	47	94			
3 TO 2			8		16	16			
4 TO S1			37		37	74			
5 TO S1			26			26			
6 TO 3			12		12	24			
COMPLETE INTERSECTION	1								
TOTAL	1	4	222	79	332	774	1455	1400	975

\* TYPE IV TRENCH TABULATED AS PART OF THE SYSTEMS PLAN.  
S1 - TABULATED ON SYSTEMS PLAN

SIGNS

SYMBOL	SERIES	SIZE	AREA EACH (SQ FT)	DESCRIPTION	QUANTITY	02891.001 POST MOUNTED SIGNS, TYPE B		
						SF	SF	SF
A	R5-1	30"x30"	6.3	DO NOT ENTER	2	12.6		
B	R6-1	36"x12"	3.0	ONE-WAY (TWO SIDED, CITY STANDARD)	6		18.0	
C	R10-15AL(MOD)	30"x30"	6.3	TURNING TRAFFIC MUST YIELD TO BIKES AND PEDESTRIANS	2		6.3	6.3
D	R10-3E (MOD)	9"x15"	0.9	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER (MOD)	9		▲	
E	R10-6AL	24"x30"	5.0	STOP HERE ON RED (LEFT)	1	5.0		
F	D3-5 **	96"x36"	24.0	100 Uptown 2000 ← Jumonville St Wyandotte St →	1			24.0
G	D3-4 *	60"x24"	10.0	2000 Uptown 1900 Fifth Ave	2			20.0
H	R3-2	24"x24"	4.0	NO LEFT TURN	2		8.0	
I	R3-2	30"x30"	6.3	NO LEFT TURN	2			12.6
L	R10-11	30"x36"	7.5	NO TURN ON RED ●	4		7.5	22.5
TOTAL						17.6	39.8	85.4

▲ - INCIDENTAL TO ITEM 02895.002  
\* WHITE REFLECTORIZED LEGEND AND BORDER ON BLUE REFLECTORIZED BACKGROUND. UTILIZE 4" CLEARVIEW 3W FOR BLOCK/NEIGHBORHOOD AND 8" CLEARVIEW 3W FOR STREET NAME. ACTUAL WIDTH DETERMINED BY LETTER SPACING. COORDINATE BLOCK NUMBERS AND STREET NAME DETAILS WITH CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE.  
\*\* WHITE REFLECTORIZED LEGEND AND BORDER ON BLUE REFLECTORIZED BACKGROUND. UTILIZE 4" CLEARVIEW 3W FOR BLOCK/NEIGHBORHOOD AND 8" CLEARVIEW 2W FOR STREET NAME. ACTUAL WIDTH DETERMINED BY LETTER SPACING. COORDINATE BLOCK NUMBERS AND STREET NAME DETAILS WITH CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE.



NO.	DATE	DESCRIPTION
REVISIONS		

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(NOT FOR CONSTRUCTION)

DESIGNED	LJF
DRAWN	WLZ
CHECKED	MSF
IN CHARGE	LJF
DATE	05/01/24
SCALE	AS SHOWN

PORT AUTHORITY OF ALLEGHENY COUNTY PITTSBURGH PENNSYLVANIA	
BUS RAPID TRANSIT UPTOWN TO OAKLAND SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	
Port Authority connecting people to life	CONTRACT NO. BRT-001
DWG. NO. SG38	SHT. 1098



**SIGNS**

SIGN	STANDARD	DESCRIPTION	SIZE	QTY
A	R5-1	DO NOT ENTER	48"x48"	2
B	R6-1R	HORIZONTAL RIGHT ONE WAY	54"x18"	1
C	R6-1L	HORIZONTAL LEFT ONE WAY	54"x18"	2
D	R10-3EL	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER	9"x15"	3
E	R10-3ER	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER	9"x15"	3
F	D3-4 *	Uptown 100 Kirkpatrick St Birmingham Br	102"x36"	1
G	D3-4 *	2300 Uptown 2200 FIFTH AVE	60"x24"	1
H	D3-4 *	2200 Uptown 2300 FIFTH AVE	60"x24"	1
I	R3-1	NO RIGHT TURN	30"x30"	1
J	R9-3	NO PEDESTRIAN CROSSING	24"x24"	2
K	R9-3BPL	USE CROSSWALK LEFT	18"x12"	1
L	R9-3BPR	USE CROSSWALK RIGHT	18"x12"	1
M	R10-6AL	STOP HERE ON RED, (LEFT)	24"x30"	3

\* WHITE REFLECTORIZED LEGEND AND BORDER ON BLUE REFLECTORIZED BACKGROUND. UTILIZE 4" CLEARVIEW 3W FOR BLOCK/NEIGHBORHOOD AND 8" CLEARVIEW 3W FOR STREET NAME. ACTUAL WIDTH DETERMINED BY LETTER SPACING. COORDINATE BLOCK NUMBERS AND STREET NAME DETAILS WITH CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE.

**SIGNS (CONT.)**

SIGN	STANDARD	DESCRIPTION	SIZE	QTY
N	R10-10L	LEFT TURN SIGNAL	30"x36"	1
Q	R3-5A	STRAIGHT THROUGH	30"x36"	2
R	R10-10B	BICYCLE SIGNAL	18"x24"	2
S	R10-11	NO TURN ON RED	30"x36"	2
T	R3-11B(MOD) **	RIGHT LANE - BUSES ONLY	30"x36"	2
U	SS-1 **	EXCEPT RIGHT TURNS	30"x18"	2
V	R6-1	ONE WAY (TWO SIDED, CITY STANDARD)	36"x12"	2
W	R3-1	NO RIGHT TURN	24"x24"	1
X	R3-2	NO LEFT TURN	24"x24"	1
Y	R3-5L	LEFT TURN	30"x36"	2
Z	R3-2	NO LEFT TURN	30"x30"	1
AA	R3-5Ba	BUS ONLY	30"x36"	1

\*\* POST MOUNTED SIGNS TABULATED AS PART OF THE SIGNING AND PAVEMENT MARKING PLAN.

**AUDIBLE PEDESTRIAN SIGNAL NOTES**

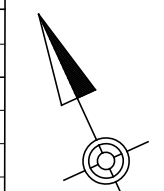
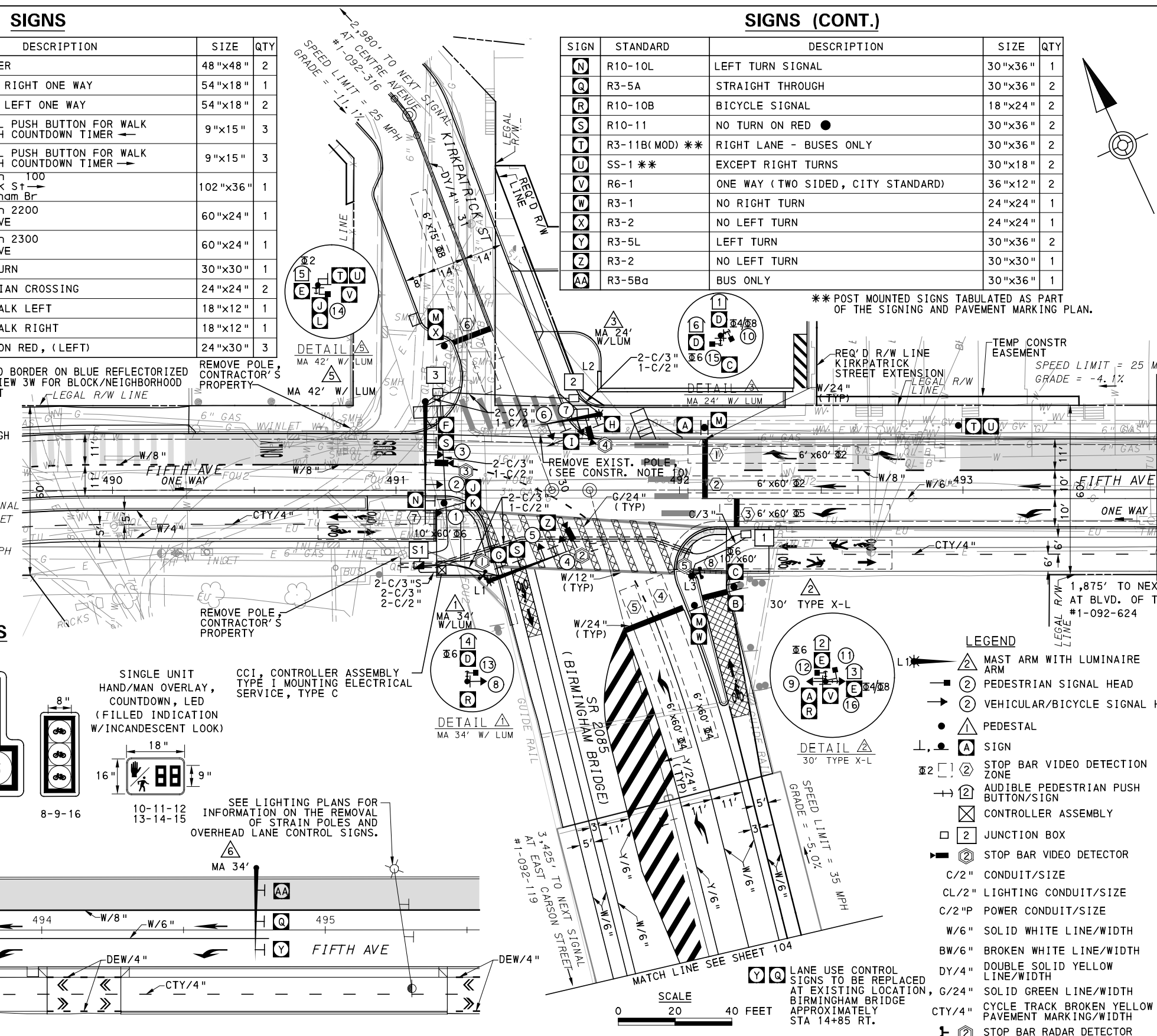
1. ALL PUSH BUTTONS SHALL BE EQUIPPED WITH LOCATOR TONES.
2. ALL WALK INTERVALS TO HAVE VERBAL MESSAGE DETAILING WALK DIRECTION.
3. VERBAL MESSAGE TO BE PLAYED DURING WALK INTERVAL WHEN BUTTON IS PRESSED.
4. ALL PEDESTRIAN PUSH BUTTONS TO BE LOCATED AT 42" ABOVE GROUND.
5. ALL PUSH BUTTONS TO BE EQUIPPED WITH VIBROTACTILE ARROW.
6. VIBROTACTILE ARROWS TO VIBRATE DURING WALK INTERVAL.
7. WALK AND DON'T WALK MESSAGE SHALL BE AUDIBLE THROUGH THE PUSH BUTTON SPEAKER.

**SIGNAL ASSEMBLY NOTES**

1. ALL VEHICULAR/BICYCLE SIGNALS SHALL BE EQUIPPED WITH L.E.D LENSES, TUNNEL VISORS AND LOUVERED BLACK METAL BACKPLATES WITH 2" REFLECTIVE BORDERS.
2. MIN/MAX HEIGHT TO BOTTOM OF VEHICULAR SIGNALS 17' / 18'.
3. MIN HORIZONTAL SPACING FOR VEHICULAR SIGNALS IS 8'.
4. MIN/MAX HEIGHT TO BOTTOM OF PEDESTRIAN SIGNALS 10' / 12'.
5. FINAL SIGNAL HEAD PLACEMENT WILL BE DETERMINED BY REPRESENTATIVES OF THE CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE AND THE DISTRICT TRAFFIC UNIT PRIOR TO SIGNAL BEING TURNED ON.
6. ALL PEDESTRIAN SIGNALS SHALL BE PORTLAND ORANGE FULL "PEDESTRIAN HAND" AND WHITE "WALKING PERSON" SYMBOLS AND HAVE INCANDESCENT LOOK WITH COUNTDOWN TIMER.
7. PROVIDE AIRCRAFT STRANDED CABLE FOR MOUNTING SIGNAL AND SIGN BRACKET ASSEMBLIES TO MAST ARMS.
8. PROVIDE BLACK ALUMINUM HOUSINGS FOR ALL SIGNAL HEADS.
9. INSTALL POST MOUNTED SIGNAL HEADS WITH BOTTOMS NO GREATER THAN 15' ABOVE THE SIDEWALK OR PAVEMENT.
10. EXACT LOCATION OF TRAFFIC SIGNAL SUPPORTS SHALL BE DETERMINED BY REPRESENTATIVES OF THE CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE AND THE DISTRICT TRAFFIC UNIT PRIOR TO INSTALLATION.

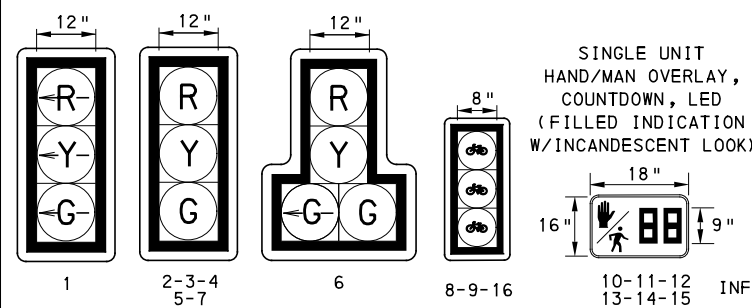
**PAVEMENT MARKING NOTES**

1. ALL STOP BARS ARE W/24".
2. CROSSWALKS ARE 10' X 24" KEYS WITH 3' TO 5' SPACING.
3. CROSSWALKS ACROSS BICYCLE LANES ARE 6' X 12" KEYS WITH 1' SPACING.



MATCH LINE SEE THIS SHEET

**SIGNAL HEADS**

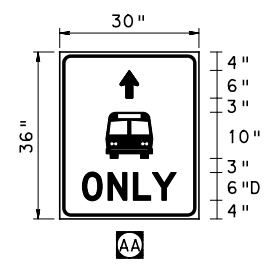


CC1, CONTROLLER ASSEMBLY TYPE I MOUNTING ELECTRICAL SERVICE, TYPE C

SEE LIGHTING PLANS FOR INFORMATION ON THE REMOVAL OF STRAIN POLES AND OVERHEAD LANE CONTROL SIGNS.

**LEGEND**

- ▲ MAST ARM WITH LUMINAIRE ARM
- ② PEDESTRIAN SIGNAL HEAD
- ② VEHICULAR/BICYCLE SIGNAL HEAD
- ▲ PEDESTAL
- ▲ SIGN
- ⊠ STOP BAR VIDEO DETECTION ZONE
- ➔ AUDIBLE PEDESTRIAN PUSH BUTTON/SIGN
- ⊠ CONTROLLER ASSEMBLY
- JUNCTION BOX
- ⊠ STOP BAR VIDEO DETECTOR
- C/2" CONDUIT/SIZE
- CL/2" LIGHTING CONDUIT/SIZE
- C/2"P POWER CONDUIT/SIZE
- W/6" SOLID WHITE LINE/WIDTH
- BW/6" BROKEN WHITE LINE/WIDTH
- DY/4" DOUBLE SOLID YELLOW LINE/WIDTH
- G/24" SOLID GREEN LINE/WIDTH
- CTY/4" CYCLE TRACK BROKEN YELLOW PAVEMENT MARKING/WIDTH
- ⊠ STOP BAR RADAR DETECTOR



TS-138

COUNTY: ALLEGHENY
MUNICIPALITY: CITY OF PITTSBURGH
INTERSECTION: FIFTH AVENUE AND SR 2085 (BIRMINGHAM BRIDGE) AND KIRKPATRICK STREET
APPROVED AND ACCEPTED:
CITY TRAFFIC ENGINEER _____ DATE _____
APPROVED AND ACCEPTED:
DISTRICT TRAFFIC ENGINEER _____ DATE _____

**AECOM**  
Gulf Tower  
707 Grant Street  
5th Floor  
Pittsburgh, PA 15219

NO.	DATE	DESCRIPTION

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**(NOT FOR CONSTRUCTION)**

DESIGNED	DWP
DRAWN	NEJ
CHECKED	AJR
IN CHARGE	JKM
DATE	05/01/24
SCALE	AS SHOWN

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT UPTOWN TO OAKLAND**  
SIGNAL PLANS  
FIFTH AVENUE & BIRMINGHAM BRIDGE/KIRKPATRICK ST

**Port Authority** connecting people to life™

CONTRACT NO. BRT-001  
DWG. NO. SG39 SHT. 1099

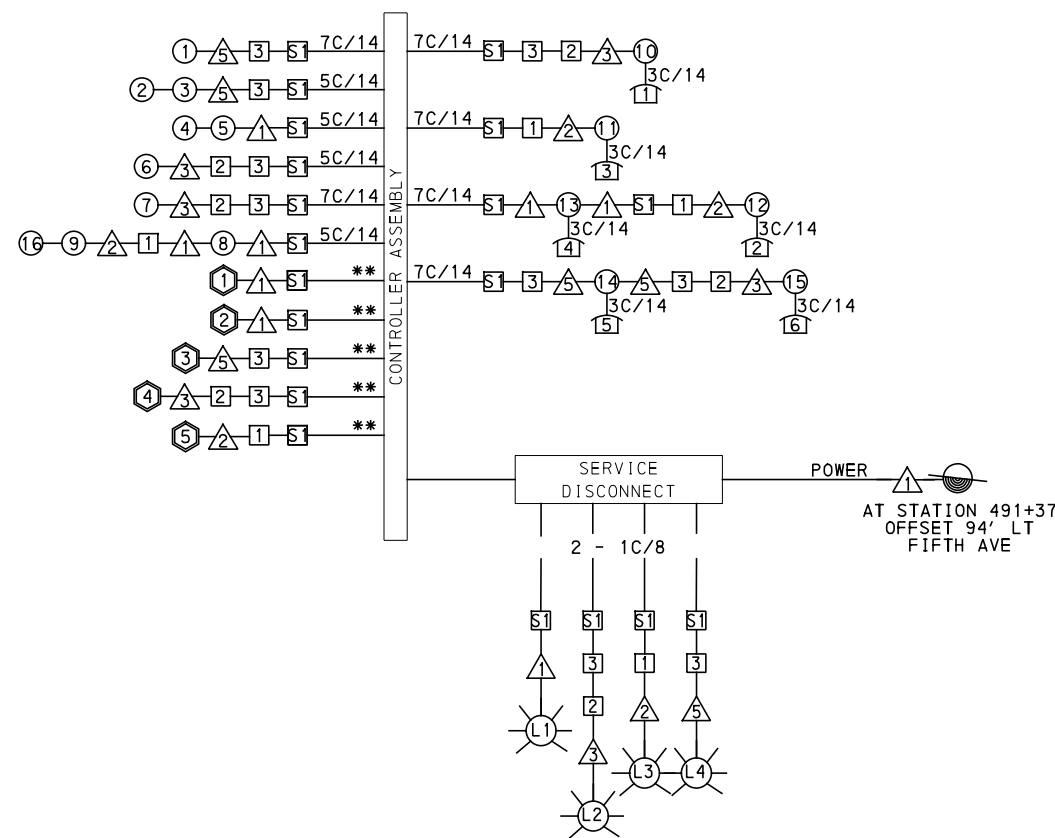


**MOVEMENT, PHASING AND SEQUENCE CHART**

SIGNAL	INTERVAL	PHASE 2+6				PHASE 2+5				PHASE 8				PHASE 4				NON-LOCKING				
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4					
1		R	R	R	R	-G	-G	-Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R
2-3		G	G	Y	R	G	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R
4-5		R	R	R	R	R	R	R	R	G	Y	R	R	R	R	R	R	R	R	R	R	R
6		R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
7		R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
8-9		G	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
10-11		DW	DW	DW	DW	DW	DW	DW	DW	W	FD	DW	DW	W	FD	DW	DW	OFF	OFF	OFF	OFF	OFF
12-13		W	FD	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	OFF	OFF	OFF	OFF	OFF
14-15		W	W	W	W	W	FD	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	OFF	OFF	OFF	OFF	OFF
16		G	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
FIXED				3	6			4	3			5	3			5	2					
MINIMUM		5				12				10				10								
PASSAGE		3				3								3								
FREE (MAX)		29				52				30				38								
PEDESTRIAN *		7	22			7	22							7	11							
MEMORY		NON LOCKING				MIN RECALL				NON LOCKING				NON LOCKING								

\* UPON PEDESTRIAN ACTUATION ONLY, OTHERWISE DON'T WALK AT ALL TIMES

① W IF FOLLOWED BY 4



**WIRING DIAGRAM**

- 5C/14 - CABLE (NO. OF CONDUCTORS/SIZE AWG.)
- ① EXISTING SIGNAL HEAD      ① PROPOSED SIGNAL HEAD
- ① EXISTING AUDIBLE PEDESTRIAN INDICATOR      ① PROPOSED AUDIBLE PEDESTRIAN INDICATOR
- △ EXISTING SIGNAL SUPPORT      △ PROPOSED SIGNAL SUPPORT
- ① EXISTING JUNCTION BOX      ① PROPOSED JUNCTION BOX
- ⊙ EXISTING LUMINAIRE      ⊙ PROPOSED LUMINAIRE
- ① PROPOSED DETECTOR
- \*\* INCIDENTAL TO ITEM 02895.001, AS PER MANUFACTURERS SPECIFICATIONS
- 3C/14 INCIDENTAL TO ITEM 02895.002

**TRANSIT PRIORITY PRE-EMPTION NOTES (TO BE INSTALLED BY OTHERS)**

- COORDINATE TRAFFIC CONTROLLER PROGRAMMING MODIFICATION WITH REPRESENTATIVES OF THE CITY OF PITTSBURGH AND DISTRICT TRAFFIC UNIT.
- INCLUDE A TRANSIT PRIORITY PHASE THAT WILL EXTEND THE INDICATED PHASE A MAXIMUM OF 10 SECONDS WHEN ACTIVATED BY A PORT AUTHORITY VEHICLE. DO NOT VIOLATE SIDE STREET PEDESTRIAN MINIMUM TIMINGS.
- MAINTAIN ALL YELLOW CLEARANCES AT ALL TIMES.
- PROCEED TO THE SUBSEQUENT INTERVAL AS DEFINED IN THE MOVEMENT, SEQUENCE AND TIMING DIAGRAM UPON COMPLETING THE GREEN EXTENSION INTERVAL.
- ONCE A TRANSIT CALL IS PLACED AND SATISFIED, THE CONTROLLER WILL NOT SATISFY ANOTHER CALL FOR 4 CYCLES.
- LOCATION OF BUS DETECTORS ARE TO BE FIELD ADJUSTED TO ACHIEVE MAXIMUM OPERATION.

**DETECTOR ZONE INFORMATION**

DETECTOR	DETECTION ZONE(S)	MODE	TYPE	ROUTE	PHASE	LOCATION MAST ARM
①	⑦ (10' x 60')	PRESENCE	RADAR (STOP BAR)	5TH AVENUE	6	①
②	⑥ (6' x 75')	PRESENCE	VIDEO (STOP BAR)	KIRKPATRICK STREET	8	①
③	①② (6' x 60')	PRESENCE	VIDEO (STOP BAR)	5TH AVENUE	2	③
	③ (6' x 60')	PRESENCE	VIDEO (STOP BAR)	5TH AVENUE	5	
④	④⑤ (6' x 60')	PRESENCE	VIDEO (STOP BAR)	BIRMINGHAM BRIDGE	4	③
⑤	⑧ (10' x 60')	PRESENCE	RADAR (STOP BAR)	5TH AVENUE	6	③

COUNTY: ALLEGHENY
MUNICIPALITY: CITY OF PITTSBURGH
INTERSECTION: FIFTH AVENUE AND SR 2085 (BIRMINGHAM BRIDGE) AND KIRKPATRICK STREET
APPROVED AND ACCEPTED:
CITY TRAFFIC ENGINEER _____ DATE _____
APPROVED AND ACCEPTED:
DISTRICT TRAFFIC ENGINEER _____ DATE _____



Gulf Tower  
707 Grant Street  
5th Floor  
Pittsburgh, PA 15219

NO.	DATE	DESCRIPTION

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DESIGNED	DWP
DRAWN	NED
CHECKED	AJR
IN CHARGE	JKM
DATE	05/01/24
SCALE	AS SHOWN

<b>PORT AUTHORITY OF ALLEGHENY COUNTY</b> PITTSBURGH PENNSYLVANIA	
BUS RAPID TRANSIT UPTOWN TO OAKLAND SIGNAL PLANS WIRING, MOVEMENT, PHASING & SEQUENCE DIAGRAMS	
<b>Port Authority</b> connecting people to life	CONTRACT NO. BRT-001
DWG. NO. SG40	SHT. 1100

**TRAFFIC SIGNAL TABULATION**

FIFTH AVENUE AND SR 2085 (BIRMINGHAM BRIDGE) AND KIRKPATRICK STREET

MISCELLANEOUS				
ITEM NUMBER	DESCRIPTION	QTY.	LOCATION	REMARKS
01882.002 EACH	TRAFFIC SIGNAL TIMING MODIFICATIONS	2	cc	
01883.001 EACH	TEMPORARY TRAFFIC SIGNAL	1	CC	
02212.009 LF	POLE FOUNDATION DRILLING, LESS THAN 30" DIAMETER	9	△2	
02212.010 LF	POLE FOUNDATION DRILLING, GREATER THAN 30" DIAMETER	49	△1 △3 △5 △6	
02889.002 EACH	LED LUMINAIRE CITY STANDARD, BLACK	4	①②③④	△1 △3 △2 △5
02890.001 EACH	TRAFFIC SIGNAL CONTROLLER ASSEMBLY, TYPE 2070 LC, WITH TYPE 332 BASE MOUNTED CABINET	1	CC	332 CONTROLLER CABINET 8" RISER
02890.003 EACH	ETHERNET SWITCH	1	CC	
02890.005 EACH	GPS TIME CLOCK	1	CC	
02894.001 EACH	VEHICULAR SIGNAL HEAD, THREE 12" SECTIONS	6	①②③ ④⑤⑦	BLACK TUNNEL VISORS BLACK ALUMINUM HOUSINGS BLACK METAL LOUVERED BACKPLATE
02894.002 EACH	VEHICULAR SIGNAL HEAD, FOUR 12" SECTIONS	1	⑥	BLACK TUNNEL VISORS BLACK ALUMINUM HOUSINGS BLACK METAL LOUVERED BACKPLATE
02894.004 EACH	BICYCLE SIGNAL HEAD, THREE 8" SECTIONS	3	⑧⑨⑩	BLACK TUNNEL VISORS BLACK ALUMINUM HOUSINGS BLACK METAL LOUVERED BACKPLATE
02894.005 EACH	LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, TYPE A	6	⑪⑫⑬ ⑭⑮⑯	BLACK TUNNEL VISORS BLACK ALUMINUM HOUSINGS
02895.002 EACH	ACCESSIBLE PEDESTRIAN SIGNALS	6	⑰⑱⑲ ⑳㉑㉒	

DETECTORS				
ITEM NUMBER	DESCRIPTION	SEN. NO.	QTY.	LOCATION
02895.005 EACH	DIGITAL WAVE RADAR DETECTION	①	1	△1
02895.001 EACH	VIDEO DETECTION	②	1	△1
02895.001 EACH	VIDEO DETECTION	③	1	△5
02895.001 EACH	VIDEO DETECTION	④	1	△3
02895.005 EACH	DIGITAL WAVE RADAR DETECTION	⑤	1	△2

**TRAFFIC SIGNAL SUPPORTS \*\***

POLE NO.	ITEM NUMBER	DESCRIPTION	QTY.	ROUTE	STATION	SIDE	OFFSET	MAST ARM																PEDESTAL				
								ARM "A"												ARM "C"				SHAFT	SIGNAL			
								H	K	SIGNAL LOCATION						SIGN LOCATION						W	G		X	Z	H	M
										L	M	N	O	P	R	S	T	U	Y									
△1	02892.209 EACH	TRAFFIC SIGNAL SUPPORT, 34' MAST ARM WITH LUMINAIRE ARM (30' MOUNTING HEIGHT), PAINTED BLACK	1	BIRMINGHAM BR	16+98	L	42'	17'	10'	34'	29'	21'	--	--	25'	12'	--	--	5'	6°	6'	30'	0°	--	--	--		
△2	02892.005 EACH	TRAFFIC SIGNAL SUPPORT, 30' TYPE X-L WITH LUMINAIRE ARM, PAINTED BLACK	1	FIFTH AVE	492+04	R	30'	--	--	--	--	--	--	--	--	--	--	--	--	--	--	30'	0°	30'	--	10'		
△3	02892.204 EACH	TRAFFIC SIGNAL SUPPORT, 24' MAST ARM WITH LUMINAIRE ARM (30' MOUNTING HEIGHT), PAINTED BLACK	1	KIRKPATRICK ST	30+13	R	25'	17'	10'	24'	19'	8'	--	--	14'	--	--	--	2'	349°	6'	30'	0°	--	--	--		
△5	02892.608 EACH	TRAFFIC SIGNAL SUPPORT, 42' MAST ARM, PAINTED BLACK	1	FIFTH AVE	491+10	L	31'	17'	10'	42'	39'	29'	19'	--	35'	14'	--	--	8'	0°	--	--	--	--	--	--		
△6	02892.605 EACH	TRAFFIC SIGNAL SUPPORT, 34' MAST ARM, PAINTED BLACK	1	FIFTH AVE	494+76	L	22'	17'	--	34'	--	--	--	--	29'	19'	8'	--	--	0°	--	--	--	--	--	--		

\*\* REFER TO TRAFFIC STANDARDS TC-8800 SERIES FOR LETTER DESIGNATION



Gulf Tower  
707 Grant Street  
5th Floor  
Pittsburgh, PA 15219

NO.	DATE	DESCRIPTION
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DESIGNED	DWP
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<b>PORT AUTHORITY OF ALLEGHENY COUNTY</b> PITTSBURGH PENNSYLVANIA		
BUS RAPID TRANSIT UPTOWN TO OAKLAND SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS		
<b>Port Authority</b> connecting people to life®	CONTRACT NO. BRT-001	
DWG. NO. SG41	SHT. 1101	

TRAFFIC SIGNAL TABULATION

FIFTH AVENUE AND SR 2085 (BIRMINGHAM BRIDGE) AND KIRKPATRICK STREET

TRENCH, CONDUIT, JUNCTION BOX, ELECTRICAL ITEMS

DESCRIPTION	ELECTRICAL SERVICE TYPE C (NEW)	CITY OF PITTSBURGH STANDARD CONCRETE JUNCTION BOX, TYPE I	TRENCH AND BACKFILL, TYPE I	TRENCH AND BACKFILL, TYPE IV	2 INCH CONDUIT	3 INCH CONDUIT	AWG 8, UNDERGROUND CABLE, COPPER, 1 CONDUCTOR	SIGNAL CABLE, 14 AWG, 5 CONDUCTOR	SIGNAL CABLE, 14 AWG, 7 CONDUCTOR
ITEM NUMBER	02896	02897	02898	02898	02899	02899	02900	02900	02900
UNIT	EACH	EACH	LF	LF	LF	LF	LF	LF	LF
LOCATION									
CC TO S1		1	8		16	32			
S1 TO A			24		24	48			
S1 TO 1		1	47	*	116	232			
1 TO A			24			24			
S1 TO 3		1	38	28	66	132			
3 TO A			3		6	12			
3 TO 2		1	10	35	45	90			
2 TO A			9		9	18			
COMPLETE INTERSECTION	1						960	410	1160
TOTAL	1	3	163	63	282	588	960	410	1160

S1 SYSTEMS JUNCTION BOX TABULATED AS PART OF THE SYSTEMS PLAN.

\* TYPE IV TRENCH TABULATED AS PART OF THE SYSTEMS PLAN.

SIGNS

SYMBOL	SERIES	SIZE	AREA EACH (SQ FT)	DESCRIPTION	QUANTITY	02891.001 POST MOUNTED SIGNS, TYPE B			
						SF	SF	SF	
A	R5-1	48"x48"	16.0	DO NOT ENTER	2	16.0	16.0		
B	R6-1R	54"x18"	6.8	HORIZONTAL RIGHT ONE WAY	1		6.8		
C	R6-1L	54"x18"	6.8	HORIZONTAL LEFT ONE WAY	2		13.6		
D	R10-3EL	9"x15"	0.9	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER ←	3			▲	
E	R10-3ER	9"x15"	0.9	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER →	3			▲	
F	D3-4 *	102"x36"	25.5	Uptown 100 Kirkpatrick St → ← Birmingham Br	1		25.5		
G	D3-4 *	60"x24"	10.0	2300 Uptown 2200 Fifth Ave	1		10.0		
H	D3-4 *	60"x24"	10.0	2200 Uptown 2300 Fifth Ave	1		10.0		
I	R3-1	30"x30"	6.3	NO RIGHT TURN	1		6.3		
J	R9-3	24"x24"	4.0	NO PEDESTRIAN CROSSING	2	4.0	4.0		
K	R9-3BPL	18"x12"	1.5	USE CROSSWALK LEFT	1		1.5		
L	R9-3BPR	18"x12"	1.5	USE CROSSWALK RIGHT	1		1.5		
M	R10-6AL	24"x30"	5.0	STOP HERE ON RED, (LEFT)	3	15.0			
N	R10-10L	30"x36"	7.5	LEFT TURN SIGNAL	1			7.5	
Q	R3-5A	30"x36"	7.5	STRAIGHT THROUGH	2			15.0	
R	R10-10B	18"x24"	3.0	BICYCLE SIGNAL	2		6.0		
S	R10-11	30"x36"	7.5	NO TURN ON RED ●	2			15.0	
T	R3-11B (MOD)	30"x36"	7.5	RIGHT LANE - BUSES ONLY	2		15.0		
U	SS-1	30"x18"	3.8	EXCEPT RIGHT TURNS	2		7.6		
V	R6-1	36"x12"	3.0	ONE WAY (TWO SIDED, CITY STANDARD)	2		6.0		
W	R3-1	24"x24"	4.0	NO RIGHT TURN	1		4.0		
X	R3-2	24"x24"	4.0	NO LEFT TURN	1		4.0		
Y	R3-5L	30"x36"	7.5	LEFT TURN	2			15.0	
Z	R3-2	30"x30"	6.3	NO LEFT TURN	1			6.3	
AA	R3-5Ba	30"x36"	7.5	BUS ONLY	1			7.5	
TOTAL							35.0	137.8	66.3

▲ - INCIDENTAL TO ITEM 02895.002

\* WHITE REFLECTORIZED LEGEND AND BORDER ON BLUE REFLECTORIZED BACKGROUND. UTILIZE 4" CLEARVIEW 3W FOR BLOCK/NEIGHBORHOOD AND 8" CLEARVIEW 3W FOR STREET NAME. ACTUAL WIDTH DETERMINED BY LETTER SPACING. COORDINATE BLOCK NUMBERS AND STREET NAME DETAILS WITH CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE.



Gulf Tower  
707 Grant Street  
5th Floor  
Pittsburgh, PA 15219

NO.	DATE	DESCRIPTION
REVISIONS		

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(NOT FOR CONSTRUCTION)

DESIGNED	DWP
DRAWN	NED
CHECKED	AJR
IN CHARGE	JKM
DATE	05/01/24
SCALE	AS SHOWN

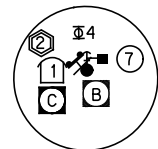
<b>PORT AUTHORITY OF ALLEGHENY COUNTY</b> PITTSBURGH PENNSYLVANIA		
<b>BUS RAPID TRANSIT UPTOWN TO OAKLAND</b> SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS		
<b>Port Authority</b> <small>connecting people to life</small>		CONTRACT NO. BRT-001
DWG. NO. SG42	SHT. 1102	

SIGNS

SIGN	STANDARD	DESCRIPTION	SIZE	QTY
A	R10-11	NO TURN ON RED ●	30"x36"	1
B	R10-22	TO REQUEST GREEN WAIT ON LINE	12"x18"	2
C	R10-3E(MOD)	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER	9"x15"	2
D	R10-6AR	STOP HERE ON RED, (RIGHT)	24"x30"	1

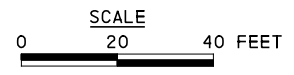
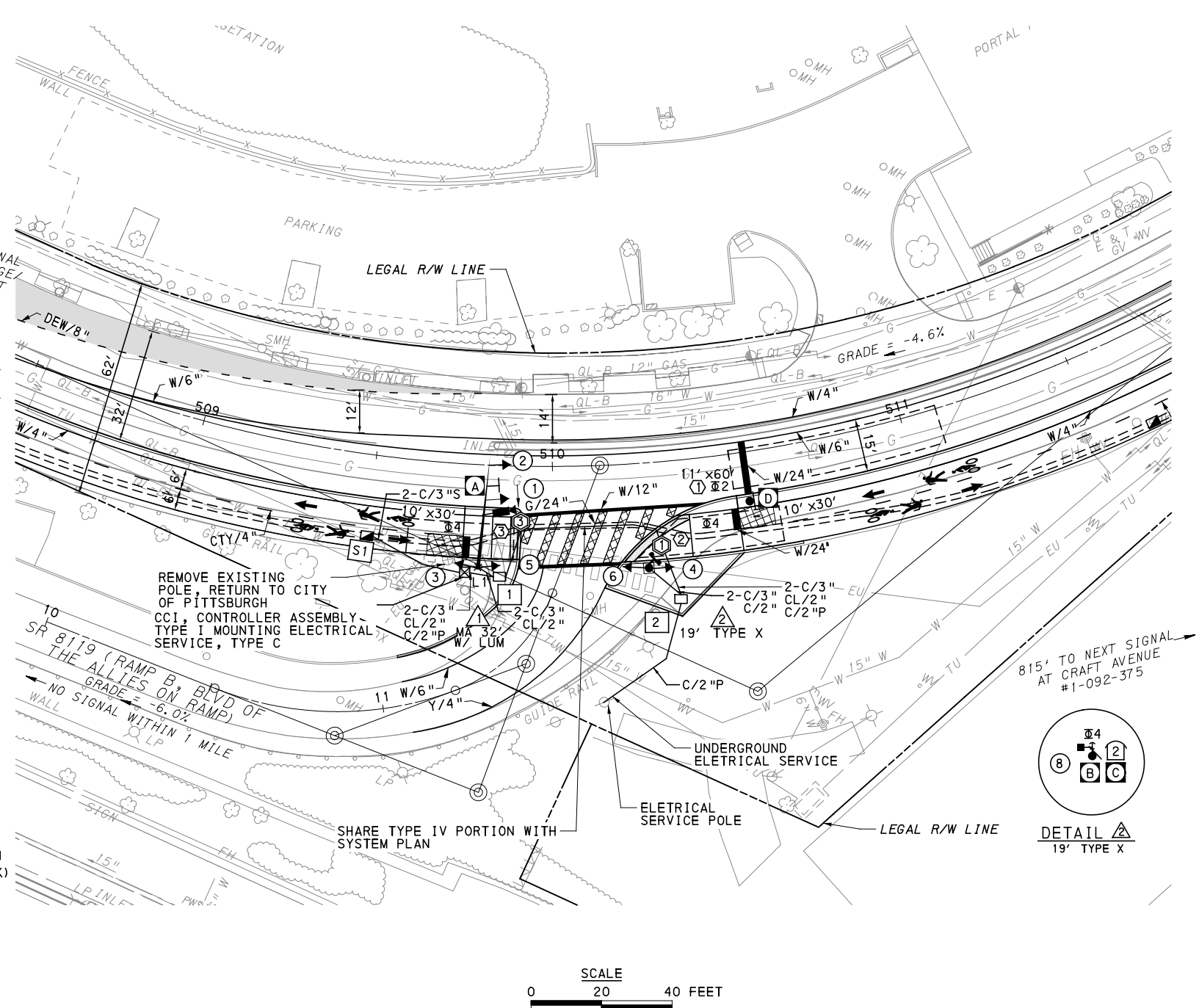
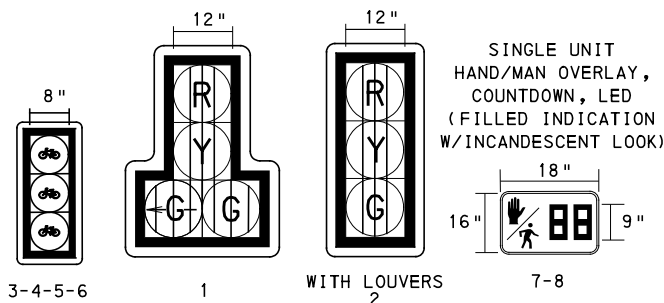
LEGEND

- ▲ MAST ARM WITH LUMINAIRE ARM
- ② PEDESTRIAN SIGNAL HEAD
- ➔ VEHICULAR/BICYCLE SIGNAL HEAD
- PEDESTAL
- ▲ SIGN
- ⊠ STOP BAR RADAR DETECTION ZONE
- ➔ AUDIBLE PEDESTRIAN PUSH BUTTON/SIGN
- ⊠ CONTROLLER ASSEMBLY
- ⊠ JUNCTION BOX
- ⊠ STOP BAR RADAR DETECTOR
- C/2" CONDUIT/SIZE
- CL/2" PROPOSED LIGHTING CONDUIT/SIZE
- C/2"P POWER CONDUIT/SIZE
- W/6" SOLID WHITE LINE/WIDTH
- BW/6" BROKEN WHITE LINE/WIDTH
- DY/4" DOUBLE SOLID YELLOW LINE/WIDTH
- DEW/4" DOTTED EXTENSION WHITE PAVEMENT MARKING/WIDTH
- G/24" SOLID GREEN LINE/WIDTH
- CTY/4" CYCLE TRACK BROKEN YELLOW PAVEMENT MARKING/WIDTH
- ⊠ S1 SYSTEM JUNCTION BOX
- C/3"S SYSTEM CONDUIT/SIZE
- ➔ STOP BAR VIDEO DETECTOR



DETAIL MA 32' W/ LUM

SIGNAL HEADS



AUDIBLE PEDESTRIAN SIGNAL NOTES

- ALL PUSH BUTTONS SHALL BE EQUIPPED WITH LOCATOR TONES.
- ALL WALK INTERVALS TO HAVE VERBAL MESSAGE DETAILING WALK DIRECTION.
- VERBAL MESSAGE TO BE PLAYED DURING WALK INTERVAL WHEN BUTTON IS PRESSED.
- ALL PEDESTRIAN PUSH BUTTONS TO BE LOCATED AT 42" ABOVE GROUND.
- ALL PUSH BUTTONS TO BE EQUIPPED WITH VIBROTACTILE ARROW.
- VIBROTACTILE ARROWS TO VIBRATE DURING WALK INTERVAL.
- WALK AND DON'T WALK MESSAGE SHALL BE AUDIBLE THROUGH THE PUSH BUTTON SPEAKER.

SIGNAL ASSEMBLY NOTES

- ALL VEHICULAR/BICYCLE SIGNALS SHALL BE EQUIPPED WITH L.E.D LENSES, TUNNEL VISORS AND LOUVERED BLACK METAL BACKPLATES WITH 2" REFLECTIVE BORDERS.
- MIN/MAX HEIGHT FOR VEHICULAR SIGNALS 17'/18'.
- MIN HORIZONTAL SPACING FOR VEHICULAR SIGNALS IS 8'.
- MIN/MAX HEIGHT FOR PEDESTRIAN MOUNTED SIGNALS 10'/12'.
- FINAL SIGNAL HEAD PLACEMENT WILL BE DETERMINED BY A REPRESENTATIVE OF THE CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE PRIOR TO SIGNAL BEING TURNED ON.
- ALL PEDESTRIAN SIGNALS SHALL BE PORTLAND ORANGE FULL "PEDESTRIAN HAND" AND WHITE "WALKING PERSON" SYMBOLS AND HAVE INCANDESCENT LOOK WITH COUNTDOWN TIMER.
- PROVIDE AIRCRAFT STRANDED CABLE FOR MOUNTING SIGNAL AND SIGN BRACKET ASSEMBLIES TO MAST ARMS.
- PROVIDE BLACK ALUMINUM HOUSINGS FOR ALL SIGNAL HEADS.
- INSTALL POST MOUNTED SIGNAL HEADS WITH BOTTOMS NO GREATER THAN 15' ABOVE THE SIDEWALK OR PAVEMENT.
- EXACT LOCATION OF TRAFFIC SIGNAL SUPPORTS SHALL BE DETERMINED BY A REPRESENTATIVE OF THE CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE PRIOR TO INSTALLATION.
- POSITION LOUVERED VEHICULAR SIGNAL HEADS TO LATERALLY CONCEAL THE VISIBILITY OF ITS INDICATIONS FROM MOTORISTS IN THE ADJACENT LANE. SIGNAL HEADS 1 AND 2 SHALL BE VISIBLE TO MOTORISTS TRAVELING TO THE LEFT OF THE CONCRETE MEDIAN. SIGNAL VISIBILITY SHALL NOT BE DISTANCE LIMITED.

PAVEMENT MARKING NOTES

- ALL STOP BARS ARE W/24".
- CROSSWALKS ARE MIN. 10' X 24" KEYS WITH 3' TO 5' SPACING.
- CROSSWALKS ACROSS BICYCLE LANES ARE 6' X 12" KEYS WITH 1' SPACING.

COUNTY: ALLEGHENY	
MUNICIPALITY: CITY OF PITTSBURGH	
INTERSECTION: FIFTH AVENUE AND SR 8119 (RAMP B, BLVD OF THE ALLIES ON RAMP)	
APPROVED AND ACCEPTED:	
CITY TRAFFIC ENGINEER	DATE
APPROVED AND ACCEPTED:	
DISTRICT TRAFFIC ENGINEER	DATE



NO.	DATE	DESCRIPTION
REVISIONS		

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(NOT FOR CONSTRUCTION)

DESIGNED	MW
DRAWN	MW
CHECKED	EMC
IN CHARGE	EMC
DATE	05/01/24
SCALE	AS SHOWN

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT UPTOWN TO OAKLAND**  
SIGNAL PLANS  
FIFTH AVENUE & RAMP TO BOULEVARD OF THE ALLIES

**Port Authority** connecting people to life™

CONTRACT NO. BRT-001  
DWG. NO. SG43 SHT. 1103

**MOVEMENT, PHASING AND SEQUENCE CHART**

SIGNAL	INTERVAL	PHASE 2			PHASE 4 (BIKE + PED PHASE)				FLASHING
		1	2	3	1	2	3	4	
2		G	Y	R					R
1		Y	R		R	R	R	R	R
3-4-5-6		R	R	R	G	G	Y	R	OFF
7-8		DW	DW	DW	W	FD	DW	DW	OFF
FIXED			4	3			4	3	
MINIMUM	10				5				
PASSAGE	3				3				
FREE (MAX)	47				20				
PEDESTRIAN*					7	10			
MEMORY		MAX RECALL			NON-LOCKING				

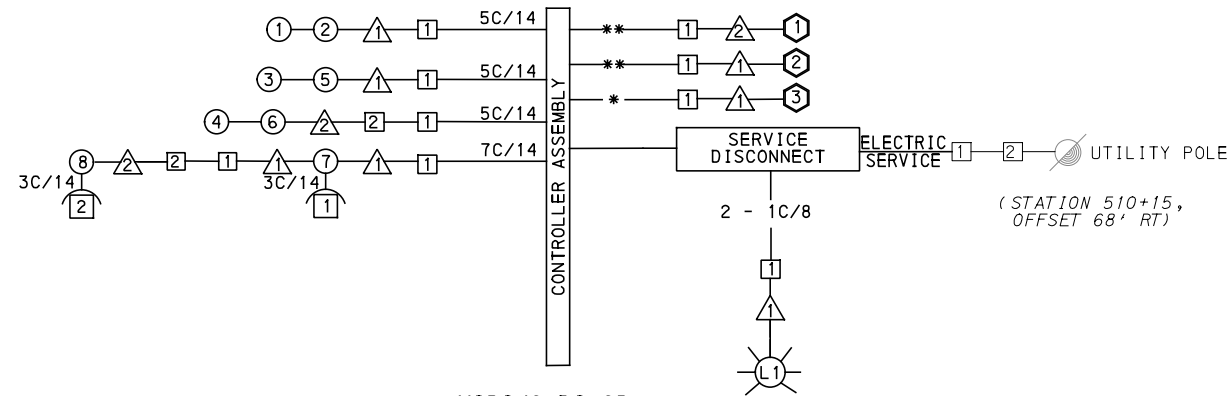
\* UPON PEDESTRIAN ACTUATION ONLY, OTHERWISE DON'T WALK AT ALL TIMES

**DETECTOR ZONE INFORMATION**

DETECTOR	DETECTION ZONE(S)	MODE	TYPE	ROUTE	PHASE	LOCATION MAST ARM
3	1 (11' x 60')	PRESENCE	VIDEO (STOP BAR)	FIFTH AVENUE	2	1
1	2 (10' x 30')	PRESENCE	RADAR (STOP BAR)	FIFTH AVENUE	4	2
2	3 (10' x 30')	PRESENCE	RADAR (STOP BAR)	FIFTH AVENUE	4	1

**TRANSIT PRIORITY PRE-EMPTION NOTES (TO BE INSTALLED BY OTHERS)**

- COORDINATE TRAFFIC CONTROLLER PROGRAMMING MODIFICATION WITH REPRESENTATIVES OF THE CITY OF PITTSBURGH AND DISTRICT TRAFFIC UNIT.
- INCLUDE A TRANSIT PRIORITY PHASE THAT WILL EXTEND THE INDICATED PHASE A MAXIMUM OF 10 SECONDS WHEN ACTIVATED BY A PORT AUTHORITY VEHICLE. DO NOT VIOLATE SIDE STREET PEDESTRIAN MINIMUM TIMINGS.
- MAINTAIN ALL YELLOW CLEARANCES AT ALL TIMES.
- PROCEED TO THE SUBSEQUENT INTERVAL AS DEFINED IN THE MOVEMENT, SEQUENCE AND TIMING DIAGRAM UPON COMPLETING THE GREEN EXTENSION INTERVAL.
- ONCE A TRANSIT CALL IS PLACED AND SATISFIED, THE CONTROLLER WILL NOT SATISFY ANOTHER CALL FOR 4 CYCLES.
- LOCATION OF BUS DETECTORS ARE TO BE FIELD ADJUSTED TO ACHIEVE MAXIMUM OPERATION.



**WIRING DIAGRAM**

- 5C/14 - CABLE (NO. OF CONDUCTORS/SIZE AWG.)
- SIGNAL HEAD
  - △ SIGNAL SUPPORT
  - AUDIBLE PEDESTRIAN INDICATOR
  - JUNCTION BOX
  - ⬡ PROPOSED DETECTOR
  - ⊙ LUMINAIRE

- \* INCIDENTAL TO ITEM 02895.001, AS PER MANUFACTURERS SPECIFICATIONS
- 3C/14 INCIDENTAL TO ITEM 02895.002
- \*\* INCIDENTAL TO ITEM 02895.005, AS PER MANUFACTURERS SPECIFICATIONS

**GENERAL NOTES**

- THE CITY OF PITTSBURGH SHALL INSPECT THE NEW SIGNAL EQUIPMENT PRIOR TO ACTIVATION.
- ALL TRAFFIC SIGNAL MAINTENANCE AND OPERATION RESPONSIBILITIES SHALL BE TURNED OVER TO THE CITY OF PITTSBURGH AFTER THE FOLLOWING CONDITIONS ARE IMPLEMENTED TO THE CITY'S SATISFACTION:
- PERMIT "AS-BUILT" TRAFFIC SIGNAL DRAWINGS ARE SUBMITTED AND APPROVED.
  - ALL PUNCH LIST ITEMS ARE COMPLETED BY THE CONTRACTOR.
  - AFTER THE 30-DAY CONTINUOUS UNINTERRUPTED SIGNAL OPERATION WITHOUT MALFUNCTIONS.

**CONSTRUCTION NOTES**

- ALL JUNCTION BOXES IN WALK AREAS TO BE CITY OF PITTSBURGH STANDARD CONCRETE JUNCTION BOX, TYPE 1.
- ALL JUNCTION BOXES IN NON-WALK AREAS TO BE CITY STANDARD JB-2 WITH BOTTOM.
- THERE SHALL BE NO SIGNAL WIRE OR FIBER CABLE SPLICING.
- SERVICE WIRE FROM THE POWER SOURCE TO THE CONTROLLER CABINET SHALL BE PLACED IN SECONDARY SEPARATE CONDUIT.
- STREET LIGHT CABLE IS NOT PERMITTED TO RUN THROUGH THE CONTROLLER CABINET AND SHALL BE PLACED IN SEPARATE CONDUIT.
- TRAFFIC SIGNAL CABLE SHALL BE PLACED IN DEDICATED CONDUIT.
- MOUNT DISCONNECT ON POLE NEAREST TO THE CONTROLLER CABINET EXCLUDING TYPE X POLES.
- REMOVE AND DISPOSE OF ALL EXISTING SIGNAL WIRING NO LONGER IN USE.
- REMOVE EXISTING SIGNAL EQUIPMENT NO LONGER IN USE AND RETURN TO THE CITY OF PITTSBURGH TRAFFIC CONTROL SHOP. COORDINATE DELIVERY OF EQUIPMENT WITH DELMAS MCELHANY, TRAFFIC CONTROL FOREMAN.

COUNTY: ALLEGHENY

MUNICIPALITY: CITY OF PITTSBURGH

INTERSECTION: FIFTH AVENUE

SR 8119 (RAMP B, BLVD OF THE ALLIES ON RAMP)

APPROVED AND ACCEPTED:

CITY TRAFFIC ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_

APPROVED AND ACCEPTED:

DISTRICT TRAFFIC ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_



NO.	DATE	DESCRIPTION
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**(NOT FOR CONSTRUCTION)**

DESIGNED	MW
DRAWN	MW
CHECKED	EMC
IN CHARGE	EMC
DATE	05/01/24
SCALE	AS SHOWN

PORT AUTHORITY OF ALLEGHENY COUNTY PITTSBURGH PENNSYLVANIA	
BUS RAPID TRANSIT UPTOWN TO OAKLAND SIGNAL PLANS WIRING, MOVEMENT, PHASING & SEQUENCE DIAGRAMS	
Port Authority connecting people to life	CONTRACT NO. BRT-001
DWG. NO. SG44	SHT. 1104





TRENCH, CONDUIT, JUNCTION BOX, ELECTRICAL ITEMS

DESCRIPTION	2 INCH CONDUIT	3 INCH CONDUIT	TRENCH AND BACKFILL, TYPE I	TRENCH AND BACKFILL, TYPE II	TRENCH AND BACKFILL, TYPE IV	AWG 8, UNDERGROUND CABLE, COPPER, 1 CONDUCTOR	SIGNAL CABLE, 14 AWG, 5 CONDUCTOR	SIGNAL CABLE, 14 AWG, 7 CONDUCTOR	ELECTRICAL SERVICE TYPE C (NEW)	CITY OF PITTSBURGH STANDARD CONCRETE JUNCTION BOX, TYPE 1
ITEM NUMBER	02899	02899	02898	02898	02898	02900	02900	02900	02896	02897
UNIT	LF	LF	LF	LF	LF	LF	LF	LF	EACH	EACH
LOCATION										
1 TO 1	6	12	6							
2 TO 2	13	26	13							
1 TO 2	146	146	35		*					1
1 TO CC	18	18	9							
S1 TO CC		54	27							
ELECTRICAL SERVICE (STA 152+72, OFFSET 30.3' RT) TO 2	37			37						1
COMPLETE INTERSECTION						79	334	210	1	
TOTAL	220	256	90	37	*	79	334	210	1	2

\* - TYPE IV TRENCH TABULATED AS PART OF THE SYSTEMS PLAN.  
 S1 - TABULATED ON SYSTEMS PLAN

TRAFFIC SIGNAL TABULATION

FIFTH AVENUE AND SR 8119 (RAMP B, BLVD OF THE ALLIES ON RAMP)

SIGNS

SYMBOL	SERIES	SIZE	AREA EACH (SQ. FT)	DESCRIPTION	QUANTITY	02891.001 POST MOUNTED SIGNS, TYPE B			02891.003 POST MOUNTED SIGNS, TYPE F			02891.007 STRUCTURE MOUNTED FLAT SHEET ALUMINUM SIGNS WITH STIFFENERS			
						SF	SF	SF	SF	SF	SF	SF			
A	R10-11	30"x36"	7.5	NO TURN ON RED ●	1										7.5
B	R10-22	12"x18"	1.5	TO REQUEST GREEN WAIT ON LINE	2						3				
C	R10-3E(MOD)	9"x15"	.9	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER	2										▲
D	R10-6AR	24"x30"	5	STOP HERE ON RED, (RIGHT)	1	5									
TOTAL					6	5			3						7.5

▲ - INCIDENTAL TO ITEM #02895.002



Gulf Tower  
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Pittsburgh, PA 15219



595 Skippack Pk,  
Suite 400  
Blue Bell, PA 19422

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PORT AUTHORITY OF ALLEGHENY COUNTY  
PITTSBURGH PENNSYLVANIA

BUS RAPID TRANSIT UPTOWN TO OAKLAND  
SIGNAL PLANS  
TRAFFIC SIGNAL TABULATIONS



CONTRACT NO. BRT-001

DWG. NO. SG46

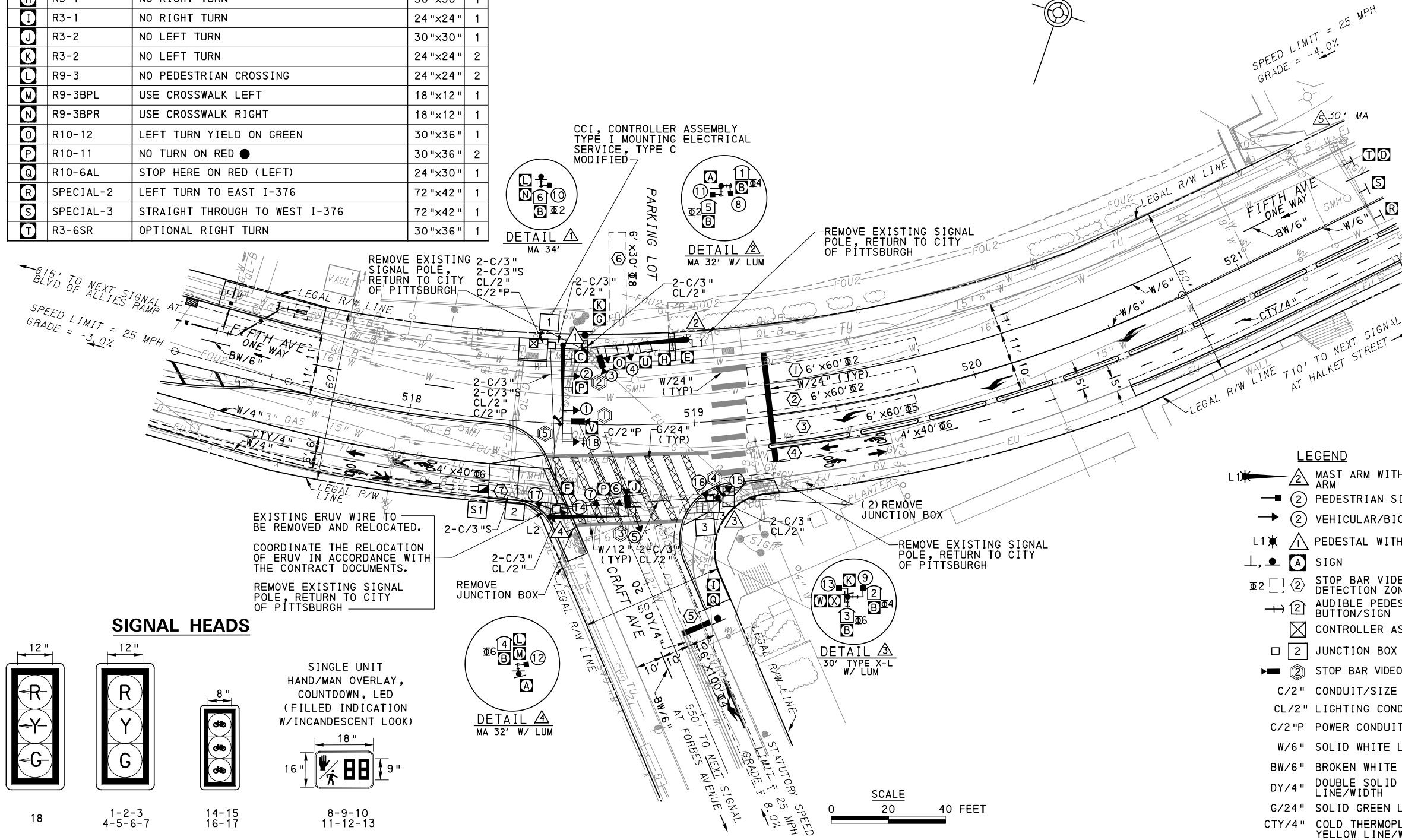
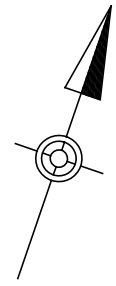
SHT. 1106

**SIGNS**

SIGN	STANDARD	DESCRIPTION	SIZE	QTY
A	R6-1	ONE WAY (TWO SIDED, CITY STANDARD)	36"x12"	2
B	R10-3E(MOD)	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER (MOD)	9"x15"	6
C	D3-4 *	100 Oakland Craft Ave	66"x24"	1
D	SPECIAL-4	UPTOWN BIRMINGHAM BRIDGE	72"x42"	1
E	D3-4 *	3200 Oakland 3300 Fifth Ave	60"x24"	1
F	D3-4 *	3300 Oakland 3200 Fifth Ave	60"x24"	1
G	SPECIAL-1	USE CAUTION WHEN EXITING LOT	42"x36"	1
H	R3-1	NO RIGHT TURN	30"x30"	1
I	R3-1	NO RIGHT TURN	24"x24"	1
J	R3-2	NO LEFT TURN	30"x30"	1
K	R3-2	NO LEFT TURN	24"x24"	2
L	R9-3	NO PEDESTRIAN CROSSING	24"x24"	2
M	R9-3BPL	USE CROSSWALK LEFT	18"x12"	1
N	R9-3BPR	USE CROSSWALK RIGHT	18"x12"	1
O	R10-12	LEFT TURN YIELD ON GREEN	30"x36"	1
P	R10-11	NO TURN ON RED	30"x36"	2
Q	R10-6AL	STOP HERE ON RED (LEFT)	24"x30"	1
R	SPECIAL-2	LEFT TURN TO EAST I-376	72"x42"	1
S	SPECIAL-3	STRAIGHT THROUGH TO WEST I-376	72"x42"	1
T	R3-6SR	OPTIONAL RIGHT TURN	30"x36"	1

SIGN	STANDARD	DESCRIPTION	SIZE	QTY
U	R6-2L	VERTICAL LEFT ONE-WAY	30"x36"	1
V	R10-10L	LEFT TURN SIGNAL	30"x36"	1
W	R3-17	BIKE LANE	30"x24"	1
X	SPECIAL-5	BEGINS	30"x9"	1

\* WHITE REFLECTORIZED LEGEND AND BORDER ON BLUE REFLECTORIZED BACKGROUND. UTILIZE 4" CLEARVIEW 3W FOR BLOCK/NEIGHBORHOOD AND 8" CLEARVIEW 3W FOR STREET NAME. ACTUAL WIDTH DETERMINED BY LETTER SPACING. COORDINATE BLOCK NUMBERS AND STREET NAME DETAILS WITH CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE.



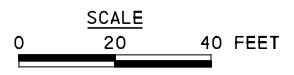
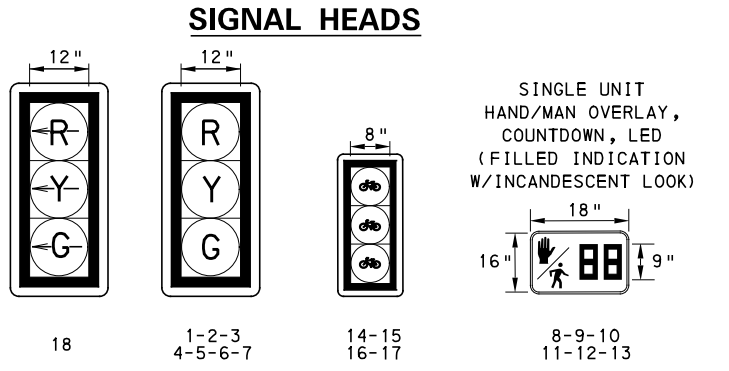
- AUDIBLE PEDESTRIAN SIGNAL NOTES**
1. ALL PUSH BUTTONS SHALL BE EQUIPPED WITH LOCATOR TONES.
  2. ALL WALK INTERVALS TO HAVE VERBAL MESSAGE DETAILING WALK DIRECTION.
  3. VERBAL MESSAGE TO BE PLAYED DURING WALK INTERVAL WHEN BUTTON IS PRESSED.
  4. ALL PEDESTRIAN PUSH BUTTONS TO BE LOCATED AT 42" ABOVE GROUND.
  5. ALL PUSH BUTTONS TO BE EQUIPPED WITH VIBROTACTILE ARROW.
  6. VIBROTACTILE ARROWS TO VIBRATE DURING WALK INTERVAL.
  7. WALK AND DON'T WALK MESSAGE SHALL BE AUDIBLE THROUGH THE PUSH BUTTON SPEAKER.

- SIGNAL ASSEMBLY NOTES**
1. ALL VEHICULAR/BICYCLE SIGNALS SHALL BE EQUIPPED WITH L.E.D LENSES, TUNNEL VISORS AND LOUVERED BLACK METAL BACKPLATES WITH 2" REFLECTIVE BORDERS.
  2. MIN/MAX HEIGHT TO BOTTOM OF VEHICULAR SIGNALS 17' /18'.
  3. MIN HORIZONTAL SPACING FOR VEHICULAR SIGNALS IS 8'.
  4. MIN/MAX HEIGHT TO BOTTOM OF PEDESTRIAN SIGNALS 10' /12'.
  5. FINAL SIGNAL HEAD PLACEMENT WILL BE DETERMINED BY REPRESENTATIVES OF THE CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE AND THE DISTRICT TRAFFIC UNIT PRIOR TO SIGNAL BEING TURNED ON.
  6. ALL PEDESTRIAN SIGNALS SHALL BE PORTLAND ORANGE FULL "PEDESTRIAN HAND" AND WHITE "WALKING PERSON" SYMBOLS AND HAVE INCANDESCENT LOOK WITH COUNTDOWN TIMER.
  7. PROVIDE AIRCRAFT STRANDED CABLE FOR MOUNTING SIGNAL AND SIGN BRACKET ASSEMBLIES TO MAST ARMS.
  8. PROVIDE BLACK ALUMINUM HOUSINGS FOR ALL SIGNAL HEADS.
  9. INSTALL POST MOUNTED SIGNAL HEADS WITH BOTTOMS NO GREATER THAN 15" ABOVE THE SIDEWALK OR PAVEMENT.
  10. EXACT LOCATION OF TRAFFIC SIGNAL SUPPORTS SHALL BE DETERMINED BY REPRESENTATIVES OF THE CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE AND THE DISTRICT TRAFFIC UNIT PRIOR TO INSTALLATION.

- PAVEMENT MARKING NOTES**
1. ALL STOP BARS ARE W/24".
  2. CROSSWALKS ARE 10' X 24" KEYS WITH 3' TO 5' SPACING.
  3. CROSSWALKS ACROSS BICYCLE LANES ARE 6' X 12" KEYS WITH 1' SPACING.

**LEGEND**

L1	MAST ARM WITH LUMINAIRE ARM	S1	SYSTEM JUNCTION BOX
2	PEDESTRIAN SIGNAL HEAD	C/3"S	SYSTEM CONDUIT/SIZE
2	VEHICULAR/BICYCLE SIGNAL HEAD	MAST ARM	
L1	PEDESTAL WITH LUMINAIRE	EXISTING MAST ARM	
A	SIGN	DIGITAL WAVE RADAR DETECTOR	
2	STOP BAR VIDEO/RADAR DETECTION ZONE		
2	AUDIBLE PEDESTRIAN PUSH BUTTON/SIGN		
2	CONTROLLER ASSEMBLY		
2	JUNCTION BOX		
2	STOP BAR VIDEO DETECTOR		
C/2"	CONDUIT/SIZE		
CL/2"	LIGHTING CONDUIT/SIZE		
C/2"P	POWER CONDUIT/SIZE		
W/6"	SOLID WHITE LINE/WIDTH		
BW/6"	BROKEN WHITE LINE/WIDTH		
DY/4"	DOUBLE SOLID YELLOW LINE/WIDTH		
G/24"	SOLID GREEN LINE/WIDTH		
CTY/4"	COLD THERMOPLASTIC YELLOW LINE/WIDTH		



TS-242

COUNTY: ALLEGHENY
MUNICIPALITY: CITY OF PITTSBURGH
INTERSECTION: FIFTH AVENUE AND CRAFT AVENUE
APPROVED AND ACCEPTED:
CITY TRAFFIC ENGINEER _____ DATE _____
APPROVED AND ACCEPTED:
DISTRICT TRAFFIC ENGINEER _____ DATE _____

**AECOM**  
 Gulf Tower  
 707 Grant Street  
 5th Floor  
 Pittsburgh, PA 15219

**FRENCH ENGINEERING**  
 French Engineering, LLC  
 3064 Morgantown Rd  
 Smithfield, PA 15478

NO.	DATE	DESCRIPTION
REVISIONS		

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**(NOT FOR CONSTRUCTION)**

DESIGNED	LJF
DRAWN	WLZ
CHECKED	MSF
IN CHARGE	LJF
DATE	05/01/24
SCALE	AS SHOWN

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
 PITTSBURGH, PENNSYLVANIA  
**BUS RAPID TRANSIT UPTOWN TO OAKLAND**  
 SIGNAL PLANS  
 FIFTH AVENUE & CRAFT AVENUE  
**Port Authority** connecting people to life®  
 CONTRACT NO. BRT-001  
 DWG. NO. SG47 SHT. 1107

**MOVEMENT, PHASING AND SEQUENCE CHART**

SIGNAL	PHASE 2+6					PHASE 2+5					PHASE 4+8					FLASHING
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	
1-2	G	G	Y <sup>①</sup>	R <sup>①</sup>		G	G	Y	R		R	R	R	R		R
3-4-5	R	R	R	R		R	R	R	R		G	G	Y	R		R
6-7	R	R	R	R		R	R	R	R		G	G	Y	R		R
8-9	DW	DW	DW	DW		DW	DW	DW	DW		W	FD	DW	DW		OFF
10-11	W	FD <sup>②</sup>	DW <sup>②</sup>	DW <sup>②</sup>		W	FD	DW	DW		DW	DW	DW	DW		OFF
12-13	W	FD	DW	DW		DW	DW	DW	DW		DW	DW	DW	DW		OFF
14-15	G	G	Y	R		R	R	R	R		R	R	R	R		R
16-17	G	G	Y	R		R	R	R	R		R	R	R	R		R
18	-R	-R	-R	-R		-G	-G	-Y	-R		-R	-R	-R	-R		OFF
FIXED			3	5				4	3				3.5	3.5		
MINIMUM		5					10					10				
PASSAGE		3					3					3				
FREE (MAX)		20					43					47				
PEDESTRIAN	7	13				7	13				7	13				
MEMORY		PED RECALL					MIN RECALL					PED RECALL				

- ① - G IF FOLLOWED BY 2+5.
- ② - W IF FOLLOWED BY 2+5.

**DETECTOR ZONE INFORMATION**

DETECTOR	DETECTION ZONE(S)	MODE	TYPE	ROUTE	PHASE	LOCATION
①	① (6' x 60')	PRESENCE	VIDEO (STOP BAR)	FIFTH AVENUE	2	▲
	② (6' x 60')	PRESENCE	VIDEO (STOP BAR)	FIFTH AVENUE	5	
④	④ (4' x 40')	PRESENCE	RADAR (STOP BAR)	FIFTH AVENUE BICYCLE LANE	6	▲
②	⑤ (6' x 100')	PRESENCE	VIDEO (STOP BAR)	CRAFT AVENUE	4	▲
③	⑥ (6' x 30')	PRESENCE	VIDEO (STOP BAR)	PARKING LOT	8	▲
⑤	⑦ (4' x 40')	PRESENCE	RADAR (STOP BAR)	FIFTH AVENUE BICYCLE LANE	6	▲

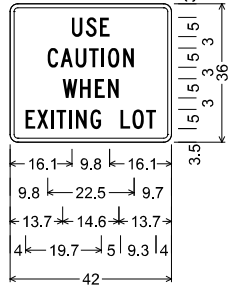
**GENERAL NOTES**

- THE CITY OF PITTSBURGH SHALL INSPECT THE NEW SIGNAL EQUIPMENT PRIOR TO ACTIVATION.
- ALL TRAFFIC SIGNAL MAINTENANCE AND OPERATION RESPONSIBILITIES SHALL BE TURNED OVER TO THE CITY OF PITTSBURGH AFTER THE FOLLOWING CONDITIONS ARE IMPLEMENTED TO THE CITY'S SATISFACTION:
- PERMIT "AS-BUILT" TRAFFIC SIGNAL DRAWINGS ARE SUBMITTED AND APPROVED.
  - ALL PUNCH LIST ITEMS ARE COMPLETED BY THE CONTRACTOR.
  - AFTER THE 30-DAY CONTINUOUS UNINTERRUPTED SIGNAL OPERATION WITHOUT MALFUNCTIONS.

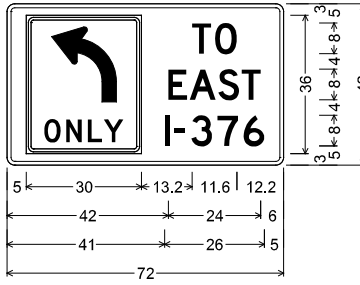
**CONSTRUCTION NOTES**

- ALL JUNCTION BOXES IN WALK AREAS TO BE CITY OF PITTSBURGH STANDARD CONCRETE JUNCTION BOX, TYPE 1.
- ALL JUNCTION BOXES IN NON-WALK AREAS TO BE CITY STANDARD JB-2 WITH BOTTOM.
- THERE SHALL BE NO SIGNAL WIRE OR FIBER CABLE SPLICING.
- SERVICE WIRE FROM THE POWER SOURCE TO THE CONTROLLER CABINET SHALL BE PLACED IN SECONDARY SEPARATE CONDUIT.
- STREET LIGHT CABLE IS NOT PERMITTED TO RUN THROUGH THE CONTROLLER CABINET AND SHALL BE PLACED IN SEPARATE CONDUIT.
- TRAFFIC SIGNAL CABLE SHALL BE PLACED IN DEDICATED CONDUIT.
- MOUNT DISCONNECT ON POLE NEAREST TO THE CONTROLLER CABINET EXCLUDING TYPE X POLES.
- REMOVE AND DISPOSE OF ALL EXISTING SIGNAL WIRING NO LONGER IN USE.
- REMOVE EXISTING SIGNAL EQUIPMENT NO LONGER IN USE AND RETURN TO THE CITY OF PITTSBURGH TRAFFIC CONTROL SHOP. COORDINATE DELIVERY OF EQUIPMENT WITH DELMAS MCELHANY, TRAFFIC CONTROL FOREMAN.
- REMOVE ALL SIGNALS WHILE POLE IS PAINTED, REFER TO SECTION 02892.

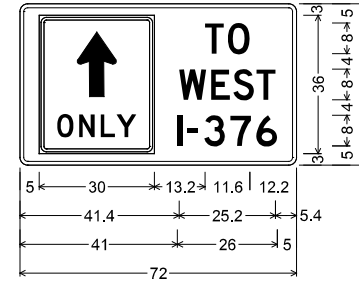
**SPECIAL-1**



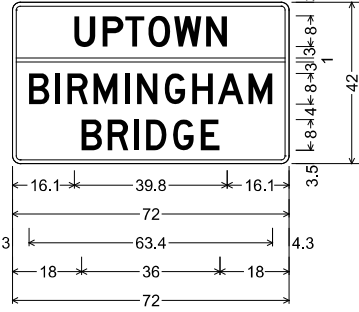
**SPECIAL-2**



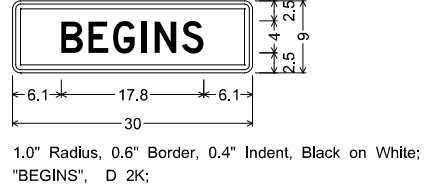
**SPECIAL-3**



**SPECIAL-4**

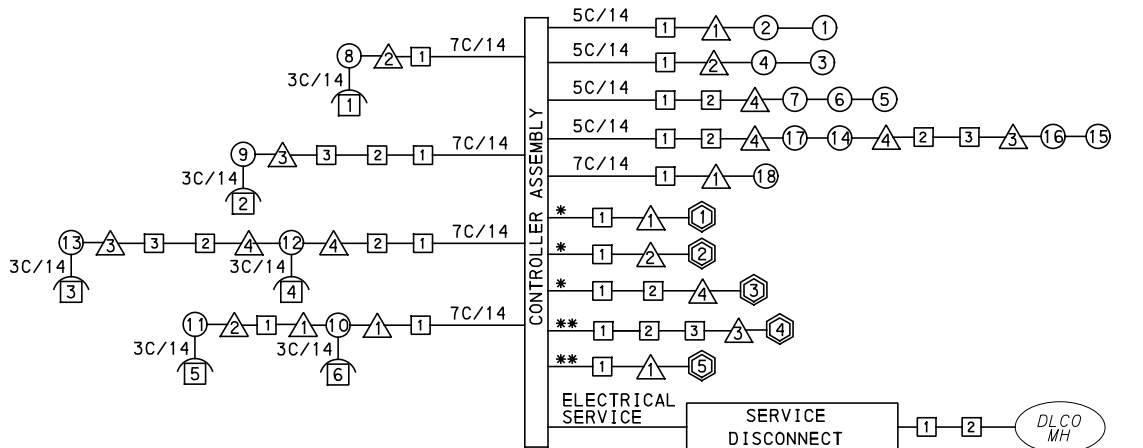


**SPECIAL-5**



**TRANSIT PRIORITY PRE-EMPTION NOTES (TO BE INSTALLED BY OTHERS)**

- COORDINATE TRAFFIC CONTROLLER PROGRAMMING MODIFICATION WITH REPRESENTATIVES OF THE CITY OF PITTSBURGH AND DISTRICT TRAFFIC UNIT.
- INCLUDE A TRANSIT PRIORITY PHASE THAT WILL EXTEND THE INDICATED PHASE A MAXIMUM OF 10 SECONDS WHEN ACTIVATED BY A PORT AUTHORITY VEHICLE. DO NOT VIOLATE SIDE STREET PEDESTRIAN MINIMUM TIMINGS.
- MAINTAIN ALL YELLOW CLEARANCES AT ALL TIMES.
- PROCEED TO THE SUBSEQUENT INTERVAL AS DEFINED IN THE MOVEMENT, SEQUENCE AND TIMING DIAGRAM UPON COMPLETING THE GREEN EXTENSION INTERVAL.
- ONCE A TRANSIT CALL IS PLACED AND SATISFIED, THE CONTROLLER WILL NOT SATISFY ANOTHER CALL FOR 4 CYCLES.
- LOCATION OF BUS DETECTORS ARE TO BE FIELD ADJUSTED TO ACHIEVE MAXIMUM OPERATION.



**WIRING DIAGRAM**

- 5C/14 - CABLE (NO. OF CONDUCTORS/SIZE AWG.)
- ① PROPOSED DETECTOR
  - ① PROPOSED AUDIBLE PEDESTRIAN INDICATOR
  - ① PROPOSED LUMINAIRE
  - ① PROPOSED SIGNAL HEAD
  - ▲ PROPOSED SIGNAL SUPPORT
  - ① PROPOSED JUNCTION BOX

3C/14 INCIDENTAL TO ITEM 02895.002  
 \* INCIDENTAL TO ITEM 02895.001, AS PER MANUFACTURERS SPECIFICATIONS  
 \*\* INCIDENTAL TO ITEM 02895.005, AS PER MANUFACTURERS SPECIFICATIONS

COUNTY: ALLEGHENY
MUNICIPALITY: CITY OF PITTSBURGH
INTERSECTION: FIFTH AVENUE AND CRAFT AVENUE
APPROVED AND ACCEPTED:
CITY TRAFFIC ENGINEER _____ DATE _____
APPROVED AND ACCEPTED:
DISTRICT TRAFFIC ENGINEER _____ DATE _____



NO.	DATE	DESCRIPTION

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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
 PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT UPTOWN TO OAKLAND SIGNAL PLANS**  
 WIRING, MOVEMENT, PHASING & SEQUENCE DIAGRAMS

**Port Authority** connecting people to life™

CONTRACT NO. BRT-001  
 DWG. NO. SG48 SHT. 1108



TRAFFIC SIGNAL TABULATION

FIFTH AVENUE AND CRAFT AVENUE

ITEM NUMBER	MISCELLANEOUS			
UNIT	DESCRIPTION	QTY.	LOCATION	REMARKS
01882.002 EACH	TRAFFIC SIGNAL TIMING MODIFICATIONS	2	CC	
02212.009 LF	POLE FOUNDATION DRILLING, LESS THAN 30" DIAMETER	9	△3	
02212.010 LF	POLE FOUNDATION DRILLING, 30" DIAMETER OR GREATER	38	△1 △2 △4	
02889.002 EACH	LED LUMINAIRE CITY STANDARD, BLACK	3	☀☀☀	△2 △3 △4
02890.001 EACH	TRAFFIC SIGNAL CONTROLLER ASSEMBLY, TYPE 2070 LC WITH TYPE 332 BASE MOUNTED CABINET	1	CC STA 518+42 OFF 28' LT	332 CONTROLLER CABINET 8" RISER RE-ESTABLISH INTERCONNECT
02890.003 EACH	ETHERNET SWITCH	1	CC	
02890.005 EACH	GPS TIME CLOCK	1	CC	
02892.501 EACH	EXISTING TRAFFIC SIGNAL SUPPORT, PAINTED BLACK	1	△5	
02894.001 EACH	VEHICULAR SIGNAL HEAD, THREE 12" SECTIONS	8	①②③④ ⑤⑥⑦⑧	BLACK TUNNEL VISORS BLACK ALUMINUM HOUSINGS BLACK METAL LOUVERED BACKPLATE
02894.004 EACH	BICYCLE SIGNAL HEAD, THREE 8" SECTIONS	4	⑭⑮⑯⑰	BLACK TUNNEL VISORS BLACK ALUMINUM HOUSINGS BLACK METAL LOUVERED BACKPLATE
02894.005 EACH	LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, TYPE A	6	⑧⑨⑩ ⑪⑫⑬	BLACK TUNNEL VISORS BLACK ALUMINUM HOUSINGS
02895.002 EACH	ACCESSIBLE PEDESTRIAN SIGNALS	6	①②③ ④⑤⑥	
02897.012 EACH	REMOVE EXISTING JUNCTION BOX	3		

ITEM NUMBER	DESCRIPTION	SEN. NO.	QTY.	LOCATION
02895.001 EACH	VIDEO DETECTION	①	1	△1
02895.001 EACH	VIDEO DETECTION	②	1	△2
02895.001 EACH	VIDEO DETECTION	③	1	△4
02895.005 EACH	DIGITAL WAVE RADAR DETECTION	④	1	△3
02895.005 EACH	DIGITAL WAVE RADAR DETECTION	⑤	1	△1

TRAFFIC SIGNAL SUPPORTS \*\*

POLE NO.	ITEM NUMBER	DESCRIPTION	QTY.	ROUTE	STATION	SIDE	OFFSET	MAST ARM																PEDESTAL		
								ARM "A"								ARM "C"				SHAFT	SIGNAL					
								H	K	SIGNAL LOCATION				SIGN LOCATION				W	G		X	Z	H	M	N	
								L	M	N	O	P	R	S	T	U	Y									
△1	02892.605 EACH	TRAFFIC SIGNAL SUPPORT, 34' MAST ARM, PAINTED BLACK	1	FIFTH AVE	518+53	LT	27.5'	17'	10'	34'	33'	22'	10'		30'	14'			4'	4°						
△2	02892.208 EACH	TRAFFIC SIGNAL SUPPORT, 32' MAST ARM WITH LUMINAIRE ARM (30' MOUNTING HEIGHT), PAINTED BLACK	1	FIFTH AVE	518+99	LT	29'	17'	10'	32'	28'	20'			24'	16'	12'		4'	272°	6'	30'	90°			
△3	02892.005 EACH	TRAFFIC SIGNAL SUPPORT, 30' TYPE X-L WITH LUMINAIRE ARM, PAINTED BLACK	1	FIFTH AVE	519+06	RT	27'													6'	30'	0°	30'	12'	10'	
△4	02892.208 EACH	TRAFFIC SIGNAL SUPPORT, 32' MAST ARM WITH LUMINAIRE ARM (30' MOUNTING HEIGHT), PAINTED BLACK	1	FIFTH AVE	518+51	RT	33'	17'	10'	32'	29'	23'	15'		29'	19'			5'	273°	6'	30'	90°			
△5		TRAFFIC SIGNAL SUPPORT, 30' MAST ARM		FIFTH AVE	521+50	LT	23'			30'					27'	17'	6'			0°						

\*\* REFER TO PENNDOT TC-8800 TRAFFIC STANDARDS-SIGNALS FOR LETTER DESIGNATION

TS-242



Gulf Tower  
 707 Grant Street  
 5th Floor  
 Pittsburgh, PA 15219



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BUS RAPID TRANSIT UPTOWN TO OAKLAND SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS		
	CONTRACT NO. BRT-001	
	DWG. NO. SG49	SHT. 1109



TRAFFIC SIGNAL TABULATION

FIFTH AVENUE AND CRAFT AVENUE

TRENCH, CONDUIT, JUNCTION BOX, ELECTRICAL ITEMS

DESCRIPTION	ELECTRICAL SERVICE, TYPE C (NEW)	CITY OF PITTSBURGH STANDARD CONCRETE JUNCTION BOX, TYPE 1	TRENCH AND BACKFILL, TYPE II	TRENCH AND BACKFILL, TYPE IV	2 INCH CONDUIT	3 INCH CONDUIT	AWG 8, UNDERGROUND CABLE, COPPER, 1 CONDUCTOR	SIGNAL CABLE, 14 AWG, 5 CONDUCTOR	SIGNAL CABLE, 14 AWG, 7 CONDUCTOR
	ITEM NUMBER	02896	02897	02898	02898	02899	02899	02900	02900
UNIT	EACH	EACH	LF	LF	LF	LF	LF	LF	LF
LOCATION									
CC TO [1]		1	7		14	28			
[1] TO [2]		1	17	41	116	232			
[2] TO [3]		1	9	45	54	108			
▲ TO [1]			5		5	10			
▲ TO [1]			48		48	96			
▲ TO [3]			3		3	6			
▲ TO [2]			4		4	8			
[S1] TO [2]			27			54			
ELECTRICAL SERVICE MANHOLE TO [2]			4	28	32				
COMPLETE INTERSECTION	1						805	720	565
TOTAL	1	3	124	114	276	542	805	720	565

[S1] - TABULATED ON SYSTEMS PLAN

SIGNS

SYMBOL	SERIES	SIZE	AREA EACH (SQ FT)	DESCRIPTION	QUANTITY	02891.001 POST MOUNTED SIGNS, TYPE B		
						SF	SF	SF
A	R6-1	36"x12"	3.0	ONE-WAY (TWO SIDED, CITY STANDARD)	2		6.0	
B	R10-3E (MOD)	9"x15"	0.9	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER (MOD)	6		▲	
C	D3-4 *	66"x24"	11.0	100 Oakland Craft Ave	1			11.0
D	SPECIAL-4	72"x42"	21.0	UPTOWN BIRMINGHAM BRIDGE	1			21.0
E	D3-4 *	60"x24"	10.0	3200 Oakland 3300 Fifth Ave	1			10.0
F	D3-4 *	60"x24"	10.0	3300 Oakland 3200 Fifth Ave	1			10.0
G	SPECIAL-1	42"x36"	10.5	USE CAUTION WHEN EXITING LOT	1	10.5		
H	R3-1	30"x30"	6.3	NO RIGHT TURN	1			6.3
I	R3-1	24"x24"	4.0	NO RIGHT TURN	1		4.0	
J	R3-2	30"x30"	6.3	NO LEFT TURN	1			6.3
K	R3-2	24"x24"	4.0	NO LEFT TURN	2		8.0	
L	R9-3	24"x24"	4.0	NO PEDESTRIAN CROSSING	2		8.0	
M	R9-3BPL	18"x12"	1.5	USE CROSSWALK LEFT	1		1.5	
N	R9-3BPR	18"x12"	1.5	USE CROSSWALK RIGHT	1		1.5	
O	R10-12	30"x36"	7.5	LEFT TURN YIELD ON GREEN	1			7.5
P	R10-11	30"x36"	7.5	NO TURN ON RED ●	2			15.0
Q	R10-6AL	24"x30"	5.0	STOP HERE ON RED (LEFT)	1	5.0		
R	SPECIAL-2	72"x42"	21.0	LEFT TURN TO EAST I-376	1			21.0
S	SPECIAL-3	72"x42"	21.0	STRAIGHT THROUGH TO WEST I-376	1			21.0
T	R3-6SR	30"x36"	7.5	OPTIONAL RIGHT TURN	1			7.5
U	R6-2L	30"x36"	7.5	VERTICAL LEFT ONE-WAY	1			7.5
V	R10-10L	30"x36"	7.5	LEFT TURN SIGNAL	1			7.5
W	R3-17	30"x24"	5.0	BIKE LANE	1		5.0	
X	SPECIAL-5	30"x9"	1.9	BEGINS	1		1.9	
TOTAL						15.5	35.9	151.6

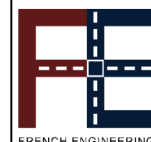
▲ - INCIDENTAL TO ITEM 02895.002

\* WHITE REFLECTORIZED LEGEND AND BORDER ON BLUE REFLECTORIZED BACKGROUND. UTILIZE 4" CLEARVIEW 3W FOR BLOCK/NEIGHBORHOOD AND 8" CLEARVIEW 3W FOR STREET NAME. ACTUAL WIDTH DETERMINED BY LETTER SPACING. COORDINATE BLOCK NUMBERS AND STREET NAME DETAILS WITH CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE.

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<b>Port Authority</b> <small>connecting people to life</small>	CONTRACT NO. BRT-001
	DWG. NO. SG50
SHT. 1110	

**SIGNS**

SIGN	STANDARD	DESCRIPTION	SIZE	QTY
A	R3-2	NO LEFT TURN	24"x24"	1
B	R4-9**	STAY IN LANE	24"x30"	1
C	R3-1	NO RIGHT TURN	30"x30"	1
D	R10-3E(MOD)	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER	9"x15"	4
E	D3-4*	3300 OAKLAND 3400 FIFTH AVE	24"x66"	1
F	D3-4*	100 OAKLAND HALKET ST	24"x60"	1
G	R9-3	NO PEDESTRIAN CROSSING	18"x18"	2
H	R1-1	STOP	30"x30"	1
J	SPECIAL	FIFTH AVE	-	1
K	SPECIAL	CHESTERFIELD RD	-	1
L	R3-1	NO RIGHT TURN	24"x24"	1
M	SPECIAL	BUS LANE SIGNAL	30"x30"	1
P	R10-15AL(MOD)	TURNING TRAFFIC MUST YIELD TO BIKES AND PEDS	30"x30"	2
R	R3-7bP	EXCEPT BICYCLES	24"x12"	3
S	R3-11B(MOD)**	RIGHT LANE - BUSES ONLY	30"x36"	1
T	SS-1**	EXCEPT RIGHT TURNS	30"x18"	1
V	R5-1	DO NOT ENTER	30"x30"	3

\* WHITE REFLECTORIZED LEGEND AND BORDER ON BLUE REFLECTORIZED BACKGROUND. UTILIZE 4" CLEARVIEW 3W FOR BLOCK/NEIGHBORHOOD AND 8" CLEARVIEW 3W FOR STREET NAME. ACTUAL WIDTH DETERMINED BY LETTER SPACING. COORDINATE BLOCK NUMBERS AND STREET NAME DETAILS WITH CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE.  
 \*\* SIGN TABULATED AS PART OF THE SIGNING AND PAVEMENT MARKING PLAN

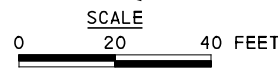
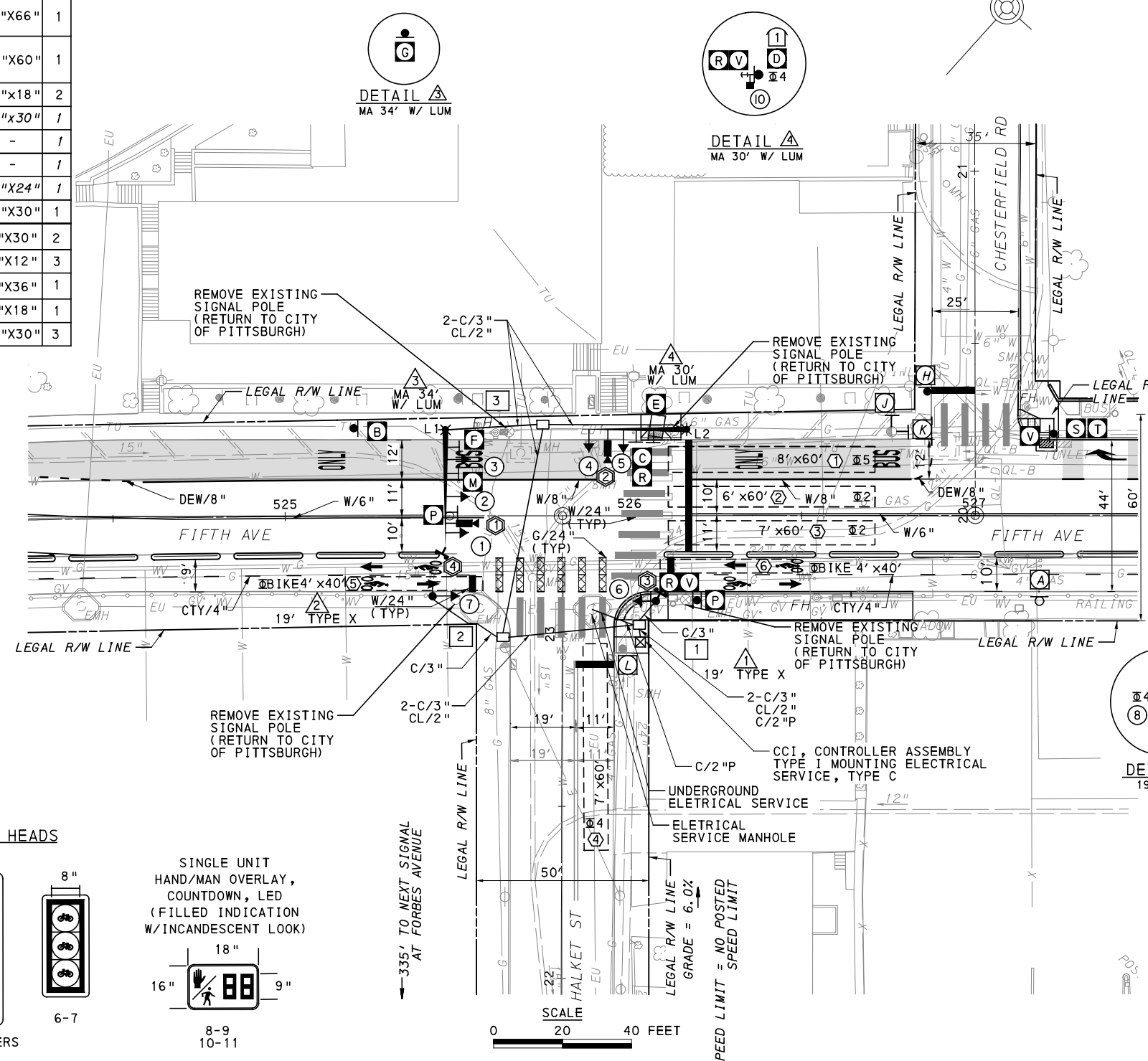
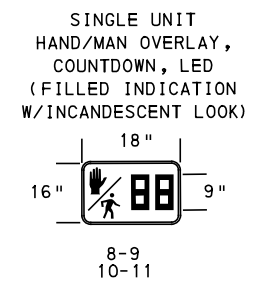
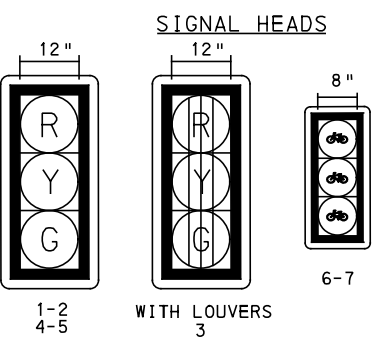
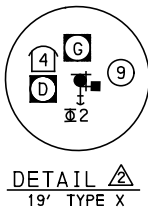
**AUDIBLE PEDESTRIAN SIGNAL NOTES**

- ALL PUSH BUTTONS SHALL BE EQUIPPED WITH LOCATOR TONES.
  - ALL WALK INTERVALS TO HAVE VERBAL MESSAGE DETAILED WALK DIRECTION.
  - VERBAL MESSAGE TO BE PLAYED DURING WALK INTERVAL WHEN BUTTON IS PRESSED.
  - ALL PEDESTRIAN PUSH BUTTONS TO BE LOCATED AT 42" ABOVE GROUND.
  - ALL PUSH BUTTONS TO BE EQUIPPED WITH VIBROTACTILE ARROW.
  - VIBROTACTILE ARROWS TO VIBRATE DURING WALK INTERVAL.
  - WALK AND DON'T WALK MESSAGE SHALL BE AUDIBLE THROUGH THE PUSH BUTTON SPEAKER.
- SIGNAL ASSEMBLY NOTES**
- ALL VEHICULAR/BICYCLE SIGNALS SHALL BE EQUIPPED WITH L.E.D LENSES, TUNNEL VISORS AND LOUVERED BLACK METAL BACKPLATES WITH 2" REFLECTIVE BORDERS.
  - MIN/MAX HEIGHT FOR VEHICULAR SIGNALS 17'/18'.
  - MIN HORIZONTAL SPACING FOR VEHICULAR SIGNALS IS 8'.
  - MIN/MAX HEIGHT FOR PEDESTRIAN MOUNTED SIGNALS 10'/12'.
  - FINAL SIGNAL HEAD PLACEMENT WILL BE DETERMINED BY A REPRESENTATIVE OF THE CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE PRIOR TO SIGNAL BEING TURNED ON.
  - ALL PEDESTRIAN SIGNALS SHALL BE PORTLAND ORANGE FULL "PEDESTRIAN HAND" AND WHITE "WALKING PERSON" SYMBOLS AND HAVE INCANDESCENT LOOK WITH COUNTDOWN TIMER.
  - PROVIDE AIRCRAFT STRANDED CABLE FOR MOUNTING SIGNAL AND SIGN BRACKET ASSEMBLIES TO MAST ARMS.
  - PROVIDE BLACK ALUMINUM HOUSINGS FOR ALL SIGNAL HEADS.
  - INSTALL POST MOUNTED SIGNAL HEADS WITH BOTTOMS NO GREATER THAN 15' ABOVE THE SIDEWALK OR PAVEMENT.
  - EXACT LOCATION OF TRAFFIC SIGNAL SUPPORTS SHALL BE DETERMINED BY A REPRESENTATIVE OF THE CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE PRIOR TO INSTALLATION.

**PAVEMENT MARKING NOTES**

- ALL STOP BARS ARE W/24".
  - CROSSWALKS ARE 10' X 24" KEYS WITH 3' TO 5' SPACING.
  - CROSSWALKS ACROSS BICYCLE LANES ARE 6' X 12" KEYS WITH 1' SPACING.
- GRADE = -0.6%  
 SPEED LIMIT = 25 MPH  
 185' TO NEXT SIGNAL AT MCKEE PL

- LEGEND**
- MAST ARM WITH LUMINAIRE ARM
  - PEDESTRIAN SIGNAL HEAD
  - VEHICULAR/BICYCLE SIGNAL HEAD
  - PEDESTAL
  - SIGN
  - STOP BAR RADAR DETECTION ZONE
  - AUDIBLE PEDESTRIAN PUSH BUTTON/SIGN
  - CONTROLLER ASSEMBLY
  - JUNCTION BOX
  - STOP BAR RADAR DETECTOR
  - C/2" CONDUIT/SIZE
  - C/2"P POWER CONDUIT/SIZE
  - CL/2"P POWER CONDUIT/SIZE
  - W/6" SOLID WHITE LINE/WIDTH
  - BW/6" BROKEN WHITE LINE/WIDTH
  - DY/4" DOUBLE SOLID YELLOW LINE/WIDTH
  - G/24" SOLID GREEN LINE/WIDTH
  - CTY/4" CYCLE TRACK BROKEN YELLOW LINE/WIDTH
  - DEW/4" DOTTED EXTENSION WHITE PAVEMENT MARKING/WIDTH
  - STOP BAR VIDEO DETECTOR



TS-325

COUNTY: ALLEGHENY
MUNICIPALITY: CITY OF PITTSBURGH
INTERSECTION: FIFTH AVENUE AND HALKET STREET
APPROVED AND ACCEPTED:
CITY TRAFFIC ENGINEER _____ DATE _____
APPROVED AND ACCEPTED:
DISTRICT TRAFFIC ENGINEER _____ DATE _____

**AECOM**  
 Gulf Tower  
 707 Grant Street  
 5th Floor  
 Pittsburgh, PA 15219

**DRIVE ENGINEERING**  
 595 Skippack Pk,  
 Suite 400  
 Blue Bell, PA 19422

NO.	DATE	DESCRIPTION
REVISIONS		

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**(NOT FOR CONSTRUCTION)**

DESIGNED	MW
DRAWN	MW
CHECKED	EMC
IN CHARGE	EMC
DATE	05/01/24
SCALE	AS SHOWN

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
 PITTSBURGH PENNSYLVANIA  
**BUS RAPID TRANSIT UPTOWN TO OAKLAND**  
 SIGNAL PLANS  
 FIFTH AVENUE & HALKET STREET  
**Port Authority** connecting people to life  
 CONTRACT NO. BRT-001  
 DWG. NO. SG51 SHT. 1111

**MOVEMENT, PHASING AND SEQUENCE CHART**

SIGNAL	INTERVAL	PHASE 5				PHASE 2+5				PHASE 4				FLASHING
		1	2	3	4	1	2	3	4	1	2	3	4	
1-2	R					G	G	Y	R	R	R	R	R	R
3	G					G	G	Y	R	R	R	R	R	R
4-5	R					R	R	R	R	G	G	Y	R	R
6-7	R					G	G	Y	R	R	R	R	R	OFF
8-9	DW <sup>①</sup>					W	FD	DW	DW	DW	DW	DW	DW	OFF
10-11	DW					DW	DW	DW	DW	W	FD	DW	DW	OFF
FIXED								3	2			3	2	
MINIMUM	5					15				15				
PASSAGE	3					3				3				
FREE (MAX)	5					55				24				
PEDESTRIAN						7	10			7	13			
MEMORY		NON LOCKING				PED RECALL				PED RECALL				

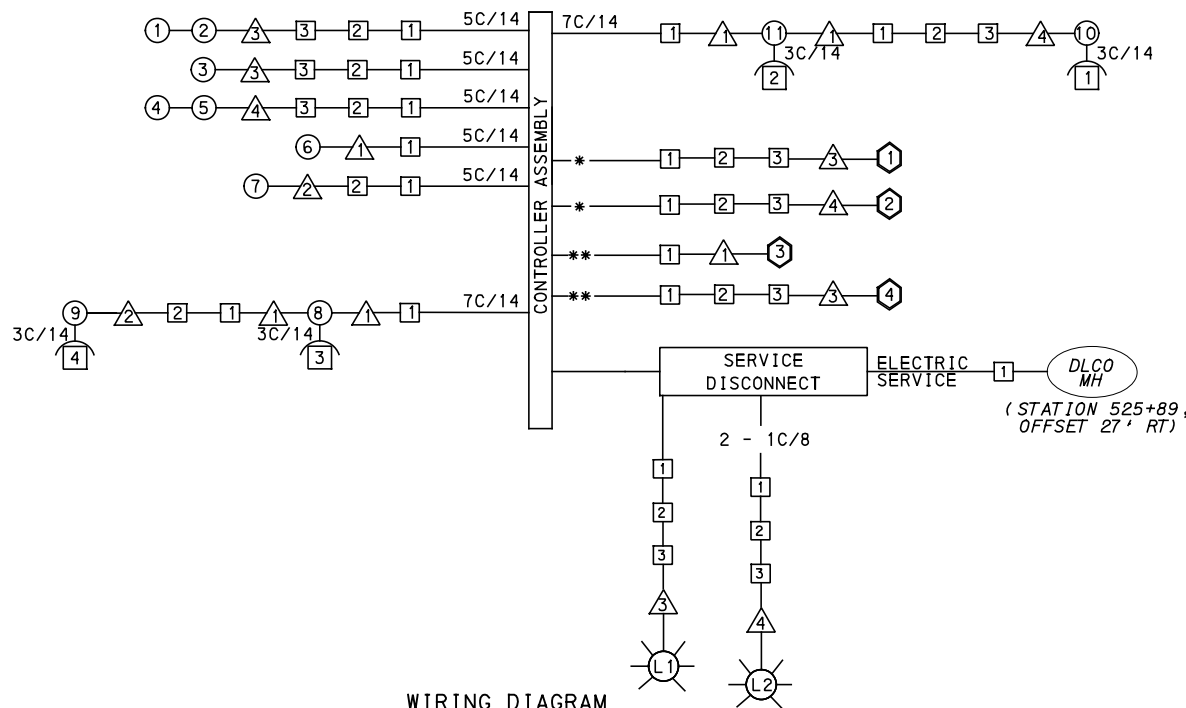
① - W IF FOLLOWED BY 2+5.

**DETECTOR ZONE INFORMATION**

DETECTOR	DETECTION ZONE(S)	MODE	TYPE	ROUTE	PHASE	LOCATION MAST ARM
①	① (8' x 60')	PRESENCE	VIDEO (STOP BAR)	FIFTH AVE.	2	③
①	② (6' x 60')	PRESENCE	VIDEO (STOP BAR)	FIFTH AVE.	2	③
①	③ (7' x 60')	PRESENCE	VIDEO (STOP BAR)	FIFTH AVE.	2	③
②	④ (7' x 60')	PRESENCE	VIDEO (STOP BAR)	HALKET ST.	4	④
④	⑤ (4' x 40')	PRESENCE	RADAR (STOP BAR)	FIFTH AVENUE BICYCLE LANE	2	③
③	⑥ (4' x 40')	PRESENCE	RADAR (STOP BAR)	FIFTH AVENUE BICYCLE LANE	2	①

**TRANSIT PRIORITY PRE-EMPTION NOTES (TO BE INSTALLED BY OTHERS)**

- COORDINATE TRAFFIC CONTROLLER PROGRAMMING MODIFICATION WITH REPRESENTATIVES OF THE CITY OF PITTSBURGH AND DISTRICT TRAFFIC UNIT.
- INCLUDE A TRANSIT PRIORITY PHASE THAT WILL EXTEND THE INDICATED PHASE A MAXIMUM OF 10 SECONDS WHEN ACTIVATED BY A PORT AUTHORITY VEHICLE. DO NOT VIOLATE SIDE STREET PEDESTRIAN MINIMUM TIMINGS.
- MAINTAIN ALL YELLOW CLEARANCES AT ALL TIMES.
- PROCEED TO THE SUBSEQUENT INTERVAL AS DEFINED IN THE MOVEMENT, SEQUENCE AND TIMING DIAGRAM UPON COMPLETING THE GREEN EXTENSION INTERVAL.
- ONCE A TRANSIT CALL IS PLACED AND SATISFIED, THE CONTROLLER WILL NOT SATISFY ANOTHER CALL FOR 4 CYCLES.
- LOCATION OF BUS DETECTORS ARE TO BE FIELD ADJUSTED TO ACHIEVE MAXIMUM OPERATION.



**WIRING DIAGRAM**

5C/14 - CABLE (NO. OF CONDUCTORS/SIZE AWG.)

- SIGNAL HEAD
- △ SIGNAL SUPPORT
- AUDIBLE PEDESTRIAN INDICATOR
- JUNCTION BOX
- ⬡ RADAR DETECTOR
- ⊙ LUMINAIRE

- \* INCIDENTAL TO ITEM 02895.001, AS PER MANUFACTURERS SPECIFICATIONS
- 3C/14 INCIDENTAL TO ITEM 02895.002
- \*\* INCIDENTAL TO ITEM 02895.005, AS PER MANUFACTURERS SPECIFICATIONS

**GENERAL NOTES**

THE CITY OF PITTSBURGH SHALL INSPECT THE NEW SIGNAL EQUIPMENT PRIOR TO ACTIVATION.

ALL TRAFFIC SIGNAL MAINTENANCE AND OPERATION RESPONSIBILITIES SHALL BE TURNED OVER TO THE CITY OF PITTSBURGH AFTER THE FOLLOWING CONDITIONS ARE IMPLEMENTED TO THE CITY'S SATISFACTION:

- PERMIT "AS-BUILT" TRAFFIC SIGNAL DRAWINGS ARE SUBMITTED AND APPROVED.
- ALL PUNCH LIST ITEMS ARE COMPLETED BY THE CONTRACTOR.
- AFTER THE 30-DAY CONTINUOUS UNINTERRUPTED SIGNAL OPERATION WITHOUT MALFUNCTIONS.

**CONSTRUCTION NOTES**

- ALL JUNCTION BOXES IN WALK AREAS TO BE CITY OF PITTSBURGH STANDARD CONCRETE JUNCTION BOX, TYPE 1.
- ALL JUNCTION BOXES IN NON-WALK AREAS TO BE CITY STANDARD JB-2 WITH BOTTOM.
- THERE SHALL BE NO SIGNAL WIRE OR FIBER CABLE SPLICING.
- SERVICE WIRE FROM THE POWER SOURCE TO THE CONTROLLER CABINET SHALL BE PLACED IN SECONDARY SEPARATE CONDUIT.
- STREET LIGHT CABLE IS NOT PERMITTED TO RUN THROUGH THE CONTROLLER CABINET AND SHALL BE PLACED IN SEPARATE CONDUIT.
- TRAFFIC SIGNAL CABLE SHALL BE PLACED IN DEDICATED CONDUIT.
- MOUNT DISCONNECT ON POLE NEAREST TO THE CONTROLLER CABINET EXCLUDING TYPE X POLES.
- REMOVE AND DISPOSE OF ALL EXISTING SIGNAL WIRING NO LONGER IN USE.
- REMOVE EXISTING SIGNAL EQUIPMENT NO LONGER IN USE AND RETURN TO THE CITY OF PITTSBURGH TRAFFIC CONTROL SHOP. COORDINATE DELIVERY OF EQUIPMENT WITH DELMAS MCELHANY, TRAFFIC CONTROL FOREMAN.

TS-325

COUNTY: ALLEGHENY  
MUNICIPALITY: CITY OF PITTSBURGH  
INTERSECTION: FIFTH AVENUE AND HALKET STREET

APPROVED AND ACCEPTED:  
CITY TRAFFIC ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_  
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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT UPTOWN TO OAKLAND SIGNAL PLANS**  
WIRING, MOVEMENT, PHASING & SEQUENCE DIAGRAMS

**Port Authority** connecting people to life

CONTRACT NO. BRT-001  
DWG. NO. SG52 SHT. 1112



TRAFFIC SIGNAL TABULATION

FIFTH AVENUE AND HALKET STREET

TRENCH, CONDUIT, JUNCTION BOX, ELECTRICAL ITEMS

DESCRIPTION	2 INCH CONDUIT	3 INCH CONDUIT	TRENCH AND BACKFILL, TYPE I	TRENCH AND BACKFILL, TYPE II	TRENCH AND BACKFILL, TYPE IV	AWG 8, UNDERGROUND CABLE, COPPER, 1 CONDUCTOR	SIGNAL CABLE, 14 AWG, 5 CONDUCTOR	SIGNAL CABLE, 14 AWG, 7 CONDUCTOR	ELECTRICAL SERVICE TYPE C (NEW)	CITY OF PITTSBURGH STANDARD CONCRETE JUNCTION BOX, TYPE 1
ITEM NUMBER	02899	02899	02898	02898	02898	02900	02900	02900	02896	02897
	002	003	001	002	005	001	002	003	004	001
UNIT	LF	LF	LF	LF	LF	LF	LF	LF	EACH	EACH
LOCATION										
CC TO 1	6	6	3							1
1 TO 2	37	74	6	1	30					1
2 TO 3	61	122		9	52					1
1 TO 1		8	8							
2 TO 2		22		22						
3 TO 3	27	54		27						
4 TO 3	40	80	11	29						
ELECTRICAL SERVICE (STA 161+61, OFFSET 19.5' RT) TO 1	14		7		7					
COMPLETE INTERSECTION						439	877	430	1	
TOTAL	185	366	35	88	89	439	877	430	1	3

SIGNS

SYMBOL	SERIES	SIZE	AREA EACH (SQ FT)	DESCRIPTION	QUANTITY	02891.001 POST MOUNTED SIGNS, TYPE B			02891.003 POST MOUNTED SIGNS, TYPE F			02891.007 STRUCTURE MOUNTED FLAT SHEET ALUMINUM SIGNS WITH STIFFENERS			
						SF	SF	SF	SF	SF	SF	SF			
C	R3-1	30"x30"	6.3	NO RIGHT TURN	1										6.3
▲D	R10-3E(MOD)	9"x15"	.9	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER	4										▲
E	D3-4*	66"x24"	11	3300 OAKLAND 3400 FIFTH AVE	1										11
F	D3-4*	60"x24"	10	100 OAKLAND HALKET ST	1										10
G	R9-3	18"x18"	2.3	NO PEDESTRIAN CROSSING	2					4.5					
M	SPECIAL	30"x30"	6.3	BUS LANE SIGNAL	1										6.3
P	R10-10B	30"x30"	6.3	TURNING TRAFFIC MUST YIELD TO BIKES AND PEDS	2	6.3									6.3
R	R3-7bP	24"x12"	2	EXCEPT BICYCLES	3					4					2
V	R5-1	30"x30"	6.3	DO NOT ENTER	3	6.3	6.3			6.3					6.3
TOTAL						12.6	14.8			48.2					

▲ - INCIDENTAL TO ITEM #02895.002

\* WHITE REFLECTORIZED LEGEND AND BORDER ON BLUE REFLECTORIZED BACKGROUND. UTILIZE 4" CLEARVIEW 3W FOR BLOCK/NEIGHBORHOOD AND 8" CLEARVIEW 3W FOR STREET NAME. ACTUAL WIDTH DETERMINED BY LETTER SPACING. COORDINATE BLOCK NUMBERS AND STREET NAME DETAILS WITH CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE.



Gulf Tower  
707 Grant Street  
5th Floor  
Pittsburgh, PA 15219



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PORT AUTHORITY OF ALLEGHENY COUNTY PITTSBURGH PENNSYLVANIA	
BUS RAPID TRANSIT UPTOWN TO OAKLAND SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	
<b>Port Authority</b> <small>connecting people to life</small>	CONTRACT NO. BRT-001
	DWG. NO. SG54 SHT. 1114



SIGNS

SIGN	STANDARD	DESCRIPTION	SIZE	QTY	SIGN	STANDARD	DESCRIPTION	SIZE	QTY
A	R3-2	NO LEFT TURN	30"x30"	2	U	R10-6AL	STOP HERE ON RED	24"x30"	1
B	R10-11	NO TURN ON RED	30"x36"	2	V	R10-10L	LEFT TURN SIGNAL	30"x36"	1
C	R3-1	NO RIGHT TURN	30"x30"	1	Z	R5-1	DO NOT ENTER	30"x30"	2
D	R10-3E(MOD)	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER	9"x15"	6					
E	D3-4*	100 OAKLAND 200 MCKEE PL DARRAGH ST	108"x24"	1					
F	R3-7bP	EXCEPT BICYCLES	24"x12"	3					
G	R9-3	NO PEDESTRIAN CROSSING	18"x18"	2					
H	R9-3BPL	USE CROSSWALK LEFT	18"x12"	1					
J	R9-3BPR	USE CROSSWALK RIGHT	18"x12"	1					
K	SPECIAL	FIFTH AVE	-	1					
L	SPECIAL	MCKEE PL	-	1					
M	R3-1	NO RIGHT TURN	24"x24"	1					
N	R10-7	DO NOT BLOCK INTERSECTION	30"x36"	1					
P	R3-7L	LEFT LANE MUST TURN LEFT	30"x30"	1					
R	R3-11B(MOD)**	RIGHT LANE - BUSES ONLY	30"x36"	2					
S	SS-1**	EXCEPT RIGHT TURNS	30"x18"	2					
T	R10-11	NO TURN ON RED	30"x36"	1					

\* WHITE REFLECTORIZED LEGEND AND BORDER ON BLUE REFLECTORIZED BACKGROUND. UTILIZE 4" CLEARVIEW 3W FOR BLOCK/NEIGHBORHOOD AND 8" CLEARVIEW 3W FOR STREET NAME. ACTUAL WIDTH DETERMINED BY LETTER SPACING. COORDINATE BLOCK NUMBERS AND STREET NAME DETAILS WITH CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE.  
 \*\* POST MOUNTED SIGNS TABULATED AS PART OF THE SIGNING AND PAVEMENT MARKING PLAN.

AUDIBLE PEDESTRIAN SIGNAL NOTES

1. ALL PUSH BUTTONS SHALL BE EQUIPPED WITH LOCATOR TONES.
2. ALL WALK INTERVALS TO HAVE VERBAL MESSAGE DETAILING WALK DIRECTION.
3. VERBAL MESSAGE TO BE PLAYED DURING WALK INTERVAL WHEN BUTTON IS PRESSED.
4. ALL PEDESTRIAN PUSH BUTTONS TO BE LOCATED AT 42" ABOVE GROUND.
5. ALL PUSH BUTTONS TO BE EQUIPPED WITH VIBROTACTILE ARROW.
6. VIBROTACTILE ARROWS TO VIBRATE DURING WALK INTERVAL.
7. WALK AND DON'T WALK MESSAGE SHALL BE AUDIBLE THROUGH THE PUSH BUTTON SPEAKER.

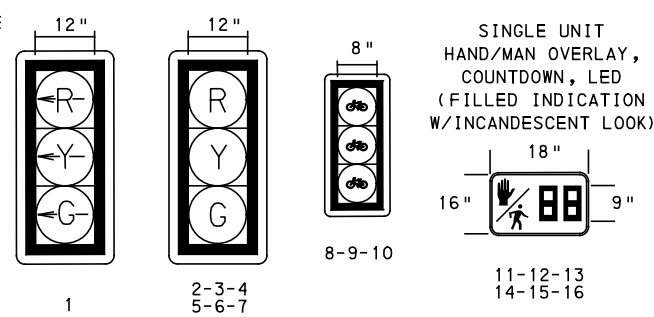
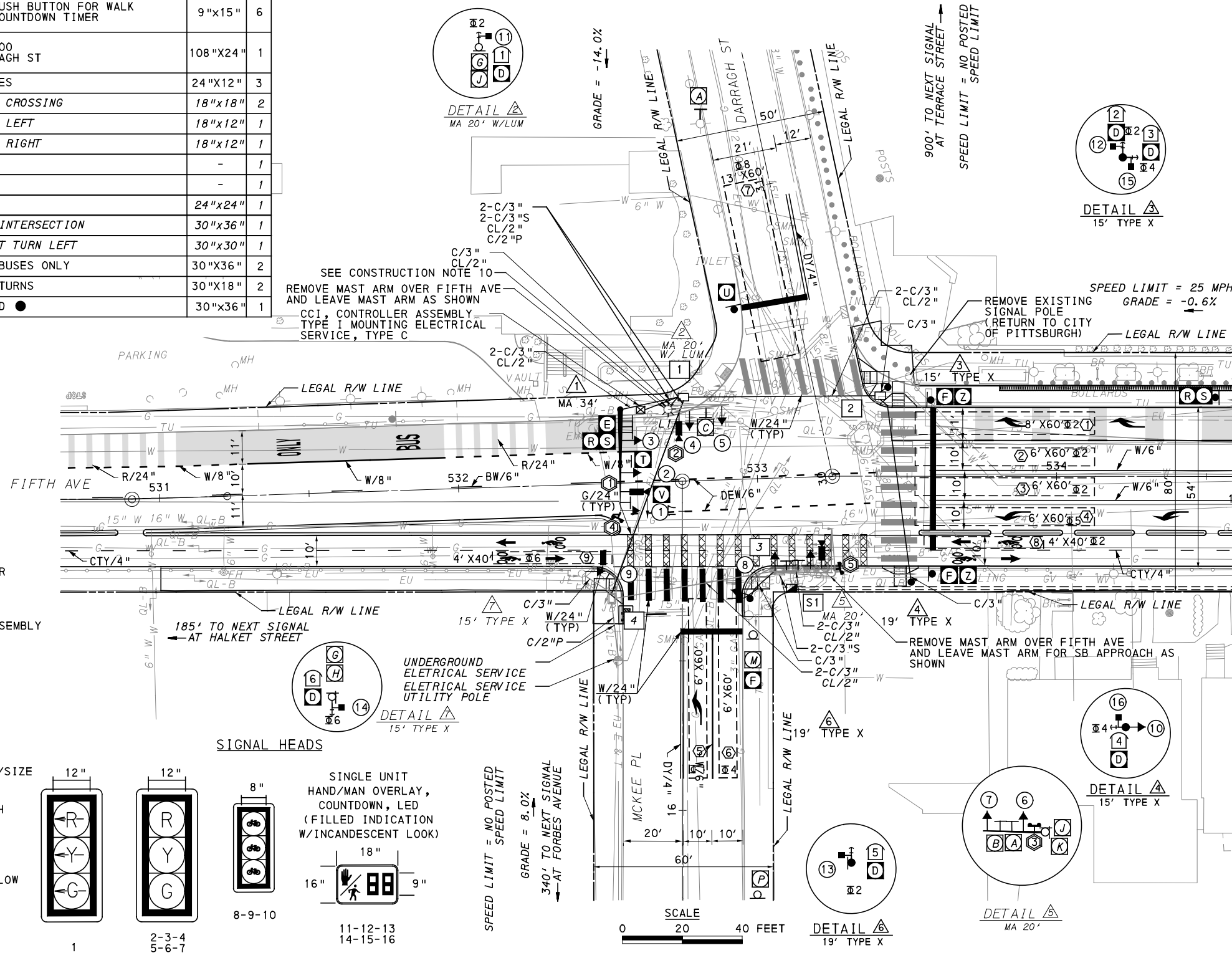
SIGNAL ASSEMBLY NOTES

1. ALL VEHICULAR/BICYCLE SIGNALS SHALL BE EQUIPPED WITH L.E.D LENSES, TUNNEL VISORS AND LOUVERED BLACK METAL BACKPLATES WITH 2" REFLECTIVE BORDERS.
2. MIN/MAX HEIGHT FOR VEHICULAR SIGNALS 17'/18'.
3. MIN HORIZONTAL SPACING FOR VEHICULAR SIGNALS IS 8'.
4. MIN/MAX HEIGHT FOR PEDESTRIAN MOUNTED SIGNALS 10'/12'.
5. FINAL SIGNAL HEAD PLACEMENT WILL BE DETERMINED BY A REPRESENTATIVE OF THE CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE PRIOR TO SIGNAL BEING TURNED ON.
6. ALL PEDESTRIAN SIGNALS SHALL BE PORTLAND ORANGE FULL "PEDESTRIAN HAND" AND WHITE "WALKING PERSON" SYMBOLS AND HAVE INCANDESCENT LOOK WITH COUNTDOWN TIMER.
7. PROVIDE AIRCRAFT STRANDED CABLE FOR MOUNTING SIGNAL AND SIGN BRACKET ASSEMBLIES TO MAST ARMS.
8. PROVIDE BLACK ALUMINUM HOUSINGS FOR ALL SIGNAL HEADS.
9. INSTALL POST MOUNTED SIGNAL HEADS WITH BOTTOMS NO GREATER THAN 15' ABOVE THE SIDEWALK OR PAVEMENT.
10. EXACT LOCATION OF TRAFFIC SIGNAL SUPPORTS SHALL BE DETERMINED BY A REPRESENTATIVE OF THE CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE PRIOR TO INSTALLATION.

PAVEMENT MARKING NOTES

1. ALL STOP BARS ARE W/24".
  2. CROSSWALKS ARE 10' X 24" KEYS WITH 3' TO 5' SPACING.
  3. CROSSWALKS ACROSS BICYCLE LANES ARE 6' X 12" KEYS WITH 1' SPACING.
- 400' TO NEXT SIGNAL AT MEYRAN AVENUE

- LEGEND**
- MAST ARM
  - EXISTING MAST ARM WITH LUMINAIRE
  - PEDESTAL
  - EXISTING PEDESTAL
  - PEDESTRIAN SIGNAL HEAD
  - PROPOSED VEHICULAR/BICYCLE SIGNAL HEAD
  - EXISTING VEHICULAR/BICYCLE SIGNAL HEAD
  - EXISTING SIGN
  - PROPOSED SIGN
  - PROPOSED STOP BAR RADAR DETECTION ZONE
  - AUDIBLE PEDESTRIAN PUSH BUTTON/SIGN
  - PROPOSED CONTROLLER ASSEMBLY
  - JUNCTION BOX
  - EXISTING JUNCTION BOX
  - PROPOSED STOP BAR RADAR DETECTOR
  - C/2" EXISTING CONDUIT/SIZE
  - EXISTING LIGHTING CONDUIT/SIZE
  - C/3"P EXISTING POWER CONDUIT/SIZE
  - W/6" SOLID WHITE LINE/WIDTH
  - BW/6" BROKEN WHITE LINE/WIDTH
  - DY/4" DOUBLE SOLID YELLOW LINE/WIDTH
  - G/24" SOLID GREEN LINE/WIDTH
  - CTY/4" CYCLE TRACK BROKEN YELLOW LINE/WIDTH
  - S1 SYSTEM JUNCTION BOX
  - C/3"S SYSTEM CONDUIT/SIZE
  - PROPOSED STOP BAR VIDEO DETECTOR



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**DRIVE ENGINEERING**  
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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
 PITTSBURGH PENNSYLVANIA  
**BUS RAPID TRANSIT UPTOWN TO OAKLAND**  
**SIGNAL PLANS**  
**FIFTH AVENUE & MCKEE PLACE/ DARRAGH STREET**

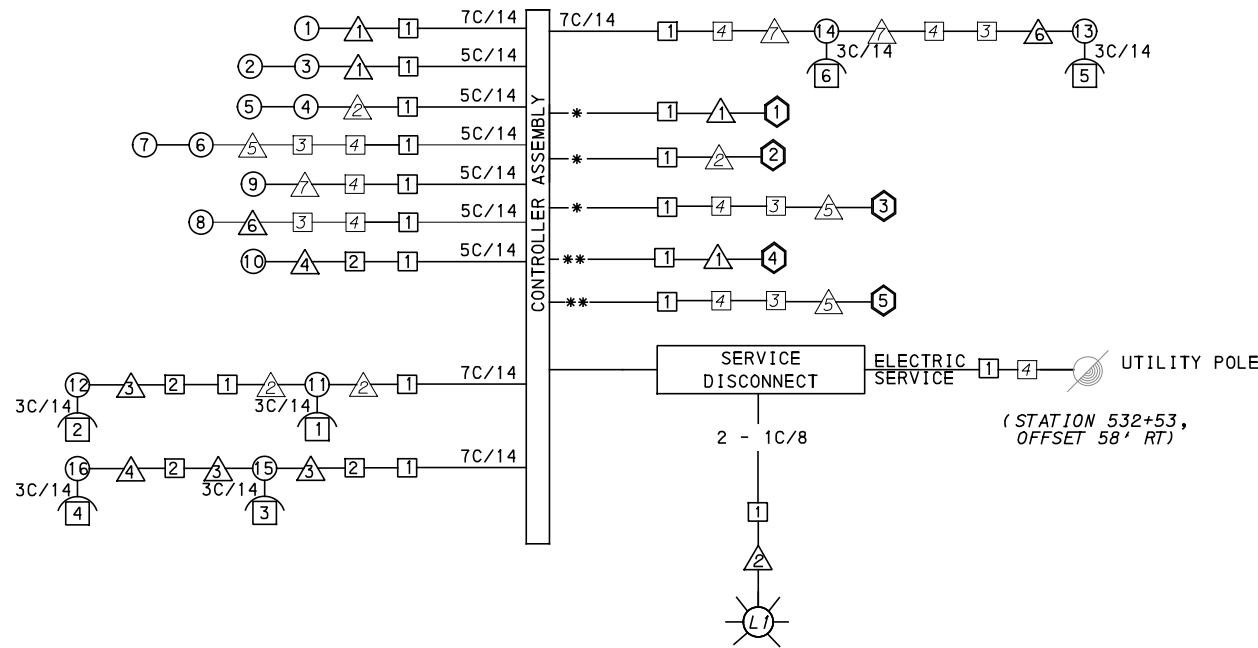
APPROVED AND ACCEPTED: \_\_\_\_\_ DATE \_\_\_\_\_  
 CITY TRAFFIC ENGINEER

APPROVED AND ACCEPTED: \_\_\_\_\_ DATE \_\_\_\_\_  
 DISTRICT TRAFFIC ENGINEER

**Port Authority** connecting people to life™  
 CONTRACT NO. BRT-001  
 DWG. NO. SG55 SHT. 1115

**MOVEMENT, PHASING AND SEQUENCE CHART**

SIGNAL	INTERVAL	PHASE 2+6				PHASE 2+5				PHASE 4+8				FLASHING
		1	2	3	4	1	2	3	4	1	2	3	4	
1		-R	-R	-R	-R	-G	-G	-Y	-R	-R	-R	-R	-R	OFF
2-3		G	G	G	G	G	G	Y	R	R	R	R	R	R
4-5		R	R	R	R	R	R	R	R	G	G	Y	R	R
6-7		R	R	R	R	R	R	R	R	G	G	Y	R	R
8-9-10		G	G	Y	R	R	R	R	R	R	R	R	R	OFF
11-12		W	W	W	W	W	FD	DW	DW	DW	DW	DW	DW	OFF
13-14		W	FD	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	OFF
15-16		DW	DW	DW	DW	DW	DW	DW	DW	W	FD	DW	DW	OFF
FIXED				3	4			3.5	3.5			3.5	3.5	
MINIMUM		8				18				15				
PASSAGE		3				3				3				
FREE (MAX)		20				38				31				
PEDESTRIAN		7	13			7	13			7	16			
MEMORY		PED RECALL				MIN RECALL				PED RECALL				



**WIRING DIAGRAM**

- 5C/14 - CABLE (NO. OF CONDUCTORS/SIZE AWG.)
- SIGNAL HEAD      △ SIGNAL SUPPORT
- AUDIBLE PEDESTRIAN INDICATOR      □ JUNCTION BOX
- ◇ RADAR DETECTOR      ⊙ LUMINAIRE
- 3C/14 INCIDENTAL TO ITEM 02895.002
- \* INCIDENTAL TO ITEM 02895.001, AS PER MANUFACTURERS SPECIFICATIONS
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**DETECTOR ZONE INFORMATION**

DETECTOR	DETECTION ZONE(S)	MODE	TYPE	ROUTE	PHASE	LOCATION MAST ARM
①	① (8' x 60')	PRESENCE	VIDEO (STOP BAR)	FIFTH AVE.	2	△
①	② (6' x 60')	PRESENCE	VIDEO (STOP BAR)	FIFTH AVE.	2	△
①	③ (6' x 60')	PRESENCE	VIDEO (STOP BAR)	FIFTH AVE.	2	△
①	④ (6' x 60')	PRESENCE	VIDEO (STOP BAR)	FIFTH AVE.	5	△
②	⑤ (6' x 60')	PRESENCE	VIDEO (STOP BAR)	MCKEE PL.	8	△
②	⑥ (6' x 60')	PRESENCE	VIDEO (STOP BAR)	MCKEE PL.	8	△
③	⑦ (13' x 60')	PRESENCE	VIDEO (STOP BAR)	DARRAGH ST.	8	△
⑤	⑧ (4' x 40')	PRESENCE	RADAR (STOP BAR)	FIFTH AVENUE BICYCLE LANE	2	△
④	⑨ (4' x 40')	PRESENCE	RADAR (STOP BAR)	FIFTH AVENUE BICYCLE LANE	2	△

**TRANSIT PRIORITY PRE-EMPTION NOTES (TO BE INSTALLED BY OTHERS)**

1. COORDINATE TRAFFIC CONTROLLER PROGRAMMING MODIFICATION WITH REPRESENTATIVES OF THE CITY OF PITTSBURGH AND DISTRICT TRAFFIC UNIT.
2. INCLUDE A TRANSIT PRIORITY PHASE THAT WILL EXTEND THE INDICATED PHASE A MAXIMUM OF 10 SECONDS WHEN ACTIVATED BY A PORT AUTHORITY VEHICLE. DO NOT VIOLATE SIDE STREET PEDESTRIAN MINIMUM TIMINGS.
3. MAINTAIN ALL YELLOW CLEARANCES AT ALL TIMES.
4. PROCEED TO THE SUBSEQUENT INTERVAL AS DEFINED IN THE MOVEMENT, SEQUENCE AND TIMING DIAGRAM UPON COMPLETING THE GREEN EXTENSION INTERVAL.
5. ONCE A TRANSIT CALL IS PLACED AND SATISFIED, THE CONTROLLER WILL NOT SATISFY ANOTHER CALL FOR 4 CYCLES.
6. LOCATION OF BUS DETECTORS ARE TO BE FIELD ADJUSTED TO ACHIEVE MAXIMUM OPERATION.

**GENERAL NOTES**

- THE CITY OF PITTSBURGH SHALL INSPECT THE NEW SIGNAL EQUIPMENT PRIOR TO ACTIVATION.
- ALL TRAFFIC SIGNAL MAINTENANCE AND OPERATION RESPONSIBILITIES SHALL BE TURNED OVER TO THE CITY OF PITTSBURGH AFTER THE FOLLOWING CONDITIONS ARE IMPLEMENTED TO THE CITY'S SATISFACTION:
1. PERMIT "AS-BUILT" TRAFFIC SIGNAL DRAWINGS ARE SUBMITTED AND APPROVED.
  2. ALL PUNCH LIST ITEMS ARE COMPLETED BY THE CONTRACTOR.
  3. AFTER THE 30-DAY CONTINUOUS UNINTERRUPTED SIGNAL OPERATION WITHOUT MALFUNCTIONS.

**CONSTRUCTION NOTES**

1. ALL JUNCTION BOXES IN WALK AREAS TO BE CITY OF PITTSBURGH STANDARD CONCRETE JUNCTION BOX, TYPE 1.
2. ALL JUNCTION BOXES IN NON-WALK AREAS TO BE CITY STANDARD JB-2 WITH BOTTOM.
3. THERE SHALL BE NO SIGNAL WIRE OR FIBER CABLE SPLICING.
4. SERVICE WIRE FROM THE POWER SOURCE TO THE CONTROLLER CABINET SHALL BE PLACED IN SECONDARY SEPARATE CONDUIT.
5. STREET LIGHT CABLE IS NOT PERMITTED TO RUN THROUGH THE CONTROLLER CABINET AND SHALL BE PLACED IN SEPARATE CONDUIT.
6. TRAFFIC SIGNAL CABLE SHALL BE PLACED IN DEDICATED CONDUIT.
7. MOUNT DISCONNECT ON POLE NEAREST TO THE CONTROLLER CABINET EXCLUDING TYPE X POLES.
8. REMOVE AND DISPOSE OF ALL EXISTING SIGNAL WIRING NO LONGER IN USE.
9. REMOVE EXISTING SIGNAL EQUIPMENT NO LONGER IN USE AND RETURN TO THE CITY OF PITTSBURGH TRAFFIC CONTROL SHOP. COORDINATE DELIVERY OF EQUIPMENT WITH DELMAS MCELHANY, TRAFFIC CONTROL FOREMAN.
10. SEE 01720 UTILITY COORDINATION FOR INFORMATION ON RELOCATION OF EXISTING SECURITY CAMERAS AND SHOT SPOTTERS
11. REMOVE ALL SIGNALS WHILE POLE IS PAINTED. REFER TO SECTION 02892.

TS-257

COUNTY: ALLEGHENY \_\_\_\_\_  
MUNICIPALITY: CITY OF PITTSBURGH \_\_\_\_\_  
INTERSECTION: FIFTH AVENUE \_\_\_\_\_  
AND MCKEE PLACE \_\_\_\_\_

APPROVED AND ACCEPTED: \_\_\_\_\_  
CITY TRAFFIC ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_

APPROVED AND ACCEPTED: \_\_\_\_\_  
DISTRICT TRAFFIC ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_



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**(NOT FOR CONSTRUCTION)**

DESIGNED	MW
DRAWN	MW
CHECKED	EMC
IN CHARGE	EMC
DATE	05/01/24
SCALE	AS SHOWN

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT UPTOWN TO OAKLAND**  
SIGNAL PLANS  
WIRING, MOVEMENT, PHASING & SEQUENCE DIAGRAMS

**Port Authority** connecting people to life™

CONTRACT NO. BRT-001  
DWG. NO. SG56      SHT. 1116

**TRAFFIC SIGNAL TABULATION**

FIFTH AVENUE AND MCKEE PLACE/DARRAGH ST

MISCELLANEOUS				
ITEM NUMBER	DESCRIPTION	QTY.	LOCATION	REMARKS
02890.001 EACH	TRAFFIC SIGNAL CONTROLLER ASSEMBLY, TYPE 2070 LC, WITH TYPE 332 BASE MOUNTED CABINET(MOD)	1	CC	332 CONTROLLER CABINET 8" RISER
02890.003 EACH	ETHERNET SWITCH	1	CC	
02890.005 EACH	GPS TIME CLOCK	1	CC	
02894.001 EACH	VEHICULAR SIGNAL HEAD, THREE 12" SECTIONS	6	①②③ ④⑤⑥	BLACK TUNNEL VISORS BLACK ALUMINUM HOUSINGS BLACK METAL LOUVERED BACKPLATE
02894.004 EACH	BICYCLE SIGNAL HEAD, THREE 8" SECTIONS	3	⑧⑨⑩	BLACK TUNNEL VISORS BLACK ALUMINUM HOUSINGS
02894.005 EACH	LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, TYPE A	6	①②③ ④⑤⑥	BLACK TUNNEL VISORS BLACK ALUMINUM HOUSINGS
02895.002 EACH	ACCESSIBLE PEDESTRIAN SIGNALS	6	①②③ ④⑤⑥	
02897.011 EACH	CONNECT TO EXISTING JUNCTION BOX	2	③ ④	
02893.003 EACH	REMOVE EXISTING MAST ARM	2		NW CORNER SE CORNER
02899.007 EACH	INSTALL CONDUIT TO EXISTING TRAFFIC SIGNAL SUPPORT	1	②	
01882.002 EACH	TRAFFIC SIGNAL TIMING MODIFICATIONS	2	CC	
02892.501 EACH	EXISTING TRAFFIC SIGNAL SUPPORT, PAINTED BLACK	3	② ⑤ ⑦	TEMPORARILY REMOVE ATTACHED SIGNAL HARDWARE AND PAINT SIGNAL SUPPORT BLACK. REATTACH HARDWARE WHEN COMPLETE.
02212.009 LF	POLE FOUNDATION DRILLING, LESS THAN 30" DIAMETER	20	③④⑥	
02212.010 LF	POLE FOUNDATION DRILLING, 30" DIAMETER OR GREATER	13	①	

**DETECTORS**

ITEM NUMBER	DESCRIPTION	SEN. NO.	QTY.	LOCATION
02895.001 EACH	VIDEO DETECTION	①② ③	3	① ② ⑤
02895.005 EACH	DIGITAL WAVE RADAR DETECTION	④ ⑤	2	① ⑤

**TRAFFIC SIGNAL SUPPORTS \*\***

POLE NO.	ITEM NUMBER	DESCRIPTION	QTY.	ROUTE	STATION	SIDE	OFFSET	MAST ARM												PEDESTAL							
								ARM "A"												ARM "C"			SHAFT	SIGNAL			
								H	K	SIGNAL LOCATION				SIGN LOCATION				W	G	X	Z	H		M	N		
										L	M	N	O	P	R	S	T									U	Y
①	02892.605 EACH	TRAFFIC SIGNAL SUPPORT, 34' MAST ARM, PAINTED BLACK	1	FIFTH AVE.	532+54	LT	23'	17'			34'	33'	21'	10'		31'	16'	7'	4'	0°							
②		TRAFFIC SIGNAL SUPPORT, 20' MAST ARM WITH LUMINAIRE ARM, 30' MOUNTING		FIFTH AVE.	532+70	LT	23'	17'	10'	20'	17'	6'			11'					270°							
③	02892.003 EACH	TRAFFIC SIGNAL SUPPORT, 15' TYPE X, PAINTED BLACK	1	FIFTH AVE.	533+43	LT	30'																15'	10'			
④	02892.003 EACH	TRAFFIC SIGNAL SUPPORT, 15' TYPE X, PAINTED BLACK	1	FIFTH AVE.	533+51	RT	34'																15'	15'	10'		
⑤		TRAFFIC SIGNAL SUPPORT, 20' MAST ARM		FIFTH AVE.	533+25	RT	31'	17'		20'	18'	6'			14'	10'				270°							
⑥	02892.004 EACH	TRAFFIC SIGNAL SUPPORT, 19' TYPE X, PAINTED BLACK	1	FIFTH AVE.	532+97	RT	38'																19'	15'	10'		
⑦		TRAFFIC SIGNAL SUPPORT, 15' TYPE X		FIFTH AVE.	532+41	RT	29'																15'	15'	10'		

\*\* REFER TO PENNDOT TC-8800 TRAFFIC STANDARDS - SIGNALS FOR LETTER DESIGNATION



Gulf Tower  
707 Grant Street  
5th Floor  
Pittsburgh, PA 15219



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PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT UPTOWN TO OAKLAND**  
SIGNAL PLANS  
TRAFFIC SIGNAL TABULATIONS



CONTRACT NO. BRT-001

DWG. NO. SG57

SHT. 1117

TRAFFIC SIGNAL TABULATION

FIFTH AVENUE AND MCKEE PLACE/DARRAGH STREET

TRENCH, CONDUIT, JUNCTION BOX, ELECTRICAL ITEMS

DESCRIPTION	2 INCH CONDUIT	3 INCH CONDUIT	TRENCH AND BACKFILL, TYPE I	TRENCH AND BACKFILL, TYPE II	TRENCH AND BACKFILL, TYPE IV	SIGNAL CABLE, 14 AWG, 5 CONDUCTOR	SIGNAL CABLE, 14 AWG, 7 CONDUCTOR	ELECTRICAL SERVICE TYPE C (EXISTING)	CITY OF PITTSBURGH STANDARD CONCRETE JUNCTION BOX, TYPE 1	8 AWG UNDERGROUND CABLE, COPPER, 1 CONDUCTOR
ITEM NUMBER	02899	02899	02898	02898	02898	02900	02900	02896	02897	02900
UNIT	LF	LF	LF	LF	LF	LF	LF	EACH	EACH	LF
LOCATION										
CC TO [1]	24	24		12					1	
[4] TO [1]	138	276	5	5	59					
[1] TO [1]	20	40		20						
[2] TO [1]	4	4		4						
[2] TO [1]	63	125	2	8	53				1	
[3] TO [2]		3	3							
[4] TO [2]		63	9		54					
[6] TO [3]		12	12							
[S1] TO [3]		10	5							
ELECTRICAL SERVICE (STA 532+53, OFFSET 58' RT) TO [3]										
COMPLETE INTERSECTION						1018	798	1		85
TOTAL	249	557	36	49	166	1018	798	1	2	85

[S1] - TABULATED ON SYSTEMS PLAN

SIGNS

SYMBOL	SERIES	SIZE	AREA EACH (SQ. FT)	DESCRIPTION	QUANTITY	02891.001 POST MOUNTED SIGNS, TYPE B			02891.003 POST MOUNTED SIGNS, TYPE F			02891.007 STRUCTURE MOUNTED FLAT SHEET ALUMINUM SIGNS WITH STIFFENERS			
						SF	SF	SF	SF	SF	SF	SF			
[D]	R10-3E(MOD)	9"x15"	.9	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER	6										
[E]	D3-4*	108"x24"	18	100 OAKLAND 200 MCKEE PL DARRAGH ST	1										18
[R]	R3-7bP	24"x12"	2	EXCEPT BICYCLES	3					6					
[R]	R3-11B(MOD)	30"x36"	7.5	RIGHT LANE - BUSES ONLY	1										7.5
[S]	SS-1	30"x18"	3.8	EXCEPT RIGHT TURNS	1										3.8
[T]	R10-11	30"x36"	7.5	NO TURN ON RED ●	1										7.5
[U]	R10-6AL	24"x30"	5	STOP HERE ON RED	1	5									
[V]	R10-10L	30"x36"	7.5	LEFT TURN SIGNAL	1										7.5
[Z]	R5-1	30"x30"	6.3	DO NOT ENTER	2	12.6									
TOTAL						17.6	6								44.3

▲ - INCIDENTAL TO ITEM #02895.002

\* WHITE REFLECTORIZED LEGEND AND BORDER ON BLUE REFLECTORIZED BACKGROUND. UTILIZE 4" CLEARVIEW 3W FOR BLOCK/NEIGHBORHOOD AND 8" CLEARVIEW 3W FOR STREET NAME. ACTUAL WIDTH DETERMINED BY LETTER SPACING. COORDINATE BLOCK NUMBERS AND STREET NAME DETAILS WITH CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE.



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<b>PORT AUTHORITY OF ALLEGHENY COUNTY</b> PITTSBURGH PENNSYLVANIA	
BUS RAPID TRANSIT UPTOWN TO OAKLAND SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	
<b>Port Authority</b> <small>connecting people to life</small>	CONTRACT NO. BRT-001
	DWG. NO. SG58 SHT. 1118

**SIGNS**

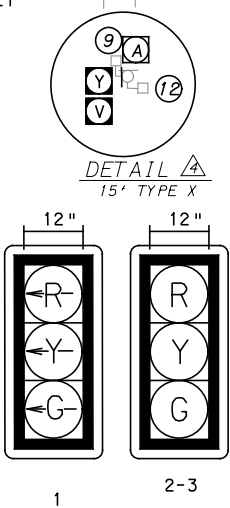
SIGN	STANDARD	DESCRIPTION	SIZE	QTY
A	R3-2	NO LEFT TURN	24"x24"	2
B	R3-7-1R	ALL TRAFFIC MUST TURN RIGHT	30"x30"	1
C	R3-1	NO RIGHT TURN	30"x30"	1
D	R10-3E(MOD)	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER	9"x15"	3
E	D3-4*	100 OAKLAND 200 MEYRAN AVE LOTHROP ST	96"x32"	1
G	R10-6AL	STOP HERE ON RED	24"x30"	1
H	R1-1	STOP	24"x24"	1
J	R6-1	ONE-WAY (TWO SIDED, CITY STANDARD)	36"x12"	1
K	SPECIAL	FIFTH AVE	-	1
L	SPECIAL	MEYRAN AVE	-	1
M	SPECIAL	OAKLAND 200 LOTHROP ST	-	1
N	SPECIAL	3500 OAKLAND FIFTH AVE	-	1
R	R3-1	NO RIGHT TURN	24"x24"	1
S	R3-11B(MOD)**	RIGHT LANE - BUSES ONLY	30"x36"	2
T	SS-1**	EXCEPT RIGHT TURNS	30"x18"	2
U	R10-10L	LEFT TURN SIGNAL	30"x36"	1
V	R3-7Bp	EXCEPT BICYCLES	24"x12"	5
Y	R5-1	DO NOT ENTER	30"x30"	4

\* WHITE REFLECTORIZED LEGEND AND BORDER ON BLUE REFLECTORIZED BACKGROUND. UTILIZE 4" CLEARVIEW 3W FOR BLOCK/NEIGHBORHOOD AND 8" CLEARVIEW 3W FOR STREET NAME. ACTUAL WIDTH DETERMINED BY LETTER SPACING. COORDINATE BLOCK NUMBERS AND STREET NAME DETAILS WITH CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE.

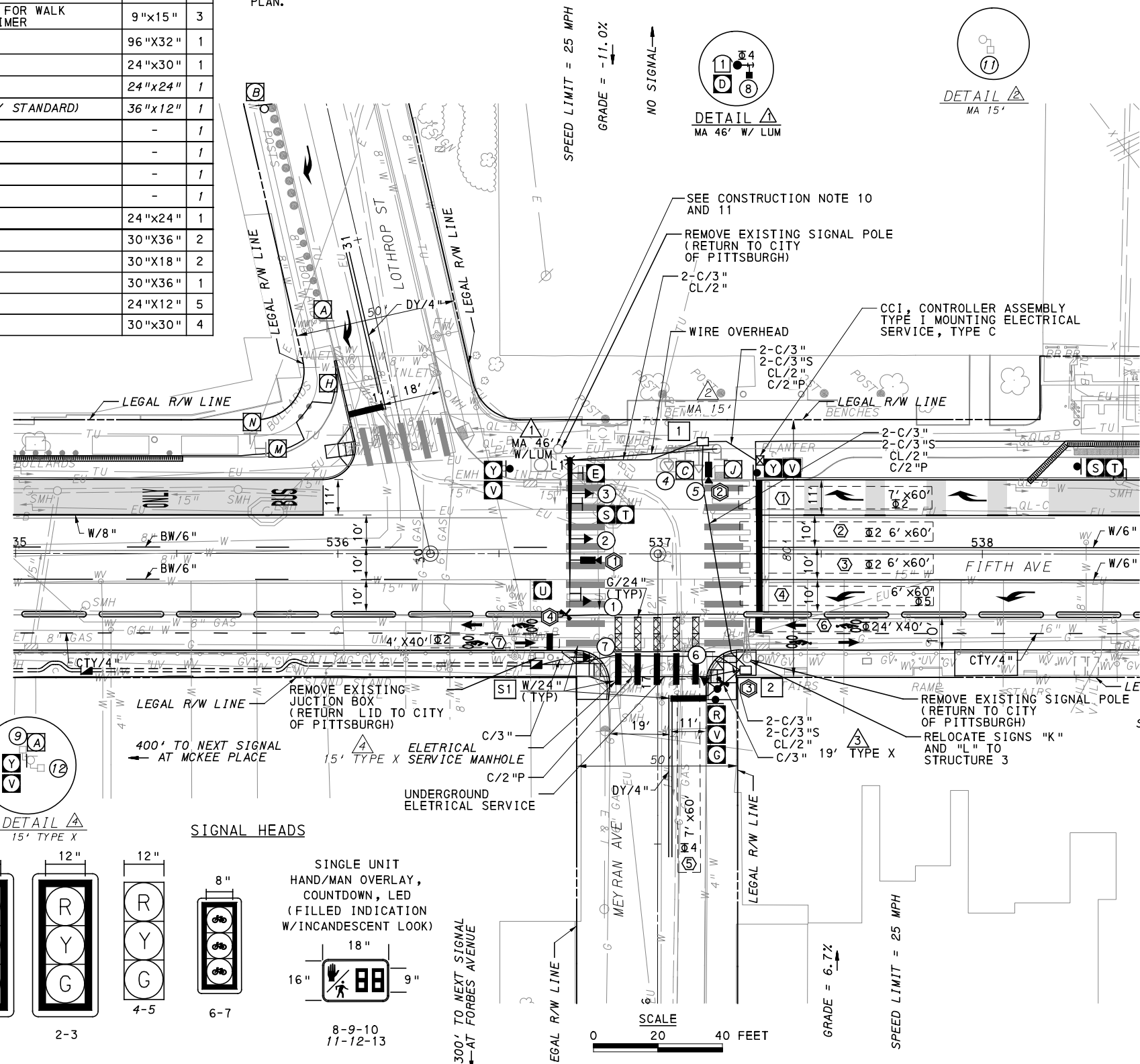
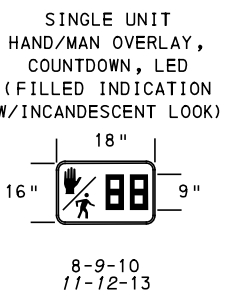
\*\* POST MOUNTED SIGNS TABULATED AS PART OF THE SIGNING AND PAVEMENT MARKING PLAN.

**LEGEND**

- ▲ MAST ARM WITH LUMINAIRE ARM
- ▲ EXISTING MAST ARM WITH LUMINAIRE
- PEDESTAL
- EXISTING PEDESTAL
- ⊠ EXISTING PEDESTRIAN SIGNAL HEAD
- ⊡ PEDESTRIAN SIGNAL HEAD
- ➔ (2) PROPOSED VEHICULAR/BICYCLE SIGNAL HEAD
- ➔ (2) EXISTING VEHICULAR/BICYCLE SIGNAL HEAD
- ▲ (A) EXISTING SIGN
- ▲ (A) PROPOSED SIGN
- ⊠ (2) PROPOSED STOP BAR RADAR DETECTION ZONE
- ➔ (2) AUDIBLE PEDESTRIAN PUSH BUTTON/SIGN
- ⊠ (2) PROPOSED CONTROLLER ASSEMBLY
- ⊠ (2) JUNCTION BOX
- ⊠ (S1) SYSTEM JUNCTION BOX
- ⊠ (2) PROPOSED STOP BAR RADAR DETECTOR
- W/6" SOLID WHITE LINE/WIDTH
- BW/6" BROKEN WHITE LINE/WIDTH
- DY/4" DOUBLE SOLID YELLOW LINE/WIDTH
- G/24" SOLID GREEN LINE/WIDTH
- CTY/4" CYCLE TRACK BROKEN YELLOW LINE/WIDTH
- C/3"S SYSTEM CONDUIT/SIZE
- C/2" CONDUIT/SIZE
- CL/2" LIGHTING CONDUIT/SIZE
- C/2"P POWER CONDUIT/SIZE
- ➔ (2) STOP BAR VIDEO DETECTOR



**SIGNAL HEADS**



**AUDIBLE PEDESTRIAN SIGNAL NOTES**

1. ALL PUSH BUTTONS SHALL BE EQUIPPED WITH LOCATOR TONES.
2. ALL WALK INTERVALS TO HAVE VERBAL MESSAGE DETAILING WALK DIRECTION.
3. VERBAL MESSAGE TO BE PLAYED DURING WALK INTERVAL WHEN BUTTON IS PRESSED.
4. ALL PEDESTRIAN PUSH BUTTONS TO BE LOCATED AT 42" ABOVE GROUND.
5. ALL PUSH BUTTONS TO BE EQUIPPED WITH VIBROTACTILE ARROW.
6. VIBROTACTILE ARROWS TO VIBRATE DURING WALK INTERVAL.
7. WALK AND DON'T WALK MESSAGE SHALL BE AUDIBLE THROUGH THE PUSH BUTTON SPEAKER.

**SIGNAL ASSEMBLY NOTES**

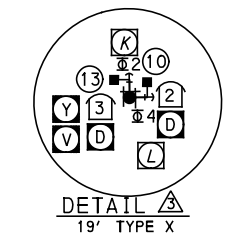
1. ALL VEHICULAR/BICYCLE SIGNALS SHALL BE EQUIPPED WITH L.E.D LENSES, TUNNEL VISORS AND LOUVERED BLACK METAL BACKPLATES WITH 2" REFLECTIVE BORDERS.
2. MIN/MAX HEIGHT FOR VEHICULAR SIGNALS 17'/18'.
3. MIN HORIZONTAL SPACING FOR VEHICULAR SIGNALS IS 8'.
4. MIN/MAX HEIGHT FOR PEDESTRIAN MOUNTED SIGNALS 10'/12'.
5. FINAL SIGNAL HEAD PLACEMENT WILL BE DETERMINED BY A REPRESENTATIVE OF THE CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE PRIOR TO SIGNAL BEING TURNED ON.
6. ALL PEDESTRIAN SIGNALS SHALL BE PORTLAND ORANGE FULL "PEDESTRIAN HAND" AND WHITE "WALKING PERSON" SYMBOLS AND HAVE INCANDESCENT LOOK WITH COUNTDOWN TIMER.
7. PROVIDE AIRCRAFT STRANDED CABLE FOR MOUNTING SIGNAL AND SIGN BRACKET ASSEMBLIES TO MAST ARMS.
8. PROVIDE BLACK ALUMINUM HOUSINGS FOR ALL SIGNAL HEADS.
9. INSTALL POST MOUNTED SIGNAL HEADS WITH BOTTOMS NO GREATER THAN 15' ABOVE THE SIDEWALK OR PAVEMENT.
10. EXACT LOCATION OF TRAFFIC SIGNAL SUPPORTS SHALL BE DETERMINED BY A REPRESENTATIVE OF THE CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE PRIOR TO INSTALLATION.

**PAVEMENT MARKING NOTES**

1. ALL STOP BARS ARE W/24".
2. CROSSWALKS ARE 10' X 24" KEYS WITH 3' TO 5' SPACING.
3. CROSSWALKS ACROSS BICYCLE LANES ARE 6' X 12" KEYS WITH 1' SPACING.

SPEED LIMIT = 25 MPH  
GRADE = -1.0%

270' TO NEXT SIGNAL AT ATWOOD STREET



COUNTY: ALLEGHENY  
MUNICIPALITY: CITY OF PITTSBURGH  
INTERSECTION: FIFTH AVENUE AND MEYRAN AVENUE AND LOTHROP STREET

APPROVED AND ACCEPTED: \_\_\_\_\_ DATE \_\_\_\_\_  
CITY TRAFFIC ENGINEER  
APPROVED AND ACCEPTED: \_\_\_\_\_ DATE \_\_\_\_\_  
DISTRICT TRAFFIC ENGINEER



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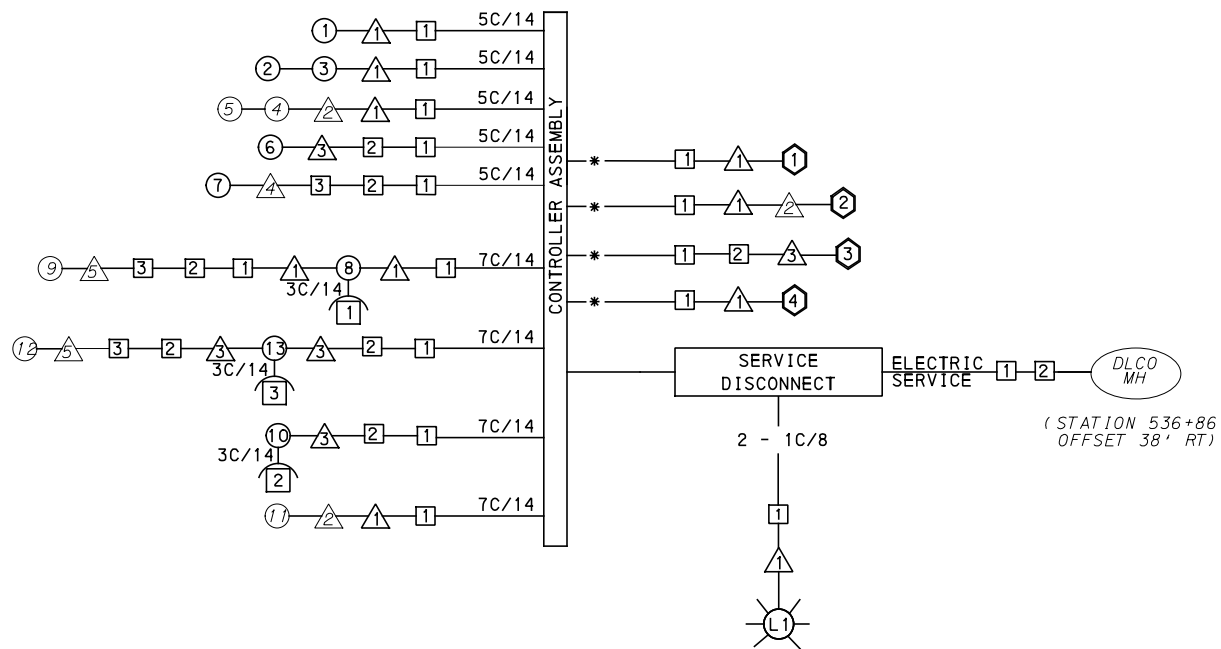
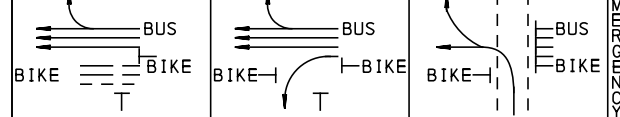
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DWG. NO. SG59	SHT. 1119



**MOVEMENT, PHASING AND SEQUENCE CHART**

SIGNAL	INTERVAL	PHASE 2				PHASE 2+5				PHASE 4					FLASHING - CYCLING
		1	2	3	4	1	2	3	4	1	2	3	4	5	
1		-R	-R	-R	-R	-G	-G	-Y	-R	-R	-R	-R	-R	-R	OFF
2-3		G	G	G	G	G	G	Y	R	R	R	R	R	R	R
4-5		R	R	R	R	R	R	R	R	R	G	G	Y	R	R
6-7		G	G	Y	R	R	R	R	R	R	R	R	R	R	OFF
8-9		DW	DW	DW	DW	DW	DW	DW	DW	W	W	FD	DW	DW	OFF
10-11		DW	DW	DW	DW	DW	DW	DW	DW	W	W	FD	DW	DW	OFF
12-13		W	FD	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	OFF
FIXED				3	3			3	3				3	4	
MINIMUM		8				18							18		
PASSAGE		3				3							3		
FREE (MAX)		17				46							19		
PEDESTRIAN		7	10			7	10			5	2	16			
MEMORY		PED RECALL				MIN RECALL				PED RECALL					



**WIRING DIAGRAM**

5C/14 - CABLE (NO. OF CONDUCTORS/SIZE AWG.)

- SIGNAL HEAD      △ SIGNAL SUPPORT
- AUDIBLE PEDESTRIAN INDICATOR      □ JUNCTION BOX
- ◇ RADAR DETECTOR      ⊙ LUMINAIRE

3C/14 INCIDENTAL TO ITEM 02895.002  
 \* INCIDENTAL TO ITEM 02895.001, AS PER MANUFACTURERS SPECIFICATIONS  
 \*\* INCIDENTAL TO ITEM 02895.005, AS PER MANUFACTURERS SPECIFICATIONS

**DETECTOR ZONE INFORMATION**

DETECTOR	DETECTION ZONE(S)	MODE	TYPE	ROUTE	PHASE	LOCATION MAST ARM
①	① (7' x 60')	PRESENCE	VIDEO (STOP BAR)	FIFTH AVENUE	2	△
①	② (6' x 60')	PRESENCE	VIDEO (STOP BAR)	FIFTH AVENUE	2	△
①	③ (6' x 60')	PRESENCE	VIDEO (STOP BAR)	FIFTH AVENUE	2	△
①	④ (6' x 60')	PRESENCE	VIDEO (STOP BAR)	FIFTH AVENUE	5	△
②	⑤ (7' x 60')	PRESENCE	VIDEO (STOP BAR)	MEYRAN AVE.	4	△
③	⑥ (4' x 40')	PRESENCE	RADAR (STOP BAR)	FIFTH AVENUE BICYCLE LANE	2	△
④	⑦ (4' x 40')	PRESENCE	RADAR (STOP BAR)	FIFTH AVENUE BICYCLE LANE	2	△

**TRANSIT PRIORITY PRE-EMPTION NOTES (TO BE INSTALLED BY OTHERS)**

- COORDINATE TRAFFIC CONTROLLER PROGRAMMING MODIFICATION WITH REPRESENTATIVES OF THE CITY OF PITTSBURGH AND DISTRICT TRAFFIC UNIT.
- INCLUDE A TRANSIT PRIORITY PHASE THAT WILL EXTEND THE INDICATED PHASE A MAXIMUM OF 10 SECONDS WHEN ACTIVATED BY A PORT AUTHORITY VEHICLE. DO NOT VIOLATE SIDE STREET PEDESTRIAN MINIMUM TIMINGS.
- MAINTAIN ALL YELLOW CLEARANCES AT ALL TIMES.
- PROCEED TO THE SUBSEQUENT INTERVAL AS DEFINED IN THE MOVEMENT, SEQUENCE AND TIMING DIAGRAM UPON COMPLETING THE GREEN EXTENSION INTERVAL.
- ONCE A TRANSIT CALL IS PLACED AND SATISFIED, THE CONTROLLER WILL NOT SATISFY ANOTHER CALL FOR 4 CYCLES.
- LOCATION OF BUS DETECTORS ARE TO BE FIELD ADJUSTED TO ACHIEVE MAXIMUM OPERATION.

**GENERAL NOTES**

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 ALL TRAFFIC SIGNAL MAINTENANCE AND OPERATION RESPONSIBILITIES SHALL BE TURNED OVER TO THE CITY OF PITTSBURGH AFTER THE FOLLOWING CONDITIONS ARE IMPLEMENTED TO THE CITY'S SATISFACTION:

- PERMIT "AS-BUILT" TRAFFIC SIGNAL DRAWINGS ARE SUBMITTED AND APPROVED.
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**CONSTRUCTION NOTES**

- ALL JUNCTION BOXES IN WALK AREAS TO BE CITY OF PITTSBURGH STANDARD CONCRETE JUNCTION BOX, TYPE 1.
- ALL JUNCTION BOXES IN NON-WALK AREAS TO BE CITY STANDARD JB-2 WITH BOTTOM.
- THERE SHALL BE NO SIGNAL WIRE OR FIBER CABLE SPLICING.
- SERVICE WIRE FROM THE POWER SOURCE TO THE CONTROLLER CABINET SHALL BE PLACED IN SECONDARY SEPARATE CONDUIT.
- STREET LIGHT CABLE IS NOT PERMITTED TO RUN THROUGH THE CONTROLLER CABINET AND SHALL BE PLACED IN SEPARATE CONDUIT.
- TRAFFIC SIGNAL CABLE SHALL BE PLACED IN DEDICATED CONDUIT.
- MOUNT DISCONNECT ON POLE NEAREST TO THE CONTROLLER CABINET EXCLUDING TYPE X POLES.
- REMOVE AND DISPOSE OF ALL EXISTING SIGNAL WIRING NO LONGER IN USE.
- REMOVE EXISTING SIGNAL EQUIPMENT NO LONGER IN USE AND RETURN TO THE CITY OF PITTSBURGH TRAFFIC CONTROL SHOP. COORDINATE DELIVERY OF EQUIPMENT WITH DELMAS MCELHANY, TRAFFIC CONTROL FOREMAN.
- CONTRACTOR IS TO MAINTAIN VEHICULAR SIGNAL HEAD VISIBILITY AT ALL TIMES DURING CONSTRUCTION.
- REMOVE ALL SIGNALS WHILE POLE IS PAINTED. REFER TO SECTION 02892.

TS-591

COUNTY: ALLEGHENY  
 MUNICIPALITY: CITY OF PITTSBURGH  
 INTERSECTION: FIFTH AVENUE AND MEYRAN AVENUE AND LOTHROP STREET

APPROVED AND ACCEPTED:  
 CITY TRAFFIC ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_  
 APPROVED AND ACCEPTED:  
 DISTRICT TRAFFIC ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_



NO.	DATE	DESCRIPTION
REVISIONS		

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**(NOT FOR CONSTRUCTION)**

DESIGNED	MW
DRAWN	MW
CHECKED	EMC
IN CHARGE	EMC
DATE	05/01/24
SCALE	AS SHOWN

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
 PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT UPTOWN TO OAKLAND**  
 SIGNAL PLANS  
 WIRING, MOVEMENT, PHASING & SEQUENCE DIAGRAMS

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CONTRACT NO. BRT-001  
 DWG. NO. SG60      SHT. 1120

PLOTTED: 3/21/2024 6:05:17 PM

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**TRAFFIC SIGNAL TABULATION**  
FIFTH AVENUE AND MEYRAN AVENUE AND LOTHROP STREET

MISCELLANEOUS				
ITEM NUMBER	DESCRIPTION	QTY.	LOCATION	REMARKS
02889.002	LED LUMINAIRE CITY STANDARD, BLACK	1	⊗	⚠
EACH				
02890.001	TRAFFIC SIGNAL CONTROLLER ASSEMBLY, TYPE 2070 LC, WITH TYPE 332 BASE MOUNTED CABINET(MOD)	1	CC	332 CONTROLLER CABINET 8" RISER
EACH				
02890.003	ETHERNET SWITCH	1	CC	
EACH				
02894.001	VEHICULAR SIGNAL HEAD, THREE 12" SECTIONS	3	①②③	BLACK TUNNEL VISORS BLACK ALUMINUM HOUSINGS BLACK METAL LOUVERED BACKPLATE
EACH				
02894.004	BICYCLE SIGNAL HEAD, THREE 8" SECTIONS	2	⑥⑦	BLACK TUNNEL VISORS BLACK ALUMINUM HOUSINGS BLACK METAL LOUVERED BACKPLATE
EACH				
02894.005	LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, TYPE A	3	⑧⑩⑬	BLACK TUNNEL VISORS BLACK ALUMINUM HOUSINGS
EACH				
02895.002	ACCESSIBLE PEDESTRIAN SIGNALS	3	①②③	
EACH				
02893.001	REMOVE EXISTING POLE	2		NW CORNER AND SE CORNER
EACH				
02899.007	INSTALL CONDUIT TO EXISTING TRAFFIC SIGNAL SUPPORT	1	⚠	
EACH				
02890.005	GPS TIME CLOCK	1	CC	
EACH				
01882.002	TRAFFIC SIGNAL TIMING MODIFICATIONS	2	CC	
EACH				
02892.501	EXISTING TRAFFIC SIGNAL SUPPORT, PAINTED BLACK	1	⚠	TEMPORARILY REMOVE ATTACHED SIGNAL HARDWARE AND PAINT SIGNAL SUPPORT BLACK. REATTACH HARDWARE WHEN COMPLETE.
EACH				
02891.013	RESET POST MOUNTED SIGNS, TYPE F	2	⚠	
EACH				
02897.012	REMOVE EXISTING JUNCTION BOX	1		SW CORNER
EACH				
02212.009	POLE FOUNDATION DRILLING, LESS THAN 30" DIAMETER	8	⚠	
LF				
02212.010	POLE FOUNDATION DRILLING, 30" DIAMETER OR GREATER	13	⚠	
LF				

**DETECTORS**

ITEM NUMBER	DESCRIPTION	SEN. NO.	QTY.	LOCATION
02895.001	VIDEO DETECTION	①②	2	⚠⚠
EACH				
02895.005	DIGITAL WAVE RADAR DETECTION	③④	2	⚠⚠
EACH				

**TRAFFIC SIGNAL SUPPORTS \*\***

POLE NO.	ITEM NUMBER	DESCRIPTION	QTY.	ROUTE	STATION	SIDE	OFFSET	MAST ARM												PEDESTAL				
								H	K	ARM "A"						ARM "C"			SHAFT	SIGNAL				
										SIGNAL LOCATION						W	G	X		Z	H	M	N	
										L	M	N	O	P	R									S
⚠	02892.214 EACH	TRAFFIC SIGNAL SUPPORT, 46' MAST ARM WITH LUMINAIRE ARM (30' MOUNTING HEIGHT), PAINTED BLACK	1	FIFTH AVE.	536+70	LT	26'	17'	10'	46'	42'	24'	10'	40'	12'			3'	0°	30'	0°			
⚠		TRAFFIC SIGNAL SUPPORT, 15' MAST ARM		FIFTH AVE.	537+19	LT	30'	17'	10'	15'	14'	5'		8'				1'	90°					
⚠		TRAFFIC SIGNAL SUPPORT, 11' MAST ARM		FIFTH AVE.	537+27	RT	30'	17'		11'								0°		30'	0°			
⚠	02892.004 EACH	TRAFFIC SIGNAL SUPPORT, 19' TYPE X, PAINTED BLACK	1	FIFTH AVE.	537+19	RT	40'															19'	17'	10'
⚠		TRAFFIC SIGNAL SUPPORT, 15' TYPE X		FIFTH AVE.	536+70	RT	30'															15'	15'	10'

\*\* REFER TO PENNDOT TC-8800 TRAFFIC STANDARDS - SIGNALS FOR LETTER DESIGNATION



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PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT UPTOWN TO OAKLAND**  
SIGNAL PLANS  
TRAFFIC SIGNAL TABULATIONS

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CONTRACT NO. BRT-001  
DWG. NO. SG61 SHT. 1121

**TRAFFIC SIGNAL TABULATION**

FIFTH AVENUE AND MEYRAN AVENUE AND LOTHROP STREET

**TRENCH, CONDUIT, JUNCTION BOX, ELECTRICAL ITEMS**

DESCRIPTION	2 INCH CONDUIT	3 INCH CONDUIT	TRENCH AND BACKFILL, TYPE I	TRENCH AND BACKFILL, TYPE II	TRENCH AND BACKFILL, TYPE IV	AWG 8, UNDERGROUND CABLE, COPPER, 1 CONDUCTOR	SIGNAL CABLE, 14 AWG, 5 CONDUCTOR	SIGNAL CABLE, 14 AWG, 7 CONDUCTOR	ELECTRICAL SERVICE TYPE C (EXISTING)	CITY OF PITTSBURGH STANDARD CONCRETE JUNCTION BOX, TYPE 1
ITEM NUMBER	02899	02899	02898	02898	02898	02900	02900	02900	02896	02897
UNIT	002	003	001	002	005	001	002	003	003	001
LOCATION	LF	LF	LF	LF	LF	LF	LF	LF	EACH	EACH
CC TO 1	34	68		17						1
1 TO 2	144	288	7	11	54					1
2 TO S1	63	252	26		37					
1 TO 1	3	6		3						
3 TO 4		5	5							
2 TO 3		9	9							
2 TO POWER SERVICE (CITY MANHOLE)	39		10		29					
COMPLETE INTERSECTION						110	874	949	1	
TOTAL	283	628	57	31	120	110	874	949	1	2

NOTE: THE EQUIPMENT GROUNDING CONDUCTOR FOR LIGHTING CIRCUITS IS INCLUDED WITH THE CIRCUIT ITEM QUANTITIES.

S1 - TABULATED ON SYSTEMS PLAN

**SIGNS**

SYMBOL	SERIES	SIZE	AREA EACH (SQ FT)	DESCRIPTION	QUANTITY	02891.001 POST MOUNTED SIGNS, TYPE B			02891.003 POST MOUNTED SIGNS, TYPE F			02891.007 STRUCTURE MOUNTED FLAT SHEET ALUMINUM SIGNS WITH STIFFENERS			
						SF	SF	SF	SF	SF	SF	SF			
▲ D	R10-3E(MOD)	9"x15"	0.9	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER	3										
E	D3-4*	96"X32"	21.3	100 OAKLAND 200 MEYRAN AVE LOTHROP ST	1										21.3
G	R10-6AL	24"x30"	5	STOP HERE ON RED	1	5									
R	R3-1	24"x24"	4	NO RIGHT TURN	1				4						
S	R3-11B(MOD)	30"x36"	7.5	RIGHT LANE - BUSES ONLY	1										7.5
T	SS-1	30"x18"	3.8	EXCEPT RIGHT TURNS	1										3.8
U	R10-10L	30"X36"	7.5	LEFT TURN SIGNAL	1										7.5
V	R3-7bP	24"x12"	2	EXCEPT BICYCLES	4				10						
Y	R5-1	30"x30"	6.3	DO NOT ENTER	4	12.6			12.6						
TOTAL						17.6			26.6						40.1

▲ - INCIDENTAL TO ITEM #02895.002

\* WHITE REFLECTORIZED LEGEND AND BORDER ON BLUE REFLECTORIZED BACKGROUND. UTILIZE 4" CLEARVIEW 3W FOR BLOCK/NEIGHBORHOOD AND 8" CLEARVIEW 3W FOR STREET NAME. ACTUAL WIDTH DETERMINED BY LETTER SPACING. COORDINATE BLOCK NUMBERS AND STREET NAME DETAILS WITH CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE.



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Pittsburgh, PA 15219



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Blue Bell, PA 19422

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**BUS RAPID TRANSIT UPTOWN TO OAKLAND**  
SIGNAL PLANS  
TRAFFIC SIGNAL TABULATIONS



CONTRACT NO. BRT-001

DWG. NO. SG62

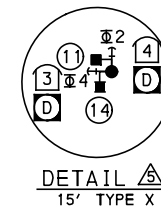
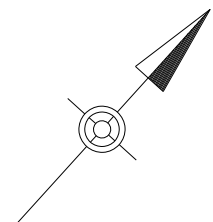
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**SIGNS**

SIGN	STANDARD	DESCRIPTION	SIZE	QTY	SIGN	STANDARD	DESCRIPTION	SIZE	QTY
A	R3-2	NO LEFT TURN	30"x30"	4	P	R3-11B(MOD)**	RIGHT LANE - BUSES ONLY	30"x36"	3
B	R10-11	NO TURN ON RED	30"x36"	1	R	SS-1**	EXCEPT RIGHT TURNS	30"x18"	3
C	R3-1	NO RIGHT TURN	30"x30"	1	S	R5-1	DO NOT ENTER	30"x30"	2
D	R10-3E(MOD)	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER	9"x15"	8	T	R10-11	NO TURN ON RED	30"x36"	2
F	D3-4	200 OAKLAND 0 ATWOOD ST	-	1	U	R3-7bP	EXCEPT BICYCLES	24"x12"	3
G	D3-4	3700 OAKLAND 3600 FIFTH AVE	-	1					
H	D3-4	3600 OAKLAND 3700 FIFTH AVE	-	1					
K	R6-1	ONE-WAY(TWO SIDED, CITY STANDARD)	36"x12"	2					
L	R5-1	DO NOT ENTER	30"x30"	1					
M	SPECIAL	ATWOOD ST	-	1					
N	R3-1	NO RIGHT TURN	24"x24"	2					

\*WHITE REFLECTORIZED LEGEND AND BORDER ON BLUE REFLECTORIZED BACKGROUND. UTILIZE 4" CLEARVIEW 3W FOR BLOCK/NEIGHBORHOOD AND 8" CLEARVIEW 3W FOR STREET NAME. ACTUAL WIDTH DETERMINED BY LETTER SPACING. COORDINATE BLOCK NUMBERS AND STREET NAME DETAILS WITH CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE.

\*\* POST MOUNTED SIGNS TABULATED AS PART OF THE SIGNING AND PAVEMENT MARKING PLAN.



**AUDIBLE PEDESTRIAN SIGNAL NOTES**

1. ALL PUSH BUTTONS SHALL BE EQUIPPED WITH LOCATOR TONES.
2. ALL WALK INTERVALS TO HAVE VERBAL MESSAGE DETAILING WALK DIRECTION.
3. VERBAL MESSAGE TO BE PLAYED DURING WALK INTERVAL WHEN BUTTON IS PRESSED.
4. ALL PEDESTRIAN PUSH BUTTONS TO BE LOCATED AT 42" ABOVE GROUND.
5. ALL PUSH BUTTONS TO BE EQUIPPED WITH VIBROTACTILE ARROW.
6. VIBROTACTILE ARROWS TO VIBRATE DURING WALK INTERVAL.
7. WALK AND DON'T WALK MESSAGE SHALL BE AUDIBLE THROUGH THE PUSH BUTTON SPEAKER.

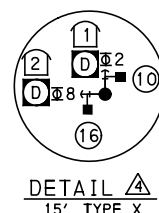
**SIGNAL ASSEMBLY NOTES**

1. ALL VEHICULAR/BICYCLE SIGNALS SHALL BE EQUIPPED WITH L.E.D LENSES, TUNNEL VISORS AND LOUVERED BLACK METAL BACKPLATES WITH 2" REFLECTIVE BORDERS.
2. MIN/MAX HEIGHT FOR VEHICULAR SIGNALS 17' /18'.
3. MIN HORIZONTAL SPACING FOR VEHICULAR SIGNALS IS 8'.
4. MIN/MAX HEIGHT FOR PEDESTRIAN MOUNTED SIGNALS 10' /12'.
5. FINAL SIGNAL HEAD PLACEMENT WILL BE DETERMINED BY A REPRESENTATIVE OF THE CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE PRIOR TO SIGNAL BEING TURNED ON.
6. ALL PEDESTRIAN SIGNALS SHALL BE PORTLAND ORANGE FULL "PEDESTRIAN HAND" AND WHITE "WALKING PERSON" SYMBOLS AND HAVE INCANDESCENT LOOK WITH COUNTDOWN TIMER.
7. PROVIDE AIRCRAFT STRANDED CABLE FOR MOUNTING SIGNAL AND SIGN BRACKET ASSEMBLIES TO MAST ARMS.
8. PROVIDE BLACK ALUMINUM HOUSINGS FOR ALL SIGNAL HEADS.
9. INSTALL POST MOUNTED SIGNAL HEADS WITH BOTTOMS NO GREATER THAN 15' ABOVE THE SIDEWALK OR PAVEMENT.
10. EXACT LOCATION OF TRAFFIC SIGNAL SUPPORTS SHALL BE DETERMINED BY A REPRESENTATIVE OF THE CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE PRIOR TO INSTALLATION.

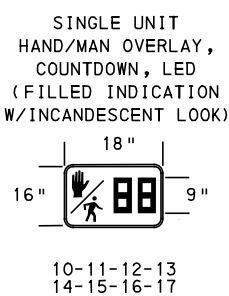
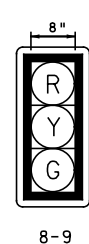
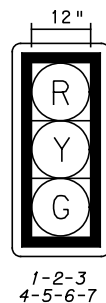
**PAVEMENT MARKING NOTES**

1. ALL STOP BARS ARE W/24".
2. CROSSWALKS ARE 10' X 24" KEYS WITH 3' TO 5' SPACING.
3. CROSSWALKS ACROSS BICYCLE LANES ARE 6' X 12" KEYS WITH 1' SPACING.

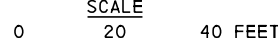
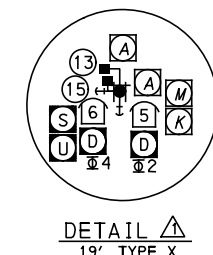
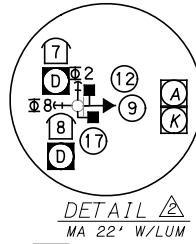
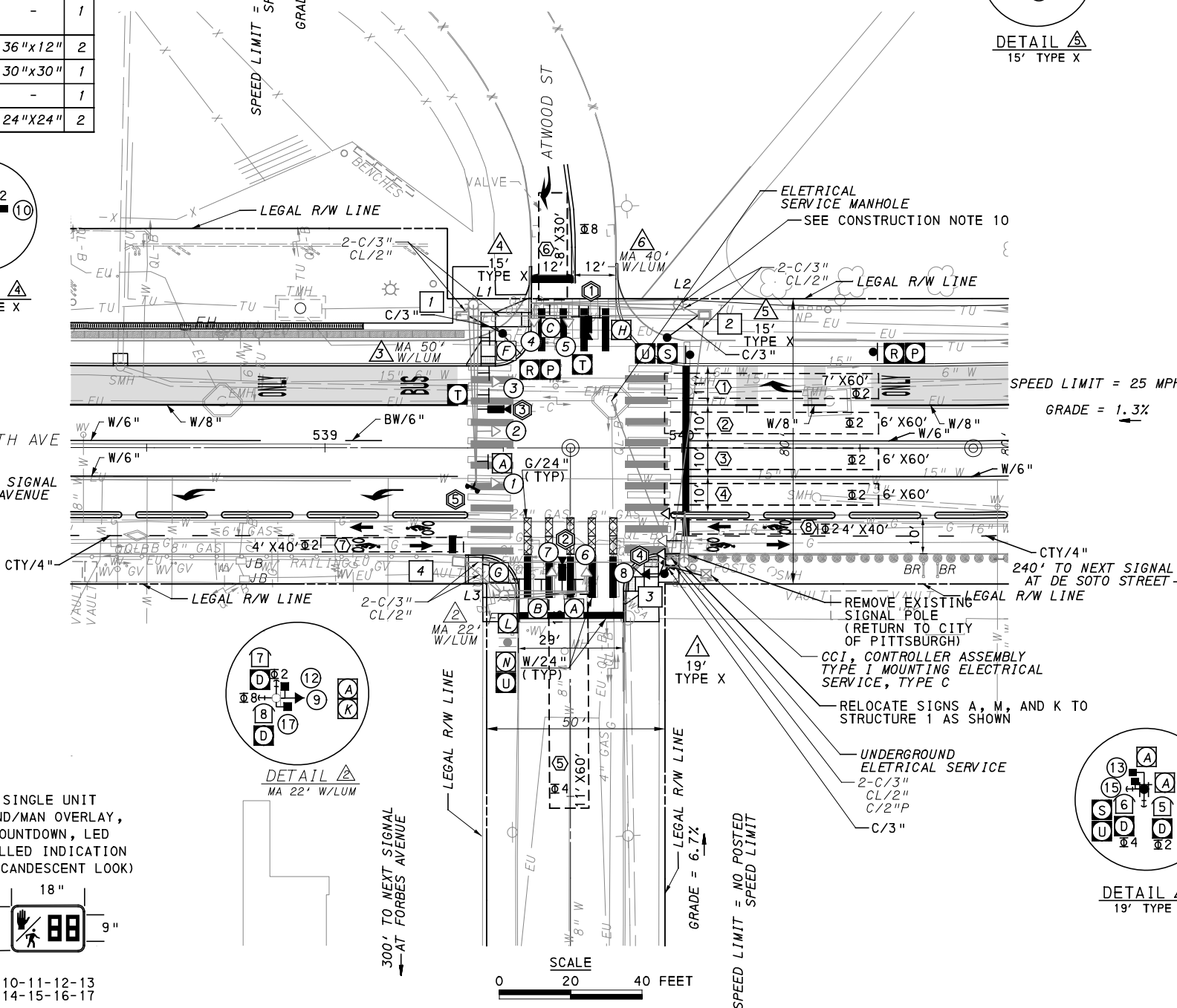
- LEGEND**
- EXISTING MAST ARM
  - EXISTING MAST ARM WITH LUMINAIRE ARM
  - EXISTING PEDESTRIAN SIGNAL HEAD
  - PROPOSED PEDESTRIAN SIGNAL HEAD
  - EXISTING VEHICULAR/BICYCLE SIGNAL HEAD
  - PROPOSED VEHICULAR/BICYCLE SIGNAL HEAD
  - PEDESTAL
  - EXISTING PEDESTAL
  - EXISTING SIGN
  - PROPOSED SIGN
  - PROPOSED STOP BAR RADAR DETECTION ZONE
  - EXISTING AUDIBLE PEDESTRIAN PUSH BUTTON/SIGN
  - PROPOSED AUDIBLE PEDESTRIAN PUSH BUTTON/SIGN
  - EXISTING CONTROLLER ASSEMBLY
  - EXISTING JUNCTION BOX
  - PROPOSED STOP BAR RADAR DETECTOR
  - C/2" CONDUIT/SIZE
  - CL/2" LIGHTING CONDUIT/SIZE
  - C/2"P POWER CONDUIT/SIZE
  - W/6" SOLID WHITE LINE/WIDTH
  - BW/6" BROKEN WHITE LINE/WIDTH
  - DY/4" DOUBLE SOLID YELLOW LINE/WIDTH
  - G/24" SOLID GREEN LINE/WIDTH
  - CTY/4" CYCLE TRACKBROKEN YELLOW LINE/WIDTH
  - PROPOSED STOP BAR VIDEO DETECTOR



**SIGNAL HEADS**



270' TO NEXT SIGNAL - AT MEYRAN AVENUE



TS-053

COUNTY: ALLEGHENY  
 MUNICIPALITY: CITY OF PITTSBURGH  
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 595 Skippack Pk,  
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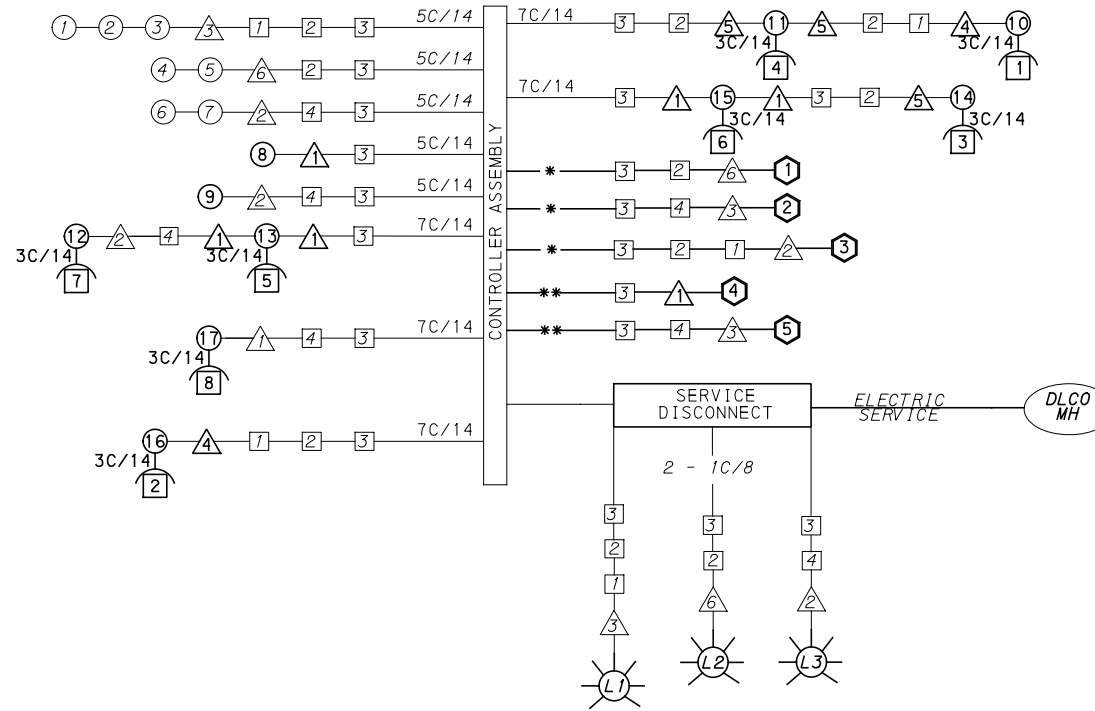
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 SIGNAL PLANS  
 FIFTH AVENUE & ATWOOD STREET

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 DWG. NO. SG63 SHT. 1123

**MOVEMENT, PHASING AND SEQUENCE CHART**

SIGNAL	INTERVAL	PHASE 2				PHASE 4+8					FLASHING CYCLING	
		1	2	3	4	1	2	3	4	5		
1-2-3		G	G	Y	R			R	R	R	R	R
4-5		R	R	R	R			G	G	Y	R	R
6-7		R	R	R	R			G	G	Y	R	R
8-9		G	G	Y	R			R	R	R	R	OFF
10-11		W	FD	DW	DW			DW	DW	DW	DW	OFF
12-13		W	FD	DW	DW			DW	DW	DW	DW	OFF
14-15		DW	DW	DW	DW			W	FD	DW	DW	OFF
16-17		DW	DW	DW	DW			W	FD	DW	DW	OFF
FIXED				3	3					3.5	2.5	
MINIMUM		15				18						
PASSAGE		3				3						
FREE (MAX)		58				30						
PEDESTRIAN		7	10			5	2	16				
MEMORY		MIN RECALL				PED RECALL						



**WIRING DIAGRAM**

5C/14 - CABLE (NO. OF CONDUCTORS/SIZE AWG.)

- SIGNAL HEAD      △ SIGNAL SUPPORT
- ◻ AUDIBLE PEDESTRIAN INDICATOR      ◻ JUNCTION BOX
- ◻ RADAR DETECTOR      ☼ LUMINAIRE

- \* INCIDENTAL TO ITEM 02895.001, AS PER MANUFACTURERS SPECIFICATIONS
- 3C/14 INCIDENTAL TO ITEM 02895.002
- \*\* INCIDENTAL TO ITEM 02895.005, AS PER MANUFACTURERS SPECIFICATIONS

**DETECTOR ZONE INFORMATION**

DETECTOR	DETECTION ZONE(S)	MODE	TYPE	ROUTE	PHASE	LOCATION MAST ARM
③	① (7' x 60')	PRESENCE	VIDEO (STOP BAR)	FIFTH AVE.	2	③
③	② (6' x 60')	PRESENCE	VIDEO (STOP BAR)	FIFTH AVE.	2	③
③	③ (6' x 60')	PRESENCE	VIDEO (STOP BAR)	FIFTH AVE.	2	③
③	④ (6' x 60')	PRESENCE	VIDEO (STOP BAR)	FIFTH AVE.	2	③
①	⑤ (11' x 60')	PRESENCE	VIDEO (STOP BAR)	ATWOOD ST.	4	⑥
②	⑥ (8' x 30')	PRESENCE	VIDEO (STOP BAR)	ATWOOD ST.	8	②
⑤	⑦ (4' x 40')	PRESENCE	RADAR (STOP BAR)	FIFTH AVENUE BICYCLE LANE	2	③
④	⑧ (4' x 40')	PRESENCE	RADAR (STOP BAR)	FIFTH AVENUE BICYCLE LANE	2	①

**TRANSIT PRIORITY PRE-EMPTION NOTES (TO BE INSTALLED BY OTHERS)**

- COORDINATE TRAFFIC CONTROLLER PROGRAMMING MODIFICATION WITH REPRESENTATIVES OF THE CITY OF PITTSBURGH AND DISTRICT TRAFFIC UNIT.
- INCLUDE A TRANSIT PRIORITY PHASE THAT WILL EXTEND THE INDICATED PHASE A MAXIMUM OF 10 SECONDS WHEN ACTIVATED BY A PORT AUTHORITY VEHICLE. DO NOT VIOLATE SIDE STREET PEDESTRIAN MINIMUM TIMINGS.
- MAINTAIN ALL YELLOW CLEARANCES AT ALL TIMES.
- PROCEED TO THE SUBSEQUENT INTERVAL AS DEFINED IN THE MOVEMENT, SEQUENCE AND TIMING DIAGRAM UPON COMPLETING THE GREEN EXTENSION INTERVAL.
- ONCE A TRANSIT CALL IS PLACED AND SATISFIED, THE CONTROLLER WILL NOT SATISFY ANOTHER CALL FOR 4 CYCLES.
- LOCATION OF BUS DETECTORS ARE TO BE FIELD ADJUSTED TO ACHIEVE MAXIMUM OPERATION.

**GENERAL NOTES**

THE CITY OF PITTSBURGH SHALL INSPECT THE NEW SIGNAL EQUIPMENT PRIOR TO ACTIVATION.  
 ALL TRAFFIC SIGNAL MAINTENANCE AND OPERATION RESPONSIBILITIES SHALL BE TURNED OVER TO THE CITY OF PITTSBURGH AFTER THE FOLLOWING CONDITIONS ARE IMPLEMENTED TO THE CITY'S SATISFACTION:

- PERMIT "AS-BUILT" TRAFFIC SIGNAL DRAWINGS ARE SUBMITTED AND APPROVED.
- ALL PUNCH LIST ITEMS ARE COMPLETED BY THE CONTRACTOR.
- AFTER THE 30-DAY CONTINUOUS UNINTERRUPTED SIGNAL OPERATION WITHOUT MALFUNCTIONS.

**CONSTRUCTION NOTES**

- ALL JUNCTION BOXES IN WALK AREAS TO BE CITY OF PITTSBURGH STANDARD CONCRETE JUNCTION BOX, TYPE 1.
- ALL JUNCTION BOXES IN NON-WALK AREAS TO BE CITY STANDARD JB-2 WITH BOTTOM.
- THERE SHALL BE NO SIGNAL WIRE OR FIBER CABLE SPLICING.
- SERVICE WIRE FROM THE POWER SOURCE TO THE CONTROLLER CABINET SHALL BE PLACED IN SECONDARY SEPARATE CONDUIT.
- STREET LIGHT CABLE IS NOT PERMITTED TO RUN THROUGH THE CONTROLLER CABINET AND SHALL BE PLACED IN SEPARATE CONDUIT.
- TRAFFIC SIGNAL CABLE SHALL BE PLACED IN DEDICATED CONDUIT.
- MOUNT DISCONNECT ON POLE NEAREST TO THE CONTROLLER CABINET EXCLUDING TYPE X POLES.
- REMOVE AND DISPOSE OF ALL EXISTING SIGNAL WIRING NO LONGER IN USE.
- REMOVE EXISTING SIGNAL EQUIPMENT NO LONGER IN USE AND RETURN TO THE CITY OF PITTSBURGH TRAFFIC CONTROL SHOP. COORDINATE DELIVERY OF EQUIPMENT WITH DELMAS MCELHANY, TRAFFIC CONTROL FOREMAN.
- SEE 01720 UTILITY COORDINATION FOR INFORMATION ON RELOCATION OF EXISTING SECURITY CAMERAS AND SHOT SPOTTERS

TS-053

COUNTY: ALLEGHENY \_\_\_\_\_  
 MUNICIPALITY: CITY OF PITTSBURGH \_\_\_\_\_  
 INTERSECTION: FIFTH AVENUE \_\_\_\_\_  
 AND ATWOOD STREET \_\_\_\_\_

APPROVED AND ACCEPTED: \_\_\_\_\_  
 CITY TRAFFIC ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_

APPROVED AND ACCEPTED: \_\_\_\_\_  
 DISTRICT TRAFFIC ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_



NO.	DATE	DESCRIPTION
REVISIONS		

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**(NOT FOR CONSTRUCTION)**

DESIGNED	MW
DRAWN	MW
CHECKED	EMC
IN CHARGE	EMC
DATE	05/01/24
SCALE	AS SHOWN

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
 PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT UPTOWN TO OAKLAND**  
 SIGNAL PLANS  
 WIRING, MOVEMENT, PHASING & SEQUENCE DIAGRAMS

**Port Authority** connecting people to life™

CONTRACT NO. BRT-001  
 DWG. NO. SG64      SHT. 1124





**TRAFFIC SIGNAL TABULATION**

FIFTH AVENUE AND ATWOOD STREET

**TRENCH, CONDUIT, JUNCTION BOX, ELECTRICAL ITEMS**

DESCRIPTION	3 INCH CONDUIT	TRENCH AND BACKFILL, TYPE 1	TRENCH AND BACKFILL, TYPE 11	SIGNAL CABLE, 14 AWG, 5 CONDUCTOR	SIGNAL CABLE, 14 AWG, 7 CONDUCTOR
ITEM NUMBER	02899	02898	02898	02900	02900
	003	001	002	002	003
UNIT	LF	LF	LF	LF	LF
LOCATION					
4 TO 1	11	7	4		
5 TO 2	11	11			
1 TO 3	3	3			
COMPLETE INTERSECTION				197	998
TOTAL	25	21	4	197	998

**SIGNS**

SYMBOL	SERIES	SIZE	AREA EACH (SQ. FT)	DESCRIPTION	QUANTITY	02891.001 POST MOUNTED SIGNS, TYPE B		
						SF	SF	SF
D	R10-3E(MOD)	9"X15"	.9	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER	8			▲
P	R3-11B(MOD)	30"X36"	7.5	RIGHT LANE - BUSES ONLY	1			7.5
R	SS-1	30"X18"	3.8	EXCEPT RIGHT TURNS	1			3.8
S	R5-1	30"X30"	6.3	DO NOT ENTER	2	6.3	6.3	
T	R10-11	30"X36"	7.5	NO TURN ON RED ●	2			15
U	R3-7bP	24"X12"	2	EXCEPT BICYCLES	3		6	
TOTAL						6.3	12.3	26.3

▲ - INCIDENTAL TO ITEM 02895.002

\* WHITE REFLECTORIZED LEGEND AND BORDER ON BLUE REFLECTORIZED BACKGROUND. UTILIZE 4" CLEARVIEW 3W FOR BLOCK/NEIGHBORHOOD AND 8" CLEARVIEW 3W FOR STREET NAME. ACTUAL WIDTH DETERMINED BY LETTER SPACING. COORDINATE BLOCK NUMBERS AND STREET NAME DETAILS WITH CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE.



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 707 Grant Street  
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 Pittsburgh, PA 15219



595 Skippack Pk,  
 Suite 400  
 Blue Bell, PA 19422

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<b>PORT AUTHORITY OF ALLEGHENY COUNTY</b> PITTSBURGH PENNSYLVANIA	
BUS RAPID TRANSIT UPTOWN TO OAKLAND SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	
<b>Port Authority</b> <small>connecting people to life</small>	CONTRACT NO. BRT-001
	DWG. NO. SG66      SHT. 1126

PLOTTED: 3/21/2024 6:07:00 PM

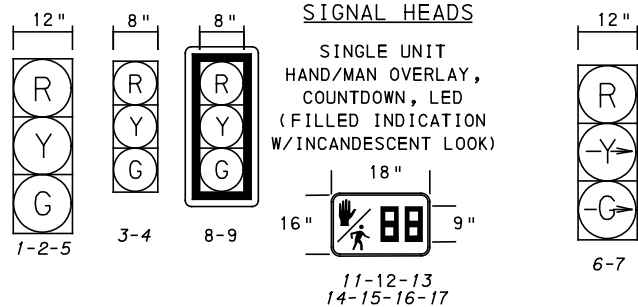
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SIGNS

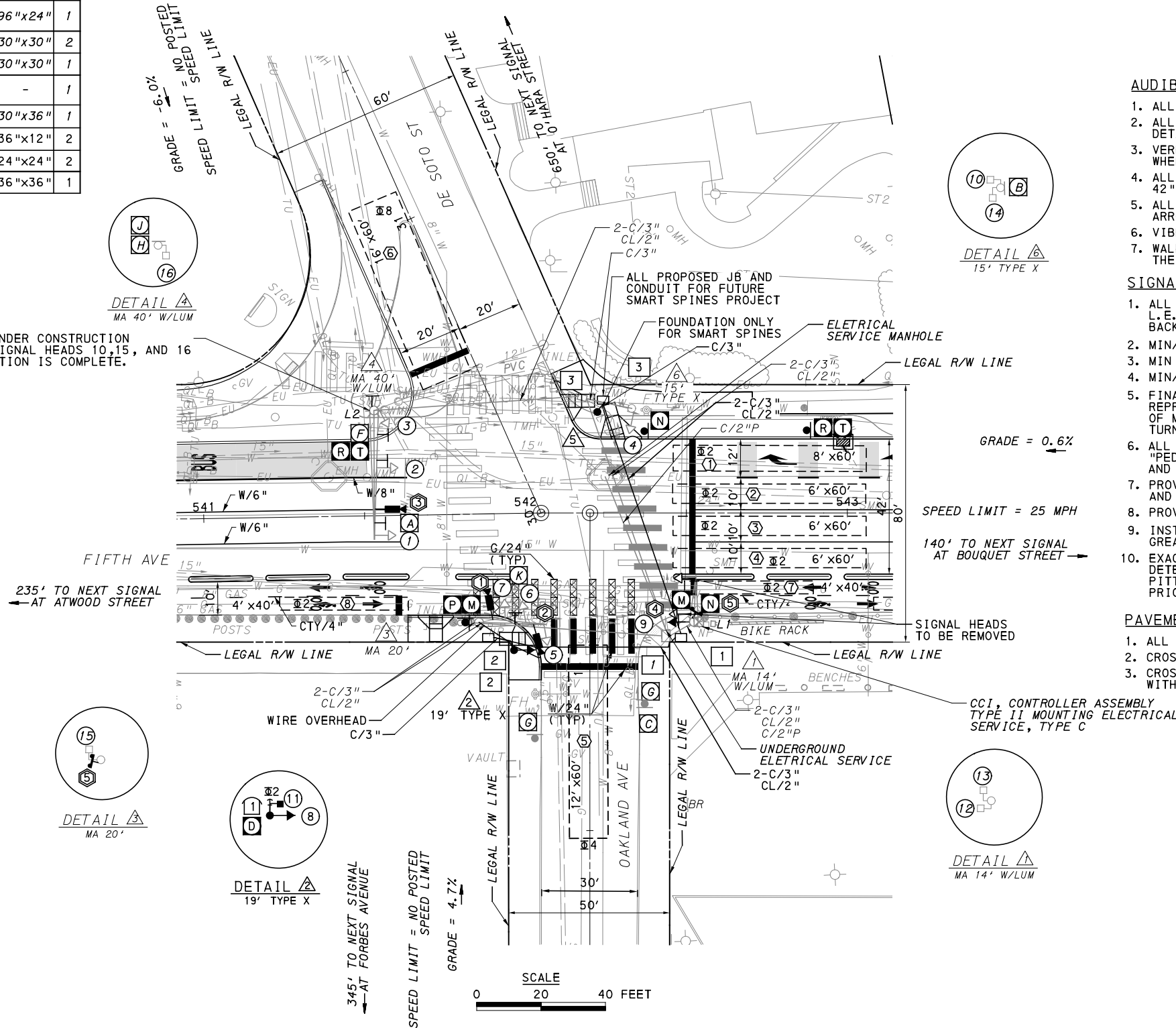
SIGN	STANDARD	DESCRIPTION	SIZE	QTY	SIGN	STANDARD	DESCRIPTION	SIZE	QTY
A	R3-2	NO LEFT TURN	30"x30"	1	R	R3-11B(MOD)**	RIGHT LANE BUSES ONLY	30"x36"	2
B	R3-2	NO LEFT TURN	24"x24"	1	T	SS-1**	EXCEPT RIGHT TURN	30"x18"	2
C	R3-1	NO RIGHT TURN	24"x24"	1					
D	R10-3E(MOD)	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER	9"x15"	1					
F	D3-4	100 OAKLAND 200 OAKLAND AVE DE SOTO ST	96"x24"	1					
G	R5-1	DO NOT ENTER	30"x30"	2					
H	R3-7-1R	ALL TRAFFIC MUST TURN RIGHT	30"x30"	1					
J	SPECIAL	3700 OAKLAND 3800 FIFTH AVE	-	1					
K	R6-2R	VERTICAL RIGHT ONE-WAY	30"x36"	1					
M	R6-1	ONE-WAY(TWO SIDED, CITY STANDARD)**	36"x12"	2					
N	R3-2	NO LEFT TURN**	24"x24"	2					
P	R5-1	DO NOT ENTER**	36"x36"	1					

\*\* POST MOUNTED SIGNS TABULATED AS PART OF THE SIGNING AND PAVEMENT MARKING PLAN.

- LEGEND**
- EXISTING MAST ARM
  - EXISTING MAST ARM WITH LUMINAIRE ARM
  - EXISTING PEDESTRIAN SIGNAL HEAD
  - PROPOSED PEDESTRIAN SIGNAL HEAD
  - EXISTING VEHICULAR/BICYCLE SIGNAL HEAD
  - PROPOSED VEHICULAR/BICYCLE SIGNAL HEAD
  - EXISTING PEDESTAL
  - PROPOSED PEDESTAL
  - EXISTING SIGN
  - PROPOSED SIGN
  - PROPOSED STOP BAR RADAR DETECTION ZONE
  - EXISTING AUDIBLE PEDESTRIAN PUSH BUTTON/SIGN
  - PROPOSED AUDIBLE PEDESTRIAN PUSH BUTTON/SIGN
  - EXISTING CONTROLLER ASSEMBLY
  - JUNCTION BOX
  - EXISTING JUNCTION BOX
  - PROPOSED STOP BAR RADAR DETECTOR
  - C/2" CONDUIT/SIZE
  - C/2"P POWER CONDUIT/SIZE
  - W/6" SOLID WHITE LINE/WIDTH
  - BW/6" BROKEN WHITE LINE/WIDTH
  - DY/4" DOUBLE SOLID YELLOW LINE/WIDTH
  - G/24" SOLID GREEN LINE/WIDTH
  - CTY/4" CITY TRACK BROKEN YELLOW/WIDTH
  - PROPOSED STOP BAR VIDEO DETECTOR



NW CORNER CURRENTLY UNDER CONSTRUCTION BY OTHERS. PEDESTRIAN SIGNAL HEADS 10, 15, AND 16 BAGGED UNTIL CONSTRUCTION IS COMPLETE.



**AUDIBLE PEDESTRIAN SIGNAL NOTES**

- ALL PUSH BUTTONS SHALL BE EQUIPPED WITH LOCATOR TONES.
- ALL WALK INTERVALS TO HAVE VERBAL MESSAGE DETAILING WALK DIRECTION.
- VERBAL MESSAGE TO BE PLAYED DURING WALK INTERVAL WHEN BUTTON IS PRESSED.
- ALL PEDESTRIAN PUSH BUTTONS TO BE LOCATED AT 42" ABOVE GROUND.
- ALL PUSH BUTTONS TO BE EQUIPPED WITH VIBROTACTILE ARROW.
- VIBROTACTILE ARROWS TO VIBRATE DURING WALK INTERVAL.
- WALK AND DON'T WALK MESSAGE SHALL BE AUDIBLE THROUGH THE PUSH BUTTON SPEAKER.

**SIGNAL ASSEMBLY NOTES**

- ALL VEHICULAR/BICYCLE SIGNALS SHALL BE EQUIPPED WITH L.E.D LENSES, TUNNEL VISORS AND LOUVERED BLACK METAL BACKPLATES WITH 2" REFLECTIVE BORDERS.
- MIN/MAX HEIGHT FOR VEHICULAR SIGNALS 17' / 18'.
- MIN HORIZONTAL SPACING FOR VEHICULAR SIGNALS IS 8'.
- MIN/MAX HEIGHT FOR PEDESTRIAN MOUNTED SIGNALS 10' / 12'.
- FINAL SIGNAL HEAD PLACEMENT WILL BE DETERMINED BY A REPRESENTATIVE OF THE CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE PRIOR TO SIGNAL BEING TURNED ON.
- ALL PEDESTRIAN SIGNALS SHALL BE PORTLAND ORANGE FULL "PEDESTRIAN HAND" AND WHITE "WALKING PERSON" SYMBOLS AND HAVE INCANDESCENT LOOK WITH COUNTDOWN TIMER.
- PROVIDE AIRCRAFT STRANDED CABLE FOR MOUNTING SIGNAL AND SIGN BRACKET ASSEMBLIES TO MAST ARMS.
- PROVIDE BLACK ALUMINUM HOUSINGS FOR ALL SIGNAL HEADS.
- INSTALL POST MOUNTED SIGNAL HEADS WITH BOTTOMS NO GREATER THAN 15' ABOVE THE SIDEWALK OR PAVEMENT.
- EXACT LOCATION OF TRAFFIC SIGNAL SUPPORTS SHALL BE DETERMINED BY A REPRESENTATIVE OF THE CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE PRIOR TO INSTALLATION.

**PAVEMENT MARKING NOTES**

- ALL STOP BARS ARE W/24".
- CROSSWALKS ARE 10' X 24" KEYS WITH 3' TO 5' SPACING.
- CROSSWALKS ACROSS BICYCLE LANES ARE 6' X 12" KEYS WITH 1' SPACING.

TS-258

COUNTY: ALLEGHENY
MUNICIPALITY: CITY OF PITTSBURGH
INTERSECTION: FIFTH AVENUE AND DE SOTO AVENUE
APPROVED AND ACCEPTED:
CITY TRAFFIC ENGINEER _____ DATE _____
APPROVED AND ACCEPTED:
DISTRICT TRAFFIC ENGINEER _____ DATE _____

**AECOM**  
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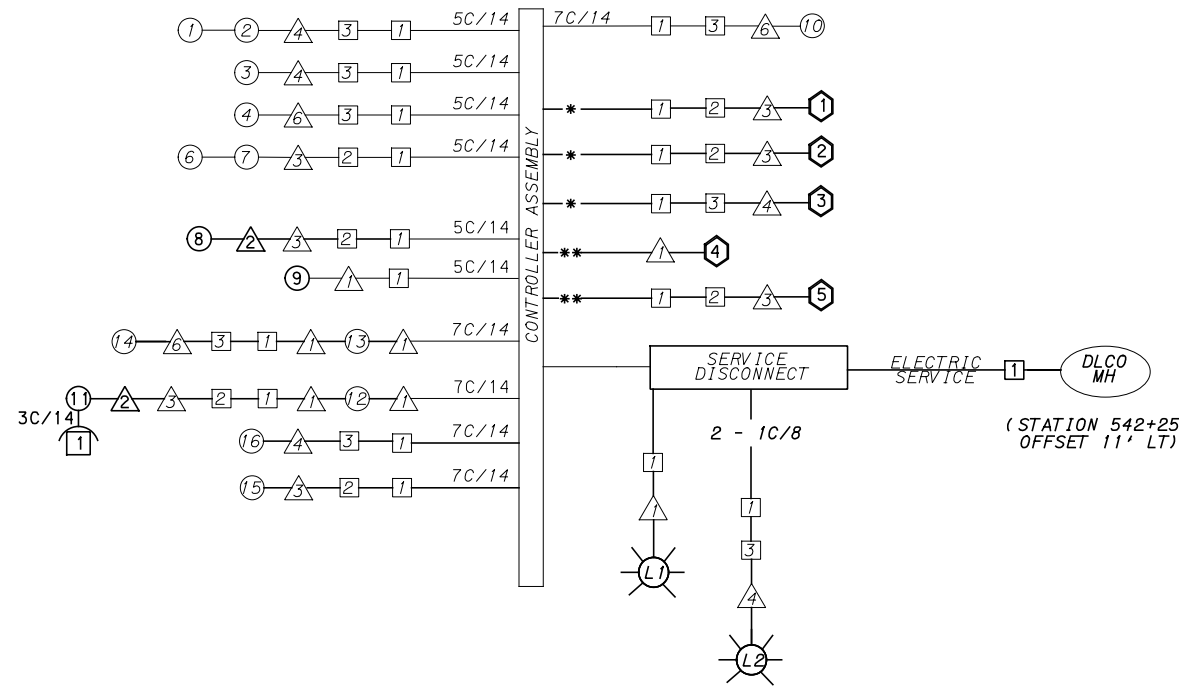
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DESIGNED	MW
DRAWN	MW
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IN CHARGE	EMC
DATE	06/21/22
SCALE	AS SHOWN

<b>PORT AUTHORITY OF ALLEGHENY COUNTY</b> PITTSBURGH PENNSYLVANIA	
<b>BUS RAPID TRANSIT UPTOWN TO OAKLAND</b> SIGNAL PLANS FIFTH AVENUE & OAKLAND AVENUE/DE SOTO STREET	
<b>Port Authority</b> <small>connecting people to life</small>	CONTRACT NO. BRT-001
	DWG. NO. SG67      SHT. 1127

**MOVEMENT, PHASING AND SEQUENCE CHART**

SIGNAL	PHASE 2				PHASE 4+8				FLASHING YELLOW
	1	2	3	4	1	2	3	4	
1-2	G	G	Y	R	R	R	R	R	R
3-4-5	R	R	R	R	G	G	Y	R	R
6-7	R	R	R	R	-G-	-G-	-Y-	R	R
8-9	G	G	Y	R	R	R	R	R	R
10-11-12	W	FD	DW	DW	DW	DW	DW	DW	OFF
13-14-15-16	DW	DW	DW	DW	W	FD	DW	DW	OFF
FIXED	3.5 2.5				3.5 3.5				
MINIMUM	18				18				
PASSAGE	3				3				
FREE (MAX)	54				34				
PEDESTRIAN	7	10			7	16			
MEMORY	MIN RECALL				PED RECALL				



**WIRING DIAGRAM**

5C/14 - CABLE (NO. OF CONDUCTORS/SIZE AWG.)

- SIGNAL HEAD
- △ SIGNAL SUPPORT
- AUDIBLE PEDESTRIAN INDICATOR
- JUNCTION BOX
- ⬡ RADAR DETECTOR
- ⊗ LUMINAIRE
- \* INCIDENTAL TO ITEM 02895.001, AS PER MANUFACTURERS SPECIFICATIONS
- \*\* INCIDENTAL TO ITEM 02895.005, AS PER MANUFACTURERS SPECIFICATIONS

**DETECTOR ZONE INFORMATION**

DETECTOR	DETECTION ZONE(S)	MODE	TYPE	ROUTE	PHASE	LOCATION MAST ARM
3	1 (8' x 60')	PRESENCE	VIDEO (STOP BAR)	FIFTH AVE.	2	4
3	2 (6' x 60')	PRESENCE	VIDEO (STOP BAR)	FIFTH AVE.	2	4
3	3 (6' x 60')	PRESENCE	VIDEO (STOP BAR)	FIFTH AVE.	2	4
3	4 (6' x 60')	PRESENCE	VIDEO (STOP BAR)	FIFTH AVE.	2	4
2	5 (12' x 60')	PRESENCE	VIDEO (STOP BAR)	DE SOTO ST.	4	3
1	6 (16' x 60')	PRESENCE	VIDEO (STOP BAR)	OKLAND AVE.	8	3
4	7 (4' x 40')	PRESENCE	RADAR (STOP BAR)	FIFTH AVENUE BICYCLE LANE	2	2
5	8 (4' x 40')	PRESENCE	RADAR (STOP BAR)	FIFTH AVENUE BICYCLE LANE	2	3

**TRANSIT PRIORITY PRE-EMPTION NOTES (TO BE INSTALLED BY OTHERS)**

- COORDINATE TRAFFIC CONTROLLER PROGRAMMING MODIFICATION WITH REPRESENTATIVES OF THE CITY OF PITTSBURGH AND DISTRICT TRAFFIC UNIT.
- INCLUDE A TRANSIT PRIORITY PHASE THAT WILL EXTEND THE INDICATED PHASE A MAXIMUM OF 10 SECONDS WHEN ACTIVATED BY A PORT AUTHORITY VEHICLE. DO NOT VIOLATE SIDE STREET PEDESTRIAN MINIMUM TIMINGS.
- MAINTAIN ALL YELLOW CLEARANCES AT ALL TIMES.
- PROCEED TO THE SUBSEQUENT INTERVAL AS DEFINED IN THE MOVEMENT, SEQUENCE AND TIMING DIAGRAM UPON COMPLETING THE GREEN EXTENSION INTERVAL.
- ONCE A TRANSIT CALL IS PLACED AND SATISFIED, THE CONTROLLER WILL NOT SATISFY ANOTHER CALL FOR 4 CYCLES.
- LOCATION OF BUS DETECTORS ARE TO BE FIELD ADJUSTED TO ACHIEVE MAXIMUM OPERATION.

**GENERAL NOTES**

- THE CITY OF PITTSBURGH SHALL INSPECT THE NEW SIGNAL EQUIPMENT PRIOR TO ACTIVATION.
- ALL TRAFFIC SIGNAL MAINTENANCE AND OPERATION RESPONSIBILITIES SHALL BE TURNED OVER TO THE CITY OF PITTSBURGH AFTER THE FOLLOWING CONDITIONS ARE IMPLEMENTED TO THE CITY'S SATISFACTION:
- PERMIT "AS-BUILT" TRAFFIC SIGNAL DRAWINGS ARE SUBMITTED AND APPROVED.
  - ALL PUNCH LIST ITEMS ARE COMPLETED BY THE CONTRACTOR.
  - AFTER THE 30-DAY CONTINUOUS UNINTERRUPTED SIGNAL OPERATION WITHOUT MALFUNCTIONS.

**CONSTRUCTION NOTES**

- ALL JUNCTION BOXES IN WALK AREAS TO BE CITY OF PITTSBURGH STANDARD CONCRETE JUNCTION BOX, TYPE 1.
- ALL JUNCTION BOXES IN NON-WALK AREAS TO BE CITY STANDARD JB-2 WITH BOTTOM.
- THERE SHALL BE NO SIGNAL WIRE OR FIBER CABLE SPLICING.
- SERVICE WIRE FROM THE POWER SOURCE TO THE CONTROLLER CABINET SHALL BE PLACED IN SECONDARY SEPARATE CONDUIT.
- STREET LIGHT CABLE IS NOT PERMITTED TO RUN THROUGH THE CONTROLLER CABINET AND SHALL BE PLACED IN SEPARATE CONDUIT.
- TRAFFIC SIGNAL CABLE SHALL BE PLACED IN DEDICATED CONDUIT.
- MOUNT DISCONNECT ON POLE NEAREST TO THE CONTROLLER CABINET EXCLUDING TYPE X POLES.
- REMOVE AND DISPOSE OF ALL EXISTING SIGNAL WIRING NO LONGER IN USE.
- REMOVE EXISTING SIGNAL EQUIPMENT NO LONGER IN USE AND RETURN TO THE CITY OF PITTSBURGH TRAFFIC CONTROL SHOP. COORDINATE DELIVERY OF EQUIPMENT WITH DELMAS MCELHANY, TRAFFIC CONTROL FOREMAN.

TS-258

COUNTY: ALLEGHENY

MUNICIPALITY: CITY OF PITTSBURGH

INTERSECTION: FIFTH AVENUE AND DE SOTO AVENUE

APPROVED AND ACCEPTED:

CITY TRAFFIC ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_

APPROVED AND ACCEPTED:

DISTRICT TRAFFIC ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_

**AECOM**  
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NO.	DATE	DESCRIPTION

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DATE	06/21/22
SCALE	AS SHOWN

<b>PORT AUTHORITY OF ALLEGHENY COUNTY</b> PITTSBURGH PENNSYLVANIA	
BUS RAPID TRANSIT UPTOWN TO OAKLAND SIGNAL PLANS WIRING, MOVEMENT, PHASING & SEQUENCE DIAGRAMS	
<b>Port Authority</b> connecting people to life	CONTRACT NO. BRT-001
DWG. NO. SG68	SHT. 1128

TRAFFIC SIGNAL TABULATION

FIFTH AVENUE AND DE SOTO AVENUE

ITEM NUMBER	MISCELLANEOUS			
UNIT	DESCRIPTION	QTY.	LOCATION	REMARKS
01882.002 EACH	TRAFFIC SIGNAL TIMING MODIFICATIONS	2	CC	
02890.005 EACH	GPS TIME CLOCK	1	CC	
02894.006 EACH	VEHICULAR SIGNAL HEAD, THREE 8" SECTIONS	2	⑧⑨	BLACK TUNNEL VISORS BLACK ALUMINUM HOUSINGS BLACK METAL LOUVERED BACKPLATE
02894.005 EACH	LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, TYPE A	1	①	BLACK TUNNEL VISORS BLACK ALUMINUM HOUSINGS
02895.002 EACH	ACCESSIBLE PEDESTRIAN SIGNALS	1	①	
02894.031 EACH	REMOVE VEHICULAR SIGNAL HEAD	2	△	SE CORNER
02212.009 EACH	POLE FOUNDATION DRILLING, LESS THAN 30" DIAMETER	14	△△	

DETECTORS

ITEM NUMBER	DESCRIPTION	SEN. NO.	QTY.	LOCATION
02895.001 EACH	VIDEO DETECTION	①②③	3	△△△
02895.005 EACH	DIGITAL WAVE RADAR DETECTION	③④	2	△△

TRAFFIC SIGNAL SUPPORTS \*\*

POLE NO.	ITEM NUMBER	DESCRIPTION	QTY.	ROUTE	STATION	SIDE	OFFSET	MAST ARM												PEDESTAL						
								ARM "A"						ARM "C"			SHAFT	SIGNAL								
								H	K	SIGNAL LOCATION				SIGN LOCATION		W		G	X	Z	H	M	N			
								L	M	N	O	P	R	S	T	U	Y									
△1		TRAFFIC SIGNAL SUPPORT, 14' MAST ARM WITH LUMINAIRE ARM (30' MOUNTING HEIGHT)		FIFTH AVE.	542+53	RT	32'	17'		14'																
△2	02892.004 EACH	TRAFFIC SIGNAL SUPPORT, 19' TYPE X, PAINTED BLACK	1	FIFTH AVE.	541+96	RT	41'																	19'	17'	10'
△3		TRAFFIC SIGNAL SUPPORT, 30' MAST ARM		FIFTH AVE.	541+86	RT	32'	17'	10'	20'	19'	13'	7'	10'												
△4		TRAFFIC SIGNAL SUPPORT, 40' MAST ARM WITH LUMINAIRE ARM (30' MOUNTING HEIGHT)		FIFTH AVE.	541+53	LT	31'	17'	10'	40'	37'	17'		34'	14'	6'										
△5	02892.008 EACH	TRAFFIC SIGNAL SUPPORT, 15' TYPE X, (FOUNDATION ONLY)	1	FIFTH AVE.	542+25	LT	31'																			
△6		TRAFFIC SIGNAL SUPPORT, 15' TYPE X		FIFTH AVE.	542+33	LT	31'																	15'	10'	10'

\*\* REFER TO PENNDOT TC-8800 TRAFFIC STANDARDS - SIGNALS FOR LETTER DESIGNATION



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PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT UPTOWN TO OAKLAND**  
SIGNAL PLANS  
TRAFFIC SIGNAL TABULATIONS

**Port Authority** connecting people to life®

CONTRACT NO. BRT-001  
DWG. NO. SG69 SHT. 1129



TRENCH, CONDUIT, JUNCTION BOX, ELECTRICAL ITEMS

DESCRIPTION	2 INCH CONDUIT	3 INCH CONDUIT	TRENCH AND BACKFILL, TYPE I	TRENCH AND BACKFILL, TYPE II	TRENCH AND BACKFILL, TYPE IV	SIGNAL CABLE, 14 AWG, 5 CONDUCTOR	SIGNAL CABLE, 14 AWG, 7 CONDUCTOR	CITY OF PITTSBURGH STANDARD CONCRETE JUNCTION BOX, TYPE 1
	02899	02899	02898	02898	02898	02900	02900	02897
ITEM NUMBER	002	003	001	002	005	002	003	001
UNIT	LF	LF	LF	LF	LF	LF	LF	EACH
LOCATION								
② TO ②								
① TO ②	59	118	14	13	32			1
① TO ③	76	152	12	6	58			1
③ TO ⑥		2	2					1
② TO ②		9	9					
COMPLETE INTERSECTION						180	183	
<b>TOTAL</b>	<b>135</b>	<b>281</b>	<b>37</b>	<b>19</b>	<b>90</b>	<b>180</b>	<b>183</b>	<b>3</b>

NOTE: THE EQUIPMENT GROUNDING CONDUCTOR FOR LIGHTING CIRCUITS IS INCLUDED WITH THE CIRCUIT ITEM QUANTITIES.

SIGNS

SYMBOL	SERIES	SIZE	AREA EACH (SQ FT)	DESCRIPTION	QUANTITY	02891.007 STRUCTURE MOUNTED FLAT SHEET ALUMINUM SIGN WITH STIFFENERS
Ⓧ	R10-3E(MOD)	9"x15"	0.9	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER	1	▲
Ⓡ	R3-7R	30"x30"	7.5	RIGHT LANE - BUSES ONLY	1	7.5
Ⓣ	SS-1	30"x18"	3.8	EXCEPT RIGHT TURN	1	3.8
<b>TOTAL</b>						<b>11.3</b>

▲ - INCIDENTAL TO ITEM 02895.002

\* WHITE REFLECTORIZED LEGEND AND BORDER ON BLUE REFLECTORIZED BACKGROUND. UTILIZE 4" CLEARVIEW 3W FOR BLOCK/NEIGHBORHOOD AND 8" CLEARVIEW 3W FOR STREET NAME. ACTUAL WIDTH DETERMINED BY LETTER SPACING. COORDINATE BLOCK NUMBERS AND STREET NAME DETAILS WITH CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE.



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DATE	05/01/24
SCALE	AS SHOWN

<b>PORT AUTHORITY OF ALLEGHENY COUNTY</b> PITTSBURGH PENNSYLVANIA	
BUS RAPID TRANSIT UPTOWN TO OAKLAND SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	
<b>Port Authority</b> <small>connecting people to life™</small>	CONTRACT NO. BRT-001
DWG. NO. SG70	SHT. 1130

**SIGNS**

SIGN	STANDARD	DESCRIPTION	SIZE	QTY	SIGN	STANDARD	DESCRIPTION	SIZE	QTY
A	R3-2	NO LEFT TURN	30"x30"	1	K	R10-10L	LEFT TURN SIGNAL	30"x36"	1
B	R10-11	NO TURN ON RED	24"x30"	1	L	R5-1	DO NOT ENTER	30"x30"	4
C	R3-1	NO RIGHT TURN	30"x30"	2	M	R3-11B(MOD)**	RIGHT LANE - BUSES ONLY	30"x36"	1
D	R10-3E(MOD)	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER	9"x15"	2	N	SS-1**	EXCEPT RIGHT TURNS	30"x18"	1
F	D3-4*	100 OAKLAND 099 BOUQUET ST	72"x24"	1	P	R3-2	NO LEFT TURN	30"x30"	1
G	R6-1	ONE-WAY (TWO SIDED, CITY STANDARD)	36"x12"	2	T	R3-7bP	EXCEPT BICYCLES	24"x12"	3
H	R6-1L	HORIZONTAL LEFT ONE-WAY	36"x12"	1					
J	SPECIAL	BUSES ONLY	30"x24"	1					

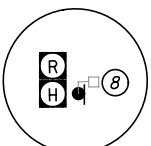
\* WHITE REFLECTORIZED LEGEND AND BORDER ON BLUE REFLECTORIZED BACKGROUND. UTILIZE 4" CLEARVIEW 3W FOR BLOCK/NEIGHBORHOOD AND 8" CLEARVIEW 3W FOR STREET NAME. ACTUAL WIDTH DETERMINED BY LETTER SPACING. COORDINATE BLOCK NUMBERS AND STREET NAME DETAILS WITH CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE.

\*\* POST MOUNTED SIGNS TABULATED AS PART OF THE SIGNING AND PAVEMENT MARKING PLAN.

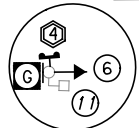
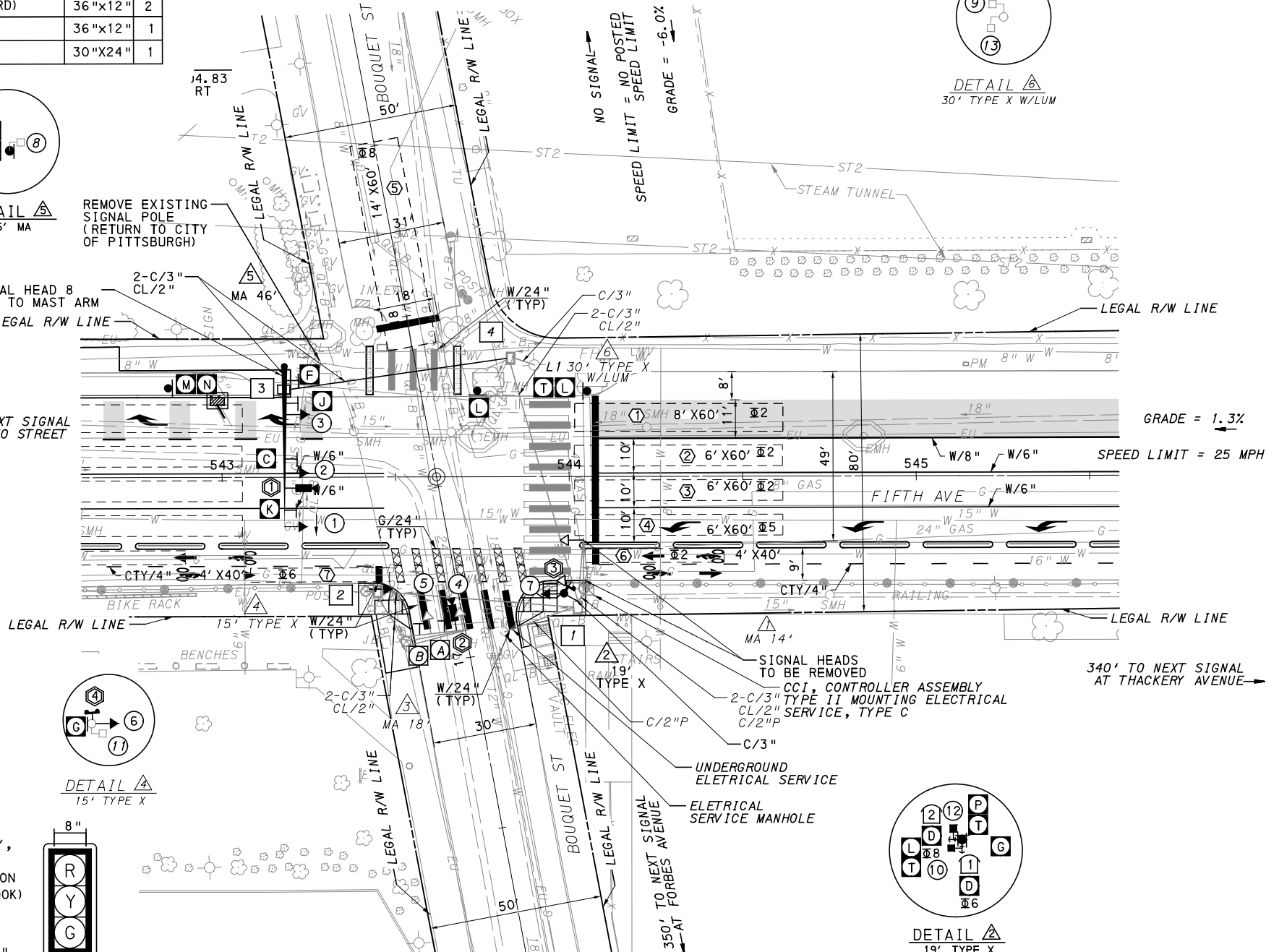
**LEGEND**

- PROPOSED MAST ARM
- EXISTING MAST ARM
- EXISTING MAST ARM WITH LUMINAIRE ARM
- EXISTING PEDESTRIAN SIGNAL HEAD
- PROPOSED PEDESTRIAN SIGNAL HEAD
- EXISTING VEHICULAR/BICYCLE SIGNAL HEAD
- PROPOSED VEHICULAR/BICYCLE SIGNAL HEAD
- PEDESTAL
- EXISTING PEDESTAL
- EXISTING SIGN
- PROPOSED SIGN
- PROPOSED STOP BAR RADAR DETECTION ZONE
- EXISTING AUDIBLE PEDESTRIAN PUSH BUTTON/SIGN
- PROPOSED AUDIBLE PEDESTRIAN PUSH BUTTON/SIGN
- EXISTING CONTROLLER ASSEMBLY
- EXISTING JUNCTION BOX
- PROPOSED STOP BAR RADAR DETECTOR
- C/2" CONDUIT/SIZE
- CL/2" LIGHTING CONDUIT/SIZE
- C/2"P POWER CONDUIT/SIZE
- W/6" SOLID WHITE LINE/WIDTH
- BW/6" BROKEN WHITE LINE/WIDTH
- DY/4" DOUBLE SOLID YELLOW LINE/WIDTH
- G/24" SOLID GREEN LINE/WIDTH
- CTY/4" CYCLE TRACK BROKEN YELLOW LINE/WIDTH
- PROPOSED STOP BAR VIDEO DETECTOR

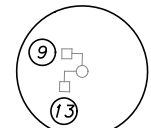
RESET PEDESTRIAN SIGNAL HEAD B FROM EXISTING MAST ARM TO MAST ARM 5 AS SHOWN



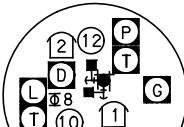
DETAIL 46' MA



DETAIL 15' TYPE X

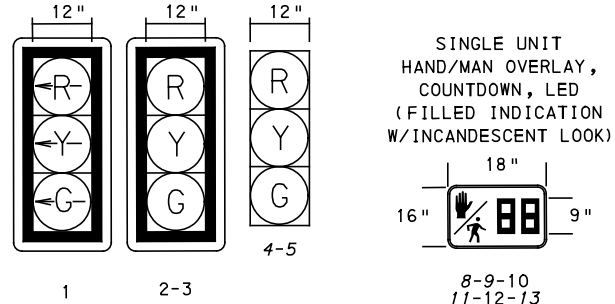


DETAIL 30' TYPE X W/LUM



DETAIL 19' TYPE X

**SIGNAL HEADS**



**AUDIBLE PEDESTRIAN SIGNAL NOTES**

- ALL PUSH BUTTONS SHALL BE EQUIPPED WITH LOCATOR TONES.
- ALL WALK INTERVALS TO HAVE VERBAL MESSAGE DETAILING WALK DIRECTION.
- VERBAL MESSAGE TO BE PLAYED DURING WALK INTERVAL WHEN BUTTON IS PRESSED.
- ALL PEDESTRIAN PUSH BUTTONS TO BE LOCATED AT 42" ABOVE GROUND.
- ALL PUSH BUTTONS TO BE EQUIPPED WITH VIBROTACTILE ARROW.
- VIBROTACTILE ARROWS TO VIBRATE DURING WALK INTERVAL.
- WALK AND DON'T WALK MESSAGE SHALL BE AUDIBLE THROUGH THE PUSH BUTTON SPEAKER.

**SIGNAL ASSEMBLY NOTES**

- ALL VEHICULAR/BICYCLE SIGNALS SHALL BE EQUIPPED WITH L.E.D LENSES, TUNNEL VISORS AND LOUVERED BLACK METAL BACKPLATES WITH 2" REFLECTIVE BORDERS.
- MIN/MAX HEIGHT FOR VEHICULAR SIGNALS 17' /18'.
- MIN HORIZONTAL SPACING FOR VEHICULAR SIGNALS IS 8'.
- MIN/MAX HEIGHT FOR PEDESTRIAN MOUNTED SIGNALS 10' /12'.
- FINAL SIGNAL HEAD PLACEMENT WILL BE DETERMINED BY A REPRESENTATIVE OF THE CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE PRIOR TO SIGNAL BEING TURNED ON.
- ALL PEDESTRIAN SIGNALS SHALL BE PORTLAND ORANGE FULL "PEDESTRIAN HAND" AND WHITE "WALKING PERSON" SYMBOLS AND HAVE INCANDESCENT LOOK WITH COUNTDOWN TIMER.
- PROVIDE AIRCRAFT STRANDED CABLE FOR MOUNTING SIGNAL AND SIGN BRACKET ASSEMBLIES TO MAST ARMS.
- PROVIDE BLACK ALUMINUM HOUSINGS FOR ALL SIGNAL HEADS.
- INSTALL POST MOUNTED SIGNAL HEADS WITH BOTTOMS NO GREATER THAN 15' ABOVE THE SIDEWALK OR PAVEMENT.
- EXACT LOCATION OF TRAFFIC SIGNAL SUPPORTS SHALL BE DETERMINED BY A REPRESENTATIVE OF THE CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE PRIOR TO INSTALLATION.

**PAVEMENT MARKING NOTES**

- ALL STOP BARS ARE W/24".
- CROSSWALKS ARE 10' X 24" KEYS WITH 3' TO 5' SPACING.
- CROSSWALKS ACROSS BICYCLE LANES ARE 6' X 12" KEYS WITH 1' SPACING.

TS-130

COUNTY: ALLEGHENY  
MUNICIPALITY: CITY OF PITTSBURGH  
INTERSECTION: FIFTH AVENUE AND BOUQUET STREET

APPROVED AND ACCEPTED: \_\_\_\_\_  
CITY TRAFFIC ENGINEER DATE  
APPROVED AND ACCEPTED: \_\_\_\_\_  
DISTRICT TRAFFIC ENGINEER DATE

**AECOM**  
Gulf Tower  
707 Grant Street  
5th Floor  
Pittsburgh, PA 15219

**DRIVE ENGINEERING**  
595 Skippack Pk,  
Suite 400  
Blue Bell, PA 19422

NO.	DATE	DESCRIPTION
REVISIONS		

THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE FEDERAL TRANSIT ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1984, AS AMENDED, FOR THE PORT AUTHORITY OF ALLEGHENY COUNTY, PENNSYLVANIA.

**(NOT FOR CONSTRUCTION)**

DESIGNED	MW
DRAWN	MW
CHECKED	EMC
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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

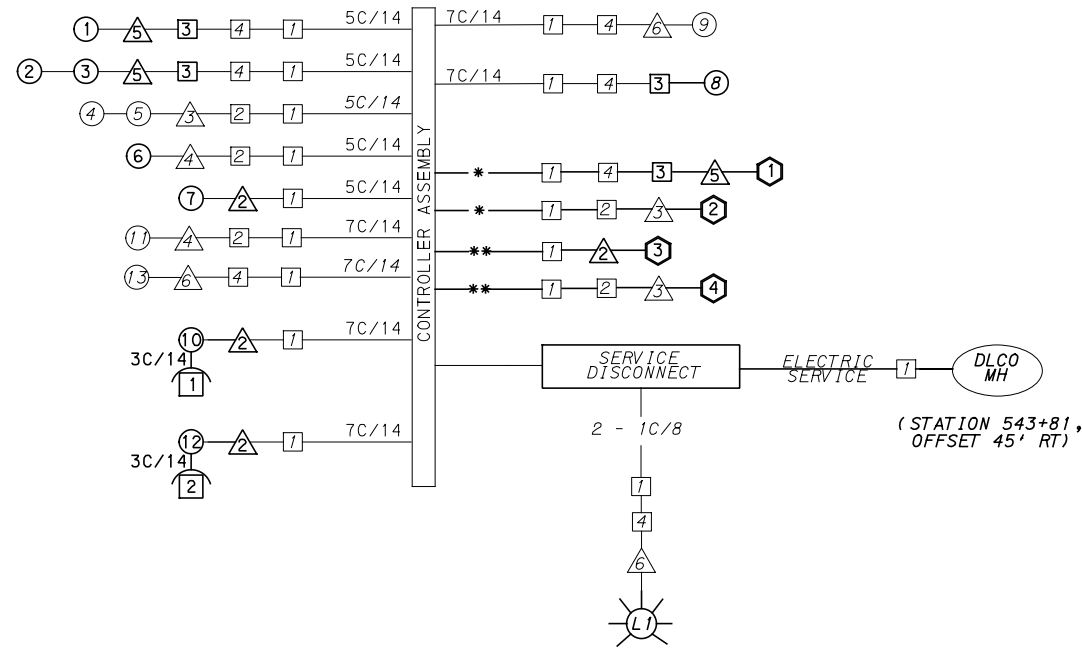
**BUS RAPID TRANSIT UPTOWN TO OAKLAND**  
**SIGNAL PLANS**  
**FIFTH AVENUE & BOUQUET STREET**

**Port Authority** connecting people to life™

CONTRACT NO. BRT-001  
DWG. NO. SG71 SHT. 1131

**MOVEMENT, PHASING AND SEQUENCE CHART**

SIGNAL	PHASE 2+6				PHASE 2+5				PHASE 8					FLASHING PULSING
	1	2	3	4	1	2	3	4	1	2	3	4	5	
1	-R	-R	-R	-R	-G	-G	-Y	-R	-R	-R	-R	-R	-R	OFF
2-3	G	G	G	G	G	G	Y	R	R	R	R	R	R	R
4-5	R	R	R	R	R	R	R	R	R	G	G	Y	R	R
6-7	G	G	Y	R	R	R	R	R	R	R	R	R	R	OFF
8-9	W	W	W	W	W	FD	DW	DW	DW	DW	DW	DW	DW	OFF
10-11	W	FD	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	OFF
12-13	DW	DW	DW	DW	DW	DW	DW	DW	W	W	FD	DW	DW	OFF
FIXED			3.5	3.5			3.5	2.5				4	3	
MINIMUM	8				18				15					
PASSAGE	3				3				3					
FREE (MAX)	17				50				23					
PEDESTRIAN	7	10			7	10			5	2	16			
MEMORY	PED RECALL				MIN RECALL				PED RECALL					



**WIRING DIAGRAM**

- 5C/14 - CABLE (NO. OF CONDUCTORS/SIZE AWG.)
- SIGNAL HEAD
  - △ SIGNAL SUPPORT
  - AUDIBLE PEDESTRIAN INDICATOR
  - JUNCTION BOX
  - ⬡ RADAR DETECTOR
  - ⊙ LUMINAIRE
- \* INCIDENTAL TO ITEM Q2895.001, AS PER MANUFACTURERS SPECIFICATIONS
- 3C/14 INCIDENTAL TO ITEM Q2895.002
- \*\* INCIDENTAL TO ITEM Q2895.005, AS PER MANUFACTURERS SPECIFICATIONS

**GENERAL NOTES**

- THE CITY OF PITTSBURGH SHALL INSPECT THE NEW SIGNAL EQUIPMENT PRIOR TO ACTIVATION.
- ALL TRAFFIC SIGNAL MAINTENANCE AND OPERATION RESPONSIBILITIES SHALL BE TURNED OVER TO THE CITY OF PITTSBURGH AFTER THE FOLLOWING CONDITIONS ARE IMPLEMENTED TO THE CITY'S SATISFACTION:
1. PERMIT "AS-BUILT" TRAFFIC SIGNAL DRAWINGS ARE SUBMITTED AND APPROVED.
  2. ALL PUNCH LIST ITEMS ARE COMPLETED BY THE CONTRACTOR.
  3. AFTER THE 30-DAY CONTINUOUS UNINTERRUPTED SIGNAL OPERATION WITHOUT MALFUNCTIONS.

**CONSTRUCTION NOTES**

1. ALL JUNCTION BOXES IN WALK AREAS TO BE CITY OF PITTSBURGH STANDARD CONCRETE JUNCTION BOX, TYPE 1.
2. ALL JUNCTION BOXES IN NON-WALK AREAS TO BE CITY STANDARD JB-2 WITH BOTTOM.
3. THERE SHALL BE NO SIGNAL WIRE OR FIBER CABLE SPLICING.
4. SERVICE WIRE FROM THE POWER SOURCE TO THE CONTROLLER CABINET SHALL BE PLACED IN SECONDARY SEPARATE CONDUIT.
5. STREET LIGHT CABLE IS NOT PERMITTED TO RUN THROUGH THE CONTROLLER CABINET AND SHALL BE PLACED IN SEPARATE CONDUIT.
6. TRAFFIC SIGNAL CABLE SHALL BE PLACED IN DEDICATED CONDUIT.
7. MOUNT DISCONNECT ON POLE NEAREST TO THE CONTROLLER CABINET EXCLUDING TYPE X POLES.
8. REMOVE AND DISPOSE OF ALL EXISTING SIGNAL WIRING NO LONGER IN USE.
9. REMOVE EXISTING SIGNAL EQUIPMENT NO LONGER IN USE AND RETURN TO THE CITY OF PITTSBURGH TRAFFIC CONTROL SHOP. COORDINATE DELIVERY OF EQUIPMENT WITH DELMAS MCELHANY, TRAFFIC CONTROL FOREMAN.
10. REMOVE ALL SIGNALS WHILE POLE IS PAINTED. REFER TO SECTION 02892.

**TRANSIT PRIORITY PRE-EMPTION NOTES (TO BE INSTALLED BY OTHERS)**

1. COORDINATE TRAFFIC CONTROLLER PROGRAMMING MODIFICATION WITH REPRESENTATIVES OF THE CITY OF PITTSBURGH AND DISTRICT TRAFFIC UNIT.
2. INCLUDE A TRANSIT PRIORITY PHASE THAT WILL EXTEND THE INDICATED PHASE A MAXIMUM OF 10 SECONDS WHEN ACTIVATED BY A PORT AUTHORITY VEHICLE. DO NOT VIOLATE SIDE STREET PEDESTRIAN MINIMUM TIMINGS.
3. MAINTAIN ALL YELLOW CLEARANCES AT ALL TIMES.
4. PROCEED TO THE SUBSEQUENT INTERVAL AS DEFINED IN THE MOVEMENT, SEQUENCE AND TIMING DIAGRAM UPON COMPLETING THE GREEN EXTENSION INTERVAL.
5. ONCE A TRANSIT CALL IS PLACED AND SATISFIED, THE CONTROLLER WILL NOT SATISFY ANOTHER CALL FOR 4 CYCLES.
6. LOCATION OF BUS DETECTORS ARE TO BE FIELD ADJUSTED TO ACHIEVE MAXIMUM OPERATION.

**DETECTOR ZONE INFORMATION**

DETECTOR	DETECTION ZONE(S)	MODE	TYPE	ROUTE	PHASE	LOCATION MAST ARM
①	① (8' x 60')	PRESENCE	VIDEO (STOP BAR)	FIFTH AVE.	2	△
①	② (6' x 60')	PRESENCE	VIDEO (STOP BAR)	FIFTH AVE.	2	△
①	③ (6' x 60')	PRESENCE	VIDEO (STOP BAR)	FIFTH AVE.	2	△
①	④ (6' x 60')	PRESENCE	VIDEO (STOP BAR)	FIFTH AVE.	5	△
②	⑤ (14' x 60')	PRESENCE	VIDEO (STOP BAR)	BOUQUET ST.	8	△
③	⑥ (4' x 40')	PRESENCE	RADAR (STOP BAR)	FIFTH AVENUE BICYCLE LANE	2	△
④	⑦ (4' x 40')	PRESENCE	RADAR (STOP BAR)	FIFTH AVENUE BICYCLE LANE	6	△

TS-130

COUNTY: ALLEGHENY

MUNICIPALITY: CITY OF PITTSBURGH

INTERSECTION: FIFTH AVENUE AND BOUQUET STREET

APPROVED AND ACCEPTED:

CITY TRAFFIC ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_

APPROVED AND ACCEPTED:

DISTRICT TRAFFIC ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_



NO.	DATE	DESCRIPTION
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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT UPTOWN TO OAKLAND**  
SIGNAL PLANS  
WIRING, MOVEMENT, PHASING & SEQUENCE DIAGRAMS

**Port Authority** connecting people to life

CONTRACT NO. BRT-001

DWG. NO. SG72 SHT. 1132

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OPERATOR: "michael.mcgarry"  
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TRAFFIC SIGNAL TABULATION

FIFTH AVENUE AND BOUQUET STREET

ITEM NUMBER	MISCELLANEOUS			
UNIT	DESCRIPTION	QTY.	LOCATION	REMARKS
01882.002 EACH	TRAFFIC SIGNAL TIMING MODIFICATIONS	2	CC	
02890.005 EACH	GPS TIME CLOCK	1	CC	
02894.001 EACH	VEHICULAR SIGNAL HEAD, THREE 12" SECTIONS	3	①②③	BLACK TUNNEL VISORS BLACK ALUMINUM HOUSINGS BLACK METAL LOUVERED BACKPLATE
02894.006 EACH	VEHICULAR SIGNAL HEAD, THREE 8" SECTIONS	2	⑥⑦	BLACK TUNNEL VISORS BLACK ALUMINUM HOUSINGS BLACK METAL LOUVERED BACKPLATE
02894.005 EACH	LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, TYPE A	2	⑩⑪	BLACK TUNNEL VISORS BLACK ALUMINUM HOUSINGS
02895.002 EACH	ACCESSIBLE PEDESTRIAN SIGNALS	2	①②	
02897.011 EACH	CONNECT TO EXISTING JUNCTION BOX	2	① ④	
02894.022 EACH	RESET PEDESTRIAN SIGNAL HEAD	1	⑤	NW CORNER
02894.031 EACH	REMOVE VEHICULAR SIGNAL HEAD	2	①	SE CORNER
02892.501 EACH	EXISTING TRAFFIC SIGNAL SUPPORT, PAINTED BLACK	4	③ ④ ⑤ ⑥	TEMPORARILY REMOVE ATTACHED SIGNAL HARDWARE AND PAINT SIGNAL SUPPORT BLACK. REATTACH HARDWARE WHEN COMPLETE.
02212.009 EACH	POLE FOUNDATION DRILLING, LESS THAN 30" DIAMETER	8	②	
02212.010 EACH	POLE FOUNDATION DRILLING, 30" DIAMETER OR GREATER	13	⑤	

DETECTORS

ITEM NUMBER	DESCRIPTION	SEN. NO.	QTY.	LOCATION
02895.001 EACH	VIDEO DETECTION	① ②	2	③ ⑤
02895.005 EACH	DIGITAL WAVE RADAR DETECTION	③ ④	2	② ④

TRAFFIC SIGNAL SUPPORTS \*\*

POLE NO.	ITEM NUMBER	DESCRIPTION	QTY.	ROUTE	STATION	SIDE	OFFSET	MAST ARM																PEDESTAL		
								ARM "A"												ARM "C"				SHAFT	SIGNAL	
								H	K	L	SIGNAL LOCATION				SIGN LOCATION				W	G	X	Z	H		M	N
											M	N	O	P	R	S	T	U								
UNIT																										
①		TRAFFIC SIGNAL SUPPORT, 14' MAST ARM		FIFTH AVE.	544+04	RT	31'	17'	10'	14'	13'	1'				3'				0°						
②	02892.004 EACH	TRAFFIC SIGNAL SUPPORT, 19' TYPE X, PAINTED BLACK	1	FIFTH AVE.	543+98	RT	33'															19'	17'	10'		
③		TRAFFIC SIGNAL SUPPORT, 18' MAST ARM		FIFTH AVE.	543+53	RT	46'	17'	10'	18'	15'	6'				10'	6'			90°						
④		TRAFFIC SIGNAL SUPPORT, 15' TYPE X		FIFTH AVE.	543+41	RT	32'															15'	17'	10'		
⑤	02892.607 EACH	TRAFFIC SIGNAL SUPPORT, 46' MAST ARM, PAINTED BLACK	1	FIFTH AVE.	543+18	LT	31'	17'	10'	10'	45'	30'	13'			40'	26'	10'		3'	0°					
⑥		TRAFFIC SIGNAL SUPPORT, 30' TYPE X WITH LUMINAIRE ARM (30' MOUNTING HEIGHT)		FIFTH AVE.	543+90	LT	31'															30'	0°	15'	17'	10'

\*\* REFER TO PENNDOT TC-8800 TRAFFIC STANDARDS - SIGNALS FOR LETTER DESIGNATION



Gulf Tower  
 707 Grant Street  
 5th Floor  
 Pittsburgh, PA 15219



595 Skippack Pk,  
 Suite 400  
 Blue Bell, PA 19422

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PORT AUTHORITY OF ALLEGHENY COUNTY  
 PITTSBURGH PENNSYLVANIA

BUS RAPID TRANSIT UPTOWN TO OAKLAND  
 SIGNAL PLANS  
 TRAFFIC SIGNAL TABULATIONS



CONTRACT NO. BRT-001

DWG. NO. SG73

SHT. 1133

**TRAFFIC SIGNAL TABULATION**

FIFTH AVENUE AND BOUQUET STREET

**TRENCH, CONDUIT, JUNCTION BOX, ELECTRICAL ITEMS**

DESCRIPTION	CITY OF PITTSBURGH STANDARD CONCRETE JUNCTION BOX, TYPE I	TRENCH AND BACKFILL, TYPE I	TRENCH AND BACKFILL, TYPE II	TRENCH AND BACKFILL, TYPE IV	2 INCH CONDUIT	3 INCH CONDUIT	SIGNAL CABLE, 14 AWG, 5 CONDUCTOR	SIGNAL CABLE, 14 AWG, 7 CONDUCTOR
ITEM NUMBER	02897	02898	02898	02898	02899	02899	02900	02900
	001	001	002	005	002	003	002	003
UNIT	EACH	LF	LF	LF	LF	LF	LF	LF
LOCATION								
4 TO 3	1		63		63	126		
1 TO 2		5				5		
3 TO 5		4	1		5	10		
COMPLETE INTERSECTION							704	318
TOTAL	1	9	64		68	141	704	318

**SIGNS**

SYMBOL	SERIES	SIZE	AREA EACH (SQ FT)	DESCRIPTION	QUANTITY	02891.001 POST MOUNTED SIGNS, TYPE B	02891.003 POST MOUNTED SIGNS, TYPE F	02891.007 STRUCTURE MOUNTED FLAT SHEET ALUMINUM SIGN WITH STIFFENERS
						SF	SF	SF
C	R3-1	30"X30"	6.3	NO RIGHT TURN	2		6.3	6.3
D	R10-3E(MOD)	9"X15"	0.9	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER	2			▲
F	D3-4*	72"X24"	12	100 OAKLAND 099 BOUQUET ST	1			12
G	R6-1	36"X12"	2.5	ONE-WAY (TWO SIDED, CITY STANDARD)	2		5	
J	SPECIAL	30"X24"	5.0	BUSES ONLY	1			5
K	R10-10L	30"X36"	7.5	LEFT TURN SIGNAL	1			7.5
L	R5-1	30"X30"	6.3	DO NOT ENTER	4	12.6	12.6	
P	R3-2	30"X30"	6.3	NO LEFT TURN	1		6.3	
T	R3-7bP	24"X12"	2	EXCEPT BICYCLES	3		6	
<b>TOTAL</b>						12.6	36.2	30.8

▲ - INCIDENTAL TO ITEM 02895.002

\* WHITE REFLECTORIZED LEGEND AND BORDER ON BLUE REFLECTORIZED BACKGROUND. UTILIZE 4" CLEARVIEW 3W FOR BLOCK/NEIGHBORHOOD AND 8" CLEARVIEW 3W FOR STREET NAME. ACTUAL WIDTH DETERMINED BY LETTER SPACING. COORDINATE BLOCK NUMBERS AND STREET NAME DETAILS WITH CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE.



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PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT UPTOWN TO OAKLAND**  
SIGNAL PLANS  
TRAFFIC SIGNAL TABULATIONS



CONTRACT NO. BRT-001

DWG. NO. SG74

SHT. 1134



**SIGNS**

SIGN	STANDARD	DESCRIPTION	SIZE	QTY
A	R3-2	NO LEFT TURN	30"x30"	2
B	R10-11	NO TURN ON RED	30"x36"	1
C	R3-1	NO RIGHT TURN	30"x30"	2
D	R10-3E(MOD)	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER	9"x15"	6
F	D3-4*	OAKLAND 100 THACKERAY	-	1
G	R5-1	DO NOT ENTER	30"x30"	4
H	R6-1**	ONE-WAY (TWO SIDED, CITY STANDARD)	36"x12"	1
K	SPECIAL	FIFTH AVE	-	1
L	SPECIAL	BUSES ONLY	30"x24"	1
N	R3-101(MOD)**	EXCEPT BIKES	24"x18"	1
P	R3-7bP	EXCEPT BICYCLES	24"x12"	2

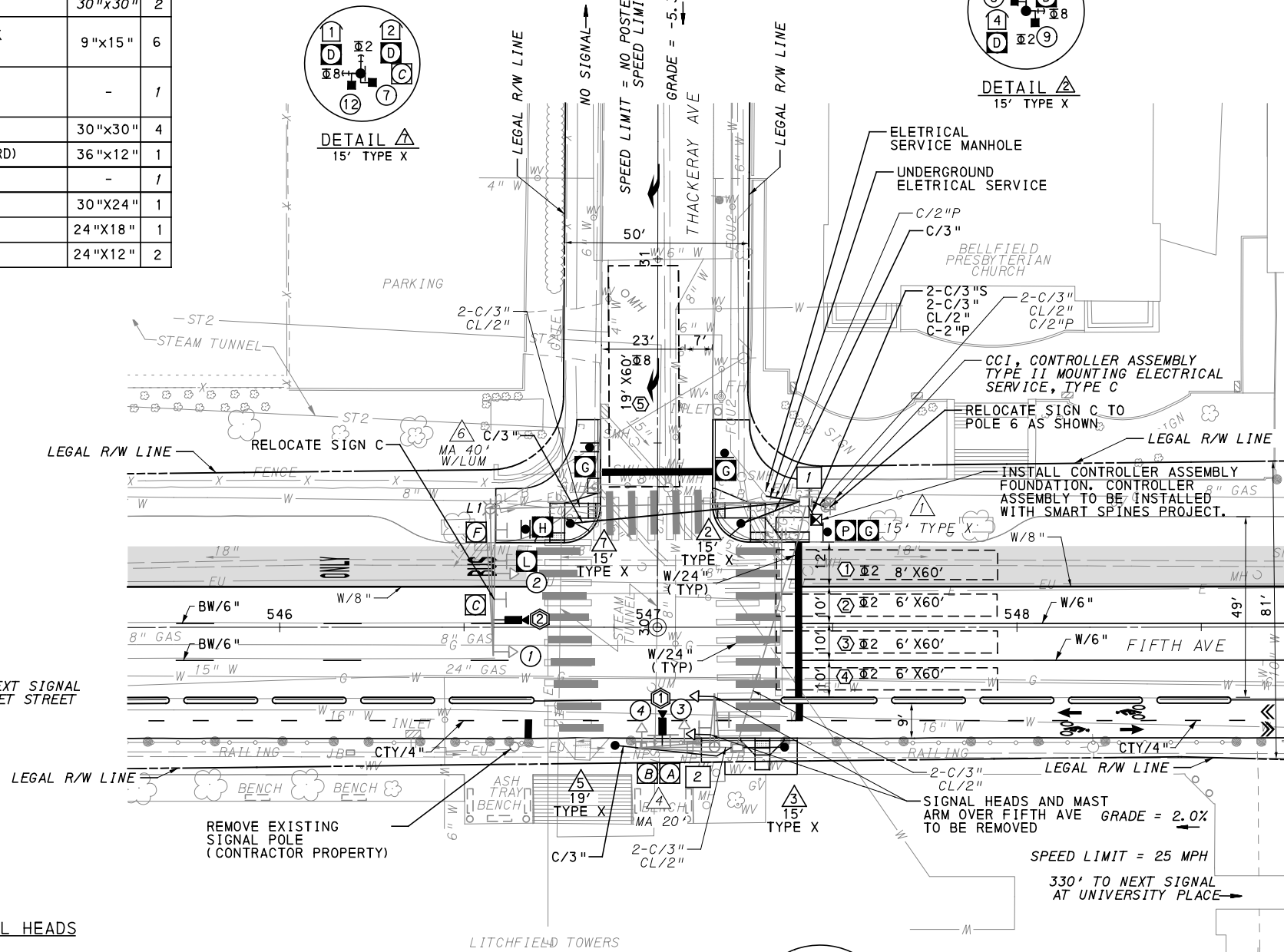
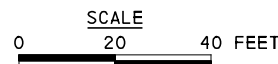
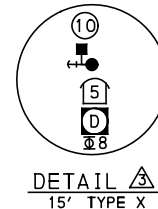
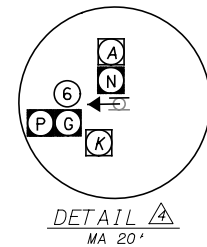
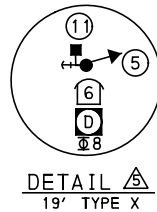
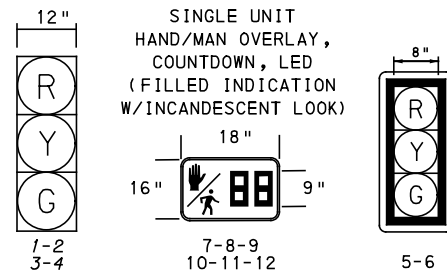
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\*\*SIGN TABULATED AS PART OF THE SIGNING AND PAVEMENT MARKING PLAN

**LEGEND**

- EXISTING MAST ARM
- EXISTING MAST ARM WITH LUMINAIRE ARM
- EXISTING PEDESTRIAN SIGNAL HEAD
- PROPOSED PEDESTRIAN SIGNAL HEAD
- EXISTING VEHICULAR/BICYCLE SIGNAL HEAD
- PROPOSED VEHICULAR/BICYCLE SIGNAL HEAD
- PEDESTAL
- EXISTING PEDESTAL
- EXISTING SIGN
- PROPOSED SIGN
- PROPOSED STOP BAR RADAR DETECTION ZONE
- EXISTING AUDIBLE PEDESTRIAN PUSH BUTTON/SIGN
- PROPOSED AUDIBLE PEDESTRIAN PUSH BUTTON/SIGN
- EXISTING CONTROLLER ASSEMBLY
- EXISTING JUNCTION BOX
- PROPOSED STOP BAR RADAR DETECTOR
- C/2" CONDUIT/SIZE
- CL/2" LIGHTING CONDUIT/SIZE
- C/2"P POWER CONDUIT/SIZE
- W/6" SOLID WHITE LINE/WIDTH
- BW/6" BROKEN WHITE LINE/WIDTH
- DY/4" DOUBLE SOLID YELLOW LINE/WIDTH
- G/24" SOLID GREEN LINE/WIDTH
- CTY/4" CITY TRACK BROKEN YELLOW/WIDTH
- PROPOSED STOP BAR VIDEO DETECTOR

**SIGNAL HEADS**



**AUDIBLE PEDESTRIAN SIGNAL NOTES**

- ALL PUSH BUTTONS SHALL BE EQUIPPED WITH LOCATOR TONES.
- ALL WALK INTERVALS TO HAVE VERBAL MESSAGE DETAILING WALK DIRECTION.
- VERBAL MESSAGE TO BE PLAYED DURING WALK INTERVAL WHEN BUTTON IS PRESSED.
- ALL PEDESTRIAN PUSH BUTTONS TO BE LOCATED AT 42" ABOVE GROUND.
- ALL PUSH BUTTONS TO BE EQUIPPED WITH VIBROTACTILE ARROW.
- VIBROTACTILE ARROWS TO VIBRATE DURING WALK INTERVAL.
- WALK AND DON'T WALK MESSAGE SHALL BE AUDIBLE THROUGH THE PUSH BUTTON SPEAKER.

**SIGNAL ASSEMBLY NOTES**

- ALL VEHICULAR/BICYCLE SIGNALS SHALL BE EQUIPPED WITH L.E.D LENSES, TUNNEL VISORS AND LOUVERED BLACK METAL BACKPLATES WITH 2" REFLECTIVE BORDERS.
- MIN/MAX HEIGHT FOR VEHICULAR SIGNALS 17' / 18'.
- MIN HORIZONTAL SPACING FOR VEHICULAR SIGNALS IS 8'.
- MIN/MAX HEIGHT FOR PEDESTRIAN MOUNTED SIGNALS 10' / 12'.
- FINAL SIGNAL HEAD PLACEMENT WILL BE DETERMINED BY A REPRESENTATIVE OF THE CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE PRIOR TO SIGNAL BEING TURNED ON.
- ALL PEDESTRIAN SIGNALS SHALL BE PORTLAND ORANGE FULL "PEDESTRIAN HAND" AND WHITE "WALKING PERSON" SYMBOLS AND HAVE INCANDESCENT LOOK WITH COUNTDOWN TIMER.
- PROVIDE AIRCRAFT STRANDED CABLE FOR MOUNTING SIGNAL AND SIGN BRACKET ASSEMBLIES TO MAST ARMS.
- PROVIDE BLACK ALUMINUM HOUSINGS FOR ALL SIGNAL HEADS.
- INSTALL POST MOUNTED SIGNAL HEADS WITH BOTTOMS NO GREATER THAN 15' ABOVE THE SIDEWALK OR PAVEMENT.
- EXACT LOCATION OF TRAFFIC SIGNAL SUPPORTS SHALL BE DETERMINED BY A REPRESENTATIVE OF THE CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE PRIOR TO INSTALLATION.

**PAVEMENT MARKING NOTES**

- ALL STOP BARS ARE W/24".
- CROSSWALKS ARE 10' X 24" KEYS WITH 3' TO 5' SPACING.
- CROSSWALKS ACROSS BICYCLE LANES ARE 6' X 12" KEYS WITH 1' SPACING.

COUNTY: ALLEGHENY  
MUNICIPALITY: CITY OF PITTSBURGH  
INTERSECTION: FIFTH AVENUE AND THACKERAY AVENUE

APPROVED AND ACCEPTED:  
CITY TRAFFIC ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_  
APPROVED AND ACCEPTED:  
DISTRICT TRAFFIC ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_



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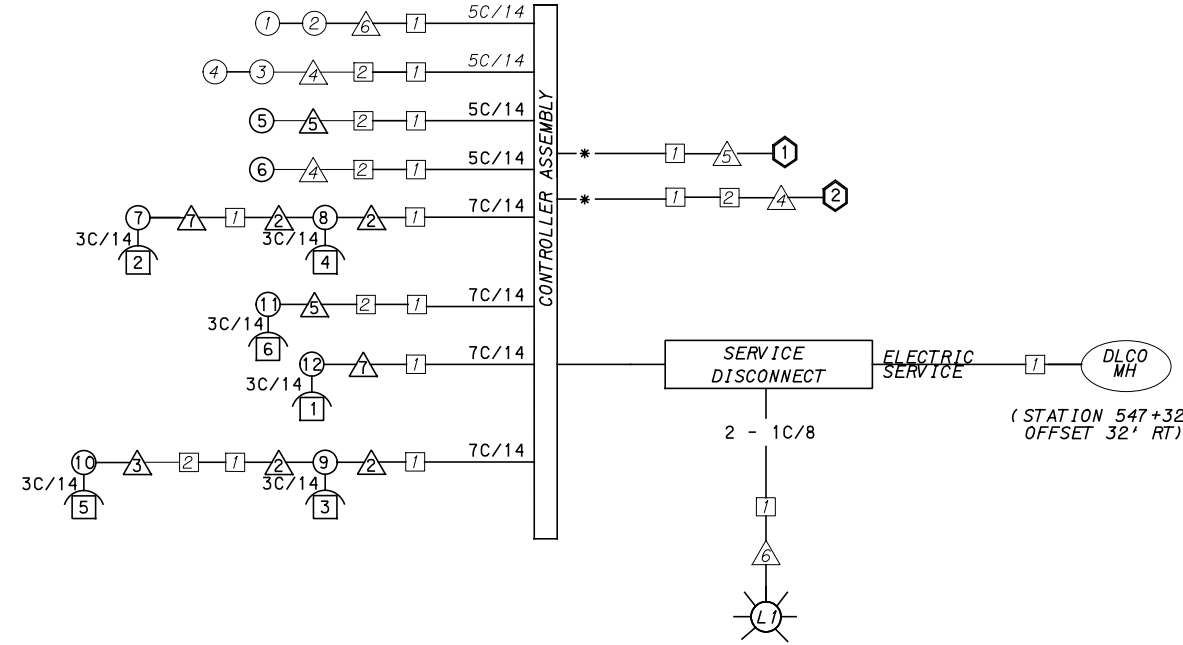
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DESIGNED MW  
DRAWN MW  
CHECKED EMC  
IN CHARGE EMC  
DATE 05/01/24  
SCALE AS SHOWN

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA  
**BUS RAPID TRANSIT UPTOWN TO OAKLAND**  
**SIGNAL PLANS**  
**FIFTH AVENUE & THACKERAY AVENUE**  
**Port Authority** connecting people to life  
CONTRACT NO. BRT-001  
DWG. NO. SG75 SHT. 1135

**MOVEMENT, PHASING AND SEQUENCE CHART**

SIGNAL	INTERVAL	PHASE 2				PHASE 8					FLASHER	
		1	2	3	4	1	2	3	4	5		
1-2		G	G	Y	R		R	R	R	R	R	
3-4		R	R	R	R		R	G	G	Y	R	R
5-6		G	G	Y	R		R	R	R	R	OFF	
7-8		W	FD	DW	DW		DW	DW	DW	DW	OFF	
9-10		DW	DW	DW	DW		W	W	FD	DW	OFF	
11-12		DW	DW	DW	DW		W	W	FD	DW	OFF	
FIXED		3.5		2.5		3		4				
MINIMUM		15				18						
PASSAGE		3				3						
FREE (MAX)		56				31						
PEDESTRIAN		7	10			5	2	16				
MEMORY		MIN RECALL				PED RECALL						



**WIRING DIAGRAM**

5C/14 - CABLE(NO. OF CONDUCTORS/SIZE AWG.)

- SIGNAL HEAD
- △ SIGNAL SUPPORT
- AUDIBLE PEDESTRIAN INDICATOR
- JUNCTION BOX
- ⬡ RADAR DETECTOR
- ⊙ LUMINAIRE

\* INCIDENTAL TO ITEM 02895.001, AS PER MANUFACTURERS SPECIFICATIONS

3C/14 INCIDENTAL TO ITEM 02895.002

**DETECTOR ZONE INFORMATION**

DETECTOR	DETECTION ZONE(S)	MODE	TYPE	ROUTE	PHASE	LOCATION MAST ARM
①	① (8' x 60')	PRESENCE	VIDEO (STOP BAR)	FIFTH AVE.	2	⑥
①	② (6' x 60')	PRESENCE	VIDEO (STOP BAR)	FIFTH AVE.	2	⑥
①	③ (6' x 60')	PRESENCE	VIDEO (STOP BAR)	FIFTH AVE.	2	⑥
①	④ (6' x 60')	PRESENCE	VIDEO (STOP BAR)	FIFTH AVE.	2	⑥
②	⑤ (19' x 60')	PRESENCE	VIDEO (STOP BAR)	THACKERAY AVE.	8	④

**TRANSIT PRIORITY PRE-EMPTION NOTES (TO BE INSTALLED BY OTHERS)**

- COORDINATE TRAFFIC CONTROLLER PROGRAMMING MODIFICATION WITH REPRESENTATIVES OF THE CITY OF PITTSBURGH AND DISTRICT TRAFFIC UNIT.
- INCLUDE A TRANSIT PRIORITY PHASE THAT WILL EXTEND THE INDICATED PHASE A MAXIMUM OF 10 SECONDS WHEN ACTIVATED BY A PORT AUTHORITY VEHICLE. DO NOT VIOLATE SIDE STREET PEDESTRIAN MINIMUM TIMINGS.
- MAINTAIN ALL YELLOW CLEARANCES AT ALL TIMES.
- PROCEED TO THE SUBSEQUENT INTERVAL AS DEFINED IN THE MOVEMENT, SEQUENCE AND TIMING DIAGRAM UPON COMPLETING THE GREEN EXTENSION INTERVAL.
- ONCE A TRANSIT CALL IS PLACED AND SATISFIED, THE CONTROLLER WILL NOT SATISFY ANOTHER CALL FOR 4 CYCLES.
- LOCATION OF BUS DETECTORS ARE TO BE FIELD ADJUSTED TO ACHIEVE MAXIMUM OPERATION.

**GENERAL NOTES**

THE CITY OF PITTSBURGH SHALL INSPECT THE NEW SIGNAL EQUIPMENT PRIOR TO ACTIVATION.  
ALL TRAFFIC SIGNAL MAINTENANCE AND OPERATION RESPONSIBILITIES SHALL BE TURNED OVER TO THE CITY OF PITTSBURGH AFTER THE FOLLOWING CONDITIONS ARE IMPLEMENTED TO THE CITY'S SATISFACTION:

- PERMIT "AS-BUILT" TRAFFIC SIGNAL DRAWINGS ARE SUBMITTED AND APPROVED.
- ALL PUNCH LIST ITEMS ARE COMPLETED BY THE CONTRACTOR.
- AFTER THE 30-DAY CONTINUOUS UNINTERRUPTED SIGNAL OPERATION WITHOUT MALFUNCTIONS.

**CONSTRUCTION NOTES**

- ALL JUNCTION BOXES IN WALK AREAS TO BE CITY OF PITTSBURGH STANDARD CONCRETE JUNCTION BOX, TYPE 1.
- ALL JUNCTION BOXES IN NON-WALK AREAS TO BE CITY STANDARD JB-2 WITH BOTTOM.
- THERE SHALL BE NO SIGNAL WIRE OR FIBER CABLE SPLICING.
- SERVICE WIRE FROM THE POWER SOURCE TO THE CONTROLLER CABINET SHALL BE PLACED IN SECONDARY SEPARATE CONDUIT.
- STREET LIGHT CABLE IS NOT PERMITTED TO RUN THROUGH THE CONTROLLER CABINET AND SHALL BE PLACED IN SEPARATE CONDUIT.
- TRAFFIC SIGNAL CABLE SHALL BE PLACED IN DEDICATED CONDUIT.
- MOUNT DISCONNECT ON POLE NEAREST TO THE CONTROLLER CABINET EXCLUDING TYPE X POLES.
- REMOVE AND DISPOSE OF ALL EXISTING SIGNAL WIRING NO LONGER IN USE.
- REMOVE EXISTING SIGNAL EQUIPMENT NO LONGER IN USE AND RETURN TO THE CITY OF PITTSBURGH TRAFFIC CONTROL SHOP. COORDINATE DELIVERY OF EQUIPMENT WITH DELMAS MCELHANY, TRAFFIC CONTROL FOREMAN.
- REMOVE ALL SIGNALS WHILE POLE IS PAINTED. REFER TO SECTION 02892.

TS-316

COUNTY: ALLEGHENY  
MUNICIPALITY: CITY OF PITTSBURGH  
INTERSECTION: FIFTH AVENUE AND THACKERAY AVENUE

APPROVED AND ACCEPTED:  
CITY TRAFFIC ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_  
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Gulf Tower  
707 Grant Street  
5th Floor  
Pittsburgh, PA 15219



595 Skippack Pk,  
Suite 400  
Blue Bell, PA 19422

NO.	DATE	DESCRIPTION
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IN CHARGE	EMC
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PORT AUTHORITY OF ALLEGHENY COUNTY PITTSBURGH PENNSYLVANIA	
BUS RAPID TRANSIT UPTOWN TO OAKLAND SIGNAL PLANS WIRING, MOVEMENT, PHASING & SEQUENCE DIAGRAMS	
Port Authority connecting people to life	CONTRACT NO. BRT-001
DWG. NO. SG76	SHT. 1136



TRAFFIC SIGNAL TABULATION

FIFTH AVENUE AND THACKERAY AVENUE

TRENCH, CONDUIT, JUNCTION BOX, ELECTRICAL ITEMS

DESCRIPTION	2 INCH CONDUIT	3 INCH CONDUIT	TRENCH AND BACKFILL, TYPE I	TRENCH AND BACKFILL, TYPE II	TRENCH AND BACKFILL, TYPE IV	SIGNAL CABLE, 14 AWG, 5 CONDUCTOR	SIGNAL CABLE, 14 AWG, 7 CONDUCTOR	CITY OF PITTSBURGH STANDARD CONCRETE JUNCTION BOX, TYPE 1
	02899	02899	02898	02898	02898	02900	02900	02897
ITEM NUMBER	002	003	001	002	005	002	003	001
UNIT	LF	LF	LF	LF	LF	LF	LF	EACH
LOCATION								
3 TO 2		11	11					
7 TO 1		64	32		32			
2 TO 1		17	17					
2 TO 5		33	9	24				
1 TO X	6	12	1	2				
COMPLETE INTERSECTION						297	652	
TOTAL	6	137	70	26	32	297	652	

SIGNS

SYMBOL	SERIES	SIZE	AREA EACH (SQ FT)	DESCRIPTION	QUANTITY	02891.001 POST MOUNTED SIGNS, TYPE B	02891.003 POST MOUNTED SIGNS, TYPE F	02891.007 STRUCTURE MOUNTED FLAT SHEET ALUMINUM SIGN WITH STIFFENERS
						SF	SF	SF
D	R10-3E(MOD)	9"X15"	0.9	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER	6			▲
L	SPECIAL	30"X24"	5	BUSES ONLY	1			5
G	R5-1	30"X30"	6.3	DO NOT ENTER	4	18.9	6.3	
P	R3-7bP	24"X12"	2	EXCEPT BICYCLES	2		4	
TOTAL						18.9	10.3	5

▲ - INCIDENTAL TO ITEM 02895.002

\* WHITE REFLECTORIZED LEGEND AND BORDER ON BLUE REFLECTORIZED BACKGROUND. UTILIZE 4" CLEARVIEW 3W FOR BLOCK/NEIGHBORHOOD AND 8" CLEARVIEW 3W FOR STREET NAME. ACTUAL WIDTH DETERMINED BY LETTER SPACING. COORDINATE BLOCK NUMBERS AND STREET NAME DETAILS WITH CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE.

NOTE: THE EQUIPMENT GROUNDING CONDUCTOR FOR LIGHTING CIRCUITS IS INCLUDED WITH THE CIRCUIT ITEM QUANTITIES.



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PORT AUTHORITY OF ALLEGHENY COUNTY  
PITTSBURGH PENNSYLVANIA

BUS RAPID TRANSIT UPTOWN TO OAKLAND  
SIGNAL PLANS  
TRAFFIC SIGNAL TABULATIONS



CONTRACT NO. BRT-001

DWG. NO. SG78

SHT. 1138

**SIGNS**

SIGN	STANDARD	DESCRIPTION	SIZE	QTY	SIGN	STANDARD	DESCRIPTION	SIZE	QTY
A	R3-2	NO LEFT TURN	30"x30"	1	R	R5-1	DO NOT ENTER	30"x30"	2
B	R10-11	NO TURN ON RED ●	30"x36"	2	S	R3-8A	LANE USE CONTROL (S-R)	30"x30"	2
C	R3-1	NO RIGHT TURN	30"x30"	2	T	R10-3E(MOD)	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER	9"x15"	4
D	R10-3E(MOD)	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER	9"x15"	4					
E	D3-4	4201 OAKLAND 4215 FIFTH AVE	72"x24"	1					
F	D3-4	4215 OAKLAND 4201 FIFTH AVE	72"x24"	1					
G	D3-4*	100 OAKLAND 099 BIGELOW BLVD	72"x24"	1					
H	R10-10L	LEFT TURN SIGNAL	30"x36"	1					
J	R3-8A	LANE USE CONTROL (L-S)	30"x30"	2					
K	R3-11B(MOD)**	RIGHT LANE - BUSES ONLY	30"x36"	2					
L	SS-1**	EXCEPT RIGHT TURNS	30"x18"	2					
M	R3-2**	NO LEFT TURN	24"x24"	1					
N	R3-1**	NO RIGHT TURN	24"x24"	1					
P	R3-10I(MOD)**	EXCEPT BIKE	12"x18"	2					

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 \*\* POST MOUNTED SIGNS TABULATED AS PART OF THE SIGNING AND PAVEMENT MARKING PLAN.

- AUDIBLE PEDESTRIAN SIGNAL NOTES**
1. ALL PUSH BUTTONS SHALL BE EQUIPPED WITH LOCATOR TONES.
  2. ALL WALK INTERVALS TO HAVE VERBAL MESSAGE DETAILING WALK DIRECTION.
  3. VERBAL MESSAGE TO BE PLAYED DURING WALK INTERVAL WHEN BUTTON IS PRESSED.
  4. ALL PEDESTRIAN PUSH BUTTONS TO BE LOCATED AT 42" ABOVE GROUND.
  5. ALL PUSH BUTTONS TO BE EQUIPPED WITH VIBROTACTILE ARROW.
  6. VIBROTACTILE ARROWS TO VIBRATE DURING WALK INTERVAL.
  7. WALK AND DON'T WALK MESSAGE SHALL BE AUDIBLE THROUGH THE PUSH BUTTON SPEAKER.

- SIGNAL ASSEMBLY NOTES**
1. ALL VEHICULAR/BICYCLE SIGNALS SHALL BE EQUIPPED WITH L.E.D LENSES, TUNNEL VISORS AND LOUVERED BLACK METAL BACKPLATES WITH 2" REFLECTIVE BORDERS.
  2. MIN/MAX HEIGHT FOR VEHICULAR SIGNALS 17' / 18'.
  3. MIN HORIZONTAL SPACING FOR VEHICULAR SIGNALS IS 8'.
  4. MIN/MAX HEIGHT FOR PEDESTRIAN MOUNTED SIGNALS 10' / 12'.
  5. FINAL SIGNAL HEAD PLACEMENT WILL BE DETERMINED BY A REPRESENTATIVE OF THE CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE PRIOR TO SIGNAL BEING TURNED ON.
  6. ALL PEDESTRIAN SIGNALS SHALL BE PORTLAND ORANGE FULL "PEDESTRIAN HAND" AND WHITE "WALKING PERSON" SYMBOLS AND HAVE INCANDESCENT LOOK WITH COUNTDOWN TIMER.
  7. PROVIDE AIRCRAFT STRANDED CABLE FOR MOUNTING SIGNAL AND SIGN BRACKET ASSEMBLIES TO MAST ARMS.
  8. PROVIDE BLACK ALUMINUM HOUSINGS FOR ALL SIGNAL HEADS.
  9. INSTALL POST MOUNTED SIGNAL HEADS WITH BOTTOMS NO GREATER THAN 15" ABOVE THE SIDEWALK OR PAVEMENT.
  10. EXACT LOCATION OF TRAFFIC SIGNAL SUPPORTS SHALL BE DETERMINED BY A REPRESENTATIVE OF THE CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE PRIOR TO INSTALLATION.

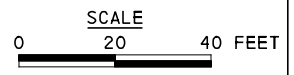
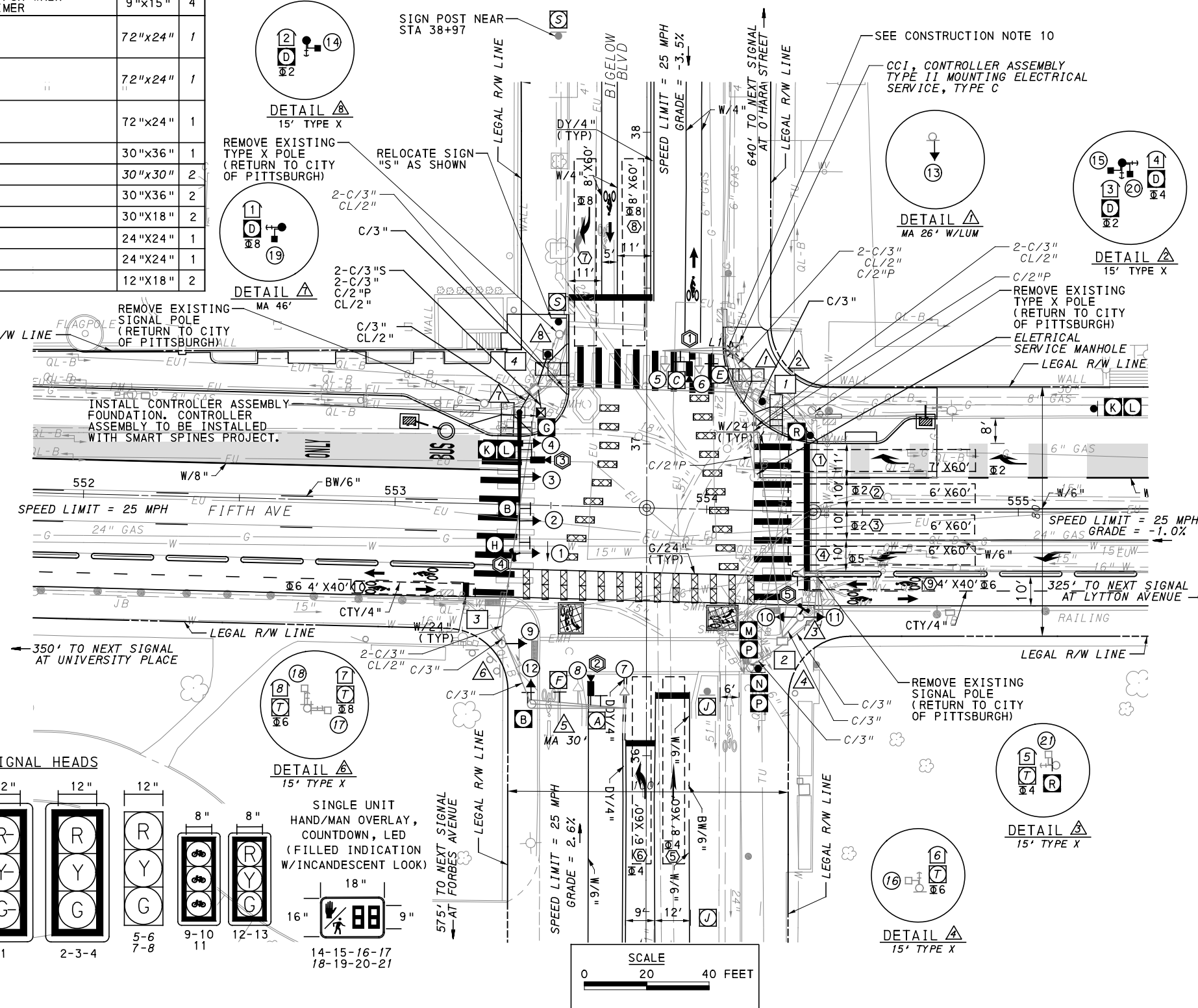
- PAVEMENT MARKING NOTES**
1. ALL STOP BARS ARE W/24".
  2. CROSSWALKS ARE 10' X 24" KEYS WITH 3' TO 5' SPACING.
  3. CROSSWALKS ACROSS BICYCLE LANES ARE 6' X 12" KEYS WITH 1' SPACING.

**LEGEND**

- MAST ARM
- EXISTING MAST ARM WITH LUMINAIRE
- PEDESTAL
- EXISTING PEDESTAL
- EXISTING PEDESTRIAN SIGNAL HEAD
- PEDESTRIAN SIGNAL HEAD
- PROPOSED VEHICULAR/BICYCLE SIGNAL HEAD
- EXISTING VEHICULAR/BICYCLE SIGNAL HEAD
- EXISTING SIGN
- PROPOSED SIGN
- PROPOSED STOP BAR RADAR DETECTION ZONE
- EXISTING AUDIBLE PEDESTRIAN PUSH BUTTON/SIGN
- AUDIBLE PEDESTRIAN PUSH BUTTON/SIGN
- EXISTING CONTROLLER ASSEMBLY
- CONTROLLER ASSEMBLY FOUNDATION
- JUNCTION BOX
- PROPOSED STOP BAR RADAR DETECTOR
- PROPOSED STOP BAR VIDEO DETECTOR

W/6" SOLID WHITE LINE/WIDTH  
 CTY/4" CYCLE TRACK BROKEN YELLOW LINE/WIDTH  
 DY/4" DOUBLE SOLID YELLOW LINE/WIDTH  
 DDY/4" DOUBLE DASHED YELLOW LINE/WIDTH  
 G/24" SOLID GREEN LINE/WIDTH  
 BW/6" BROKEN WHITE LINE/WIDTH  
 C/2" CONDUIT/SIZE  
 CL/2" LIGHTING CONDUIT/SIZE  
 C/2"P POWER CONDUIT/SIZE  
 C/3"S SYSTEM CONDUIT/SIZE

**SIGNAL HEADS**



COUNTY: ALLEGHENY  
 MUNICIPALITY: CITY OF PITTSBURGH  
 INTERSECTION: FIFTH AVENUE AND BIGELOW BOULEVARD

APPROVED AND ACCEPTED:  
 CITY TRAFFIC ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_  
 APPROVED AND ACCEPTED:  
 DISTRICT TRAFFIC ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_

**AECOM**  
 Gulf Tower  
 707 Grant Street  
 5th Floor  
 Pittsburgh, PA 15219

**DRIVE ENGINEERING**  
 595 Skippack Pk,  
 Suite 400  
 Blue Bell, PA 19422

NO.	DATE	DESCRIPTION
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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
 PITTSBURGH PENNSYLVANIA  
**BUS RAPID TRANSIT UPTOWN TO OAKLAND**  
 SIGNAL PLANS  
 FIFTH AVENUE & BIGELOW BOULEVARD

**Port Authority** connecting people to life™  
 CONTRACT NO. BRT-001  
 DWG. NO. SG79 SHT. 1139



**MOVEMENT, PHASING AND SEQUENCE CHART**

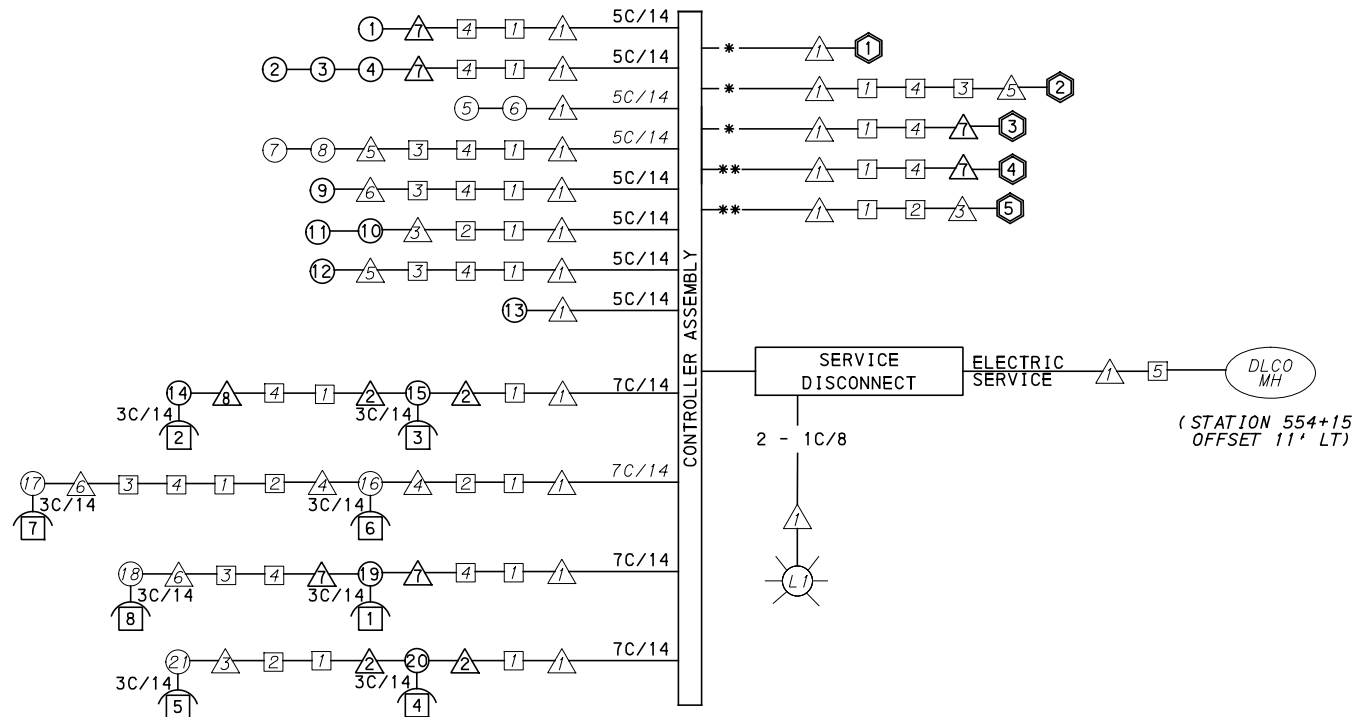
SIGNAL	PHASE 6				PHASE 2+5				PHASE 4+8					FLASHING
	1	2	3	4	1	2	3	-	1	2	3	4	5	
1	-R	-R	-R	-R	-G	-Y	-R		-R	-R	-R	-R	-R	OFF
2-3-4	G	G	Y	R	G	Y	R		R	R	R	R	R	R
5-6	R	R	R	R	R	R	R		R	G	G	Y	R	R
7-8	R	R	R	R	R	R	R		R	G	G	Y	R	R
9-10-11	G	G	Y	R	R	R	R		R	R	R	R	R	OFF
12-13	R	R	R	R	R	R	R		R	G	G	Y	R	OFF
14-15	W	FD	DW	DW	DW	DW	DW		DW	DW	DW	DW	DW	OFF
16-17	W	FD	DW	DW	DW	DW	DW		DW	DW	DW	DW	DW	OFF
18-19	DW	DW	DW	DW	DW	DW	DW		W	W	FD	DW	DW	OFF
20-21	DW	DW	DW	DW	DW	DW	DW		W	W	FD	DW	DW	OFF
FIXED			2.5	5.5		4	3					3.5	2.5	
MINIMUM		5			18				15					
PASSAGE		3			3				3					
FREE (MAX)		25			34				56					
PEDESTRIAN	7	18							5	2	17			
MEMORY	PED-RECALL				MINIMUM RECALL				PED-RECALL					

**CONTROLLER NOTES**

- ① G IF FOLLOWED BY PHASE 2+5

**TRANSIT PRIORITY PRE-EMPTION NOTES (TO BE INSTALLED BY OTHERS)**

- COORDINATE TRAFFIC CONTROLLER PROGRAMMING MODIFICATION WITH REPRESENTATIVES OF THE CITY OF PITTSBURGH AND DISTRICT TRAFFIC UNIT.
- INCLUDE A TRANSIT PRIORITY PHASE THAT WILL EXTEND THE INDICATED PHASE A MAXIMUM OF 10 SECONDS WHEN ACTIVATED BY A PORT AUTHORITY VEHICLE. DO NOT VIOLATE SIDE STREET PEDESTRIAN MINIMUM TIMINGS.
- MAINTAIN ALL YELLOW CLEARANCES AT ALL TIMES.
- PROCEED TO THE SUBSEQUENT INTERVAL AS DEFINED IN THE MOVEMENT, SEQUENCE AND TIMING DIAGRAM UPON COMPLETING THE GREEN EXTENSION INTERVAL.
- ONCE A TRANSIT CALL IS PLACED AND SATISFIED, THE CONTROLLER WILL NOT SATISFY ANOTHER CALL FOR 4 CYCLES.
- LOCATION OF BUS DETECTORS ARE TO BE FIELD ADJUSTED TO ACHIEVE MAXIMUM OPERATION.



**WIRING DIAGRAM**

5C/14 - CABLE (NO. OF CONDUCTORS/SIZE AWG.)

- SIGNAL HEAD      △ SIGNAL SUPPORT
- AUDIBLE PEDESTRIAN INDICATOR      □ JUNCTION BOX
- ⬡ RADAR DETECTOR      ⊗ LUMINAIRE

\* INCIDENTAL TO ITEM 02895.001, AS PER MANUFACTURERS SPECIFICATIONS

3C/14 INCIDENTAL TO ITEM 02895.002

\*\* INCIDENTAL TO ITEM 02895.005, AS PER MANUFACTURERS SPECIFICATIONS

**DETECTOR ZONE INFORMATION**

DETECTOR	DETECTION ZONE(S)	MODE	TYPE	ROUTE	PHASE	LOCATION MAST ARM
③	① (7' x 60')	PRESENCE	VIDEO (STOP BAR)	FIFTH AVENUE	2	△
③	② (6' x 60')	PRESENCE	VIDEO (STOP BAR)	FIFTH AVENUE	2	△
③	③ (6' x 60')	PRESENCE	VIDEO (STOP BAR)	FIFTH AVENUE	2	△
③	④ (6' x 60')	PRESENCE	VIDEO (STOP BAR)	FIFTH AVENUE	5	△
①	⑤ (8' x 60')	PRESENCE	VIDEO (STOP BAR)	BIGELOW BOULEVARD	4	△
①	⑥ (6' x 60')	PRESENCE	VIDEO (STOP BAR)	BIGELOW BOULEVARD	4	△
②	⑦ (8' x 60')	PRESENCE	VIDEO (STOP BAR)	BIGELOW BOULEVARD	8	△
②	⑧ (8' x 60')	PRESENCE	VIDEO (STOP BAR)	BIGELOW BOULEVARD	8	△
④	⑨ (4' x 40')	PRESENCE	RADAR (STOP BAR)	FIFTH AVENUE BICYCLE LANE	6	△
③	⑩ (4' x 40')	PRESENCE	RADAR (STOP BAR)	FIFTH AVENUE BICYCLE LANE	6	△

**GENERAL NOTES**

- THE CITY OF PITTSBURGH SHALL INSPECT THE NEW SIGNAL EQUIPMENT PRIOR TO ACTIVATION.
- ALL TRAFFIC SIGNAL MAINTENANCE AND OPERATION RESPONSIBILITIES SHALL BE TURNED OVER TO THE CITY OF PITTSBURGH AFTER THE FOLLOWING CONDITIONS ARE IMPLEMENTED TO THE CITY'S SATISFACTION:
- PERMIT "AS-BUILT" TRAFFIC SIGNAL DRAWINGS ARE SUBMITTED AND APPROVED.
  - ALL PUNCH LIST ITEMS ARE COMPLETED BY THE CONTRACTOR.
  - AFTER THE 30-DAY CONTINUOUS UNINTERRUPTED SIGNAL OPERATION WITHOUT MALFUNCTIONS.

**CONSTRUCTION NOTES**

- ALL JUNCTION BOXES IN WALK AREAS TO BE CITY OF PITTSBURGH STANDARD CONCRETE JUNCTION BOX, TYPE 1.
- ALL JUNCTION BOXES IN NON-WALK AREAS TO BE CITY STANDARD JB-2 WITH BOTTOM.
- THERE SHALL BE NO SIGNAL WIRE OR FIBER CABLE SPLICING.
- SERVICE WIRE FROM THE POWER SOURCE TO THE CONTROLLER CABINET SHALL BE PLACED IN SECONDARY SEPARATE CONDUIT.
- STREET LIGHT CABLE IS NOT PERMITTED TO RUN THROUGH THE CONTROLLER CABINET AND SHALL BE PLACED IN SEPARATE CONDUIT.
- TRAFFIC SIGNAL CABLE SHALL BE PLACED IN DEDICATED CONDUIT.
- MOUNT DISCONNECT ON POLE NEAREST TO THE CONTROLLER CABINET EXCLUDING TYPE X POLES.
- REMOVE AND DISPOSE OF ALL EXISTING SIGNAL WIRING NO LONGER IN USE.
- REMOVE EXISTING SIGNAL EQUIPMENT NO LONGER IN USE AND RETURN TO THE CITY OF PITTSBURGH TRAFFIC CONTROL SHOP. COORDINATE DELIVERY OF EQUIPMENT WITH DELMAS MCELHANY, TRAFFIC CONTROL FOREMAN.
- SEE 01720 UTILITY COORDINATION FOR INFORMATION ON RELOCATION OF EXISTING SECURITY CAMERAS AND SHOT SPOTTERS

TS-119

COUNTY: ALLEGHENY \_\_\_\_\_  
MUNICIPALITY: CITY OF PITTSBURGH \_\_\_\_\_  
INTERSECTION: FIFTH AVENUE \_\_\_\_\_  
AND BIGELOW BOULEVARD \_\_\_\_\_

APPROVED AND ACCEPTED: \_\_\_\_\_  
CITY TRAFFIC ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_

APPROVED AND ACCEPTED: \_\_\_\_\_  
DISTRICT TRAFFIC ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_



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**(NOT FOR CONSTRUCTION)**

DESIGNED	MW
DRAWN	MW
CHECKED	EMC
IN CHARGE	EMC
DATE	05/01/24
SCALE	AS SHOWN

<b>PORT AUTHORITY OF ALLEGHENY COUNTY</b> PITTSBURGH PENNSYLVANIA	
BUS RAPID TRANSIT UPTOWN TO OAKLAND SIGNAL PLANS WIRING, MOVEMENT, PHASING & SEQUENCE DIAGRAMS	
<b>Port Authority</b> connecting people to life	CONTRACT NO. BRT-001
DWG. NO. SG80	SHT. 1140

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TRAFFIC SIGNAL TABULATION

FIFTH AVENUE AND BIGELOW BOULEVARD

ITEM NUMBER	MISCELLANEOUS			
UNIT	DESCRIPTION	QTY.	LOCATION	REMARKS
01882.002 EACH	TRAFFIC SIGNAL TIMING MODIFICATIONS	2	CC	
02890.005 EACH	GPS TIME CLOCK	1	CC	
02890.006 EACH	TRAFFIC SIGNAL CONTROLLER ASSEMBLY FOUNDATION, FUTURE INSTALLATION OF TYPE 332 BASE MOUNTED CABINET AND 8" RISER	1	☒	ONLY INSTALL A CONTROLLER CABINET FOUNDATION AND PROPOSED CONDUITS TO FIT A FUTURE TYPE 332 CABINET AND 8" RISER.
02893.001 EACH	REMOVE EXISTING POLE	1	SE CORNER	
02894.001 EACH	VEHICULAR SIGNAL HEAD, THREE 12" SECTIONS	4	①②③④	BLACK TUNNEL VISORS BLACK ALUMINUM HOUSINGS BLACK METAL LOUVERED BACKPLATE
02894.004 EACH	BICYCLE SIGNAL HEAD, THREE 8" SECTIONS	3	⑨⑩⑪	BLACK TUNNEL VISORS BLACK ALUMINUM HOUSINGS BLACK METAL LOUVERED BACKPLATE
02894.005 EACH	LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, TYPE A	4	⑭⑮⑯⑰	△ △ △ △
02894.006 EACH	VEHICULAR SIGNAL HEAD, THREE 8" SECTIONS	2	⑫⑬	BLACK TUNNEL VISORS BLACK ALUMINUM HOUSINGS BLACK METAL LOUVERED BACKPLATE
02895.002 EACH	ACCESSIBLE PEDESTRIAN SIGNALS	4	①②③④	
02897.011 EACH	CONNECT TO EXISTING JUNCTION BOX	2	①④	
02891.013 EACH	RESET POST MOUNTED SIGNS, TYPE F	1	NW CORNER	
02212.009 EACH	POLE FOUNDATION DRILLING, LESS THAN 30" DIAMETER	13	△ △	
02212.010 EACH	POLE FOUNDATION DRILLING, 30" DIAMETER OR GREATER	13	△	

DETECTORS

ITEM NUMBER	DESCRIPTION	SEN. NO.	QTY.	LOCATION
02895.001 EACH	VIDEO DETECTION	①②③	3	△ △ △
02895.005 EACH	DIGITAL WAVE RADAR DETECTION	④⑤	2	△ △

TRAFFIC SIGNAL SUPPORTS \*\*

POLE NO.	ITEM NUMBER	DESCRIPTION	QTY.	ROUTE	STATION	SIDE	OFFSET	MAST ARM																PEDESTAL				
								ARM "A"												ARM "C"				SHAFT		SIGNAL		
								H	K	SIGNAL LOCATION						SIGN LOCATION						W	G	X	Z	H	M	N
								L	M	N	O	P	R	S	T	U	Y											
△1		TRAFFIC SIGNAL SUPPORT, 26' MAST ARM		FIFTH AVE.	554+08	LT	50'	17'	10'	26'	20'	9'				16'	9'			5'	90°							
△2	02892.003 EACH	TRAFFIC SIGNAL SUPPORT, 15' TYPE X, PAINTED BLACK	1	FIFTH AVE.	554+17	LT	35'															15'	10'					
△3		TRAFFIC SIGNAL SUPPORT, 15' TYPE X		FIFTH AVE.	554+29	RT	33'															15'	10'					
△4		TRAFFIC SIGNAL SUPPORT, 15' TYPE X		FIFTH AVE.	554+15	RT	49'															15'	10'					
△5		TRAFFIC SIGNAL SUPPORT, 30' MAST ARM		FIFTH AVE.	553+44	RT	62'	17'	10'	30'	29'	16'							0°									
△6		TRAFFIC SIGNAL SUPPORT, 15' TYPE X		FIFTH AVE.	553+38	RT	44'															15'	15' 10'					
△7	02892.607 EACH	TRAFFIC SIGNAL SUPPORT, 46' MAST ARM, PAINTED BLACK	1	FIFTH AVE.	553+39	LT	30'	17'	10'	46'	44'	34'	20'	9'	40'	30'	11'		9'	0°		30'	0°					
△8	02892.003 EACH	TRAFFIC SIGNAL SUPPORT, 15' TYPE X, PAINTED BLACK	1	FIFTH AVE.	553+49	LT	47'															15'	10'					

\*\* REFER TO PENNDOT TC-8800 TRAFFIC STANDARDS - SIGNALS FOR LETTER DESIGNATION



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Pittsburgh, PA 15219



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Blue Bell, PA 19422

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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT UPTOWN TO OAKLAND**  
SIGNAL PLANS  
TRAFFIC SIGNAL TABULATIONS

**Port Authority** connecting people to life™

CONTRACT NO. BRT-001  
DWG. NO. SG81 SHT. 1141

TRAFFIC SIGNAL TABULATION

FIFTH AVENUE AND BIGELOW BOULEVARD

TRENCH, CONDUIT, JUNCTION BOX, ELECTRICAL ITEMS

DESCRIPTION	TRENCH AND BACKFILL, TYPE I	TRENCH AND BACKFILL, TYPE IV	2 INCH CONDUIT	3 INCH CONDUIT	AWG 8, UNDERGROUND CABLE, COPPER, 1 CONDUCTOR	SIGNAL CABLE, 14 AWG, 5 CONDUCTOR	SIGNAL CABLE, 14 AWG, 7 CONDUCTOR
	02898	02898	02899	02899	02900	02900	02900
ITEM NUMBER	001	005	002	003	001	002	003
UNIT	LF	LF	LF	LF	LF	LF	LF
LOCATION							
CC TO							
TO							
TO							
TO							
TO							
TO	2			2			
TO							
TO							
TO							
TO							
TO	7		7	14			
TO	11			11			
TO	6		12	24			
COMPLETE INTERSECTION					155	1093	450
TOTAL	35		19	51	155	1093	450

SIGNS

SYMBOL	SERIES	SIZE	AREA EACH (SQ FT)	DESCRIPTION	QUANTITY	02891.001 POST MOUNTED SIGNS, TYPE B	
						SF	SF
	R10-11	30"x36"	7.5	NO TURN ON RED ●	2		15
	R10-3E(MOD)	9"x15"	0.9	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER	4		▲
	D3-4*	72"x24"	12.0	100 OAKLAND 099 BIGELOW BLVD	1		12
	R10-10L	30"x36"	7.5	LEFT TURN SIGNAL	1		7.5
	R5-1	30"x30"	6.3	DO NOT ENTER	2	6.3	6.3
TOTAL							40.8

▲ - INCIDENTAL TO ITEM 02895.002

\* WHITE REFLECTORIZED LEGEND AND BORDER ON BLUE REFLECTORIZED BACKGROUND. UTILIZE 4" CLEARVIEW 3W FOR BLOCK/NEIGHBORHOOD AND 8" CLEARVIEW 3W FOR STREET NAME. ACTUAL WIDTH DETERMINED BY LETTER SPACING. COORDINATE BLOCK NUMBERS AND STREET NAME DETAILS WITH CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE.



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PORT AUTHORITY OF ALLEGHENY COUNTY PITTSBURGH PENNSYLVANIA	
BUS RAPID TRANSIT UPTOWN TO OAKLAND SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	
<b>Port Authority</b> <small>connecting people to life</small>	CONTRACT NO. BRT-001
	DWG. NO. SG82 SHT. 1142

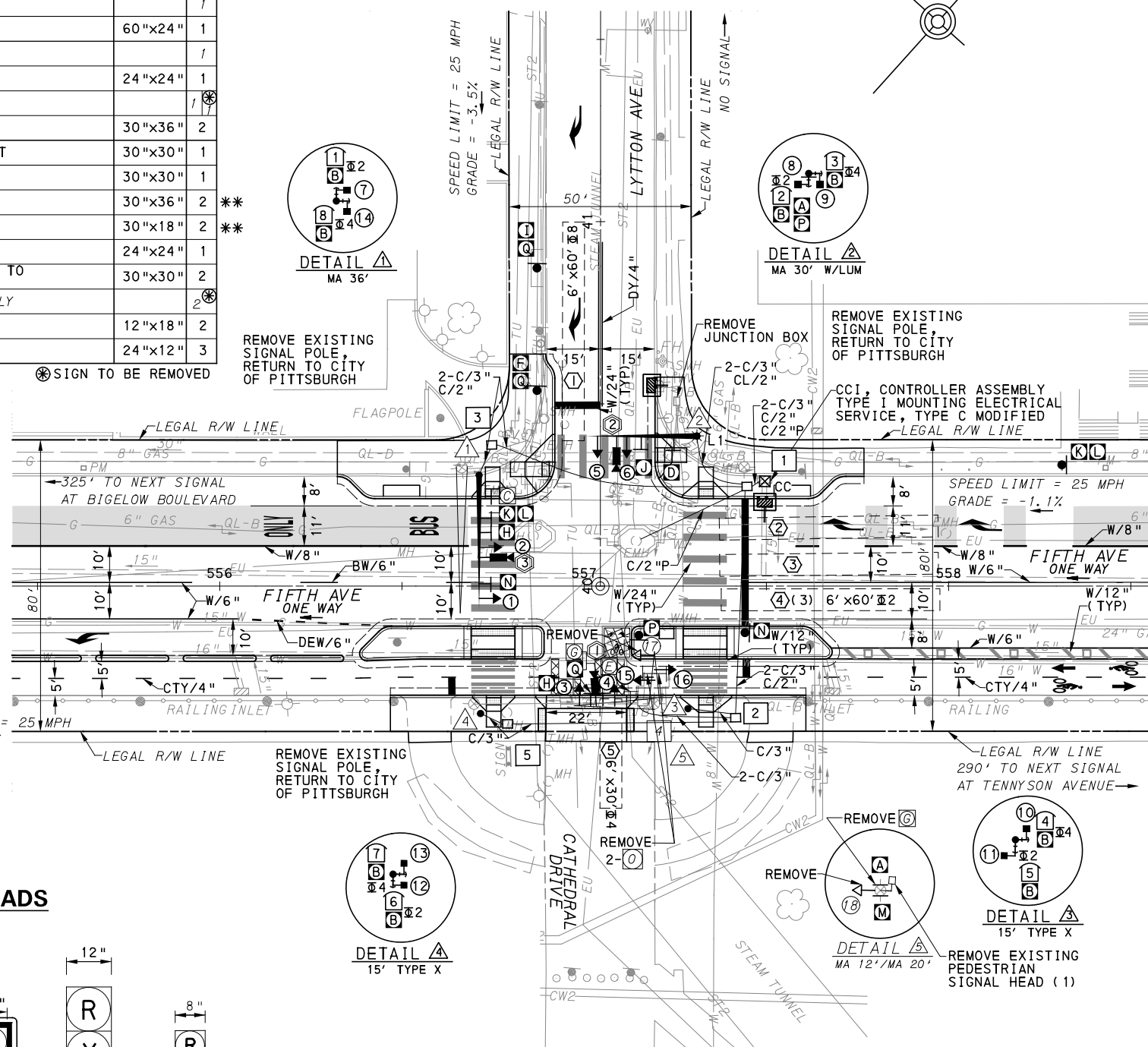
**SIGNS**

SIGN	STANDARD	DESCRIPTION	SIZE	QTY
A	R6-1	ONE-WAY (TWO SIDED, CITY STANDARD)	36"x12"	2
B	R10-3E(MOD)	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER (MOD)	9"x15"	8
C	D3-4	Oakland 100 Lytton Ave		1
D	D3-4 *	4215 Oakland 4214 Fifth Ave	60"x24"	1
E	D3-4	4214 Oakland 4215 Fifth Ave		1
F	R3-2	NO LEFT TURN	24"x24"	1
G	R3-2	NO LEFT TURN		1
H	R10-11	NO TURN ON RED ●	30"x36"	2
I	R3-7-1R	ALL TRAFFIC MUST TURN RIGHT	30"x30"	1
J	R3-1	NO RIGHT TURN	30"x30"	1
K	R3-11B(MOD)	RIGHT LANE - BUSES ONLY	30"x36"	2
L	SS-1	EXCEPT RIGHT TURNS	30"x18"	2
M	R3-1	NO RIGHT TURN	24"x24"	1
N	R10-15AL(MOD)	TURNING TRAFFIC MUST YIELD TO BIKES AND PEDESTRIANS	30"x30"	2
O		RESTRICTED LANE - BUSES ONLY		2
P	R9-5	BICYCLES USE PED SIGNAL	12"x18"	2
Q	R3-7bP	EXCEPT BICYCLES	24"x12"	3

\*WHITE REFLECTORIZED LEGEND AND BORDER ON BLUE REFLECTORIZED BACKGROUND. UTILIZE 4" CLEARVIEW 3W FOR BLOCK/NEIGHBORHOOD AND 8" CLEARVIEW 3W FOR STREET NAME. ACTUAL WIDTH DETERMINED BY LETTER SPACING. COORDINATE BLOCK NUMBERS AND STREET NAME DETAILS WITH CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE.

\*POST MOUNTED SIGNS TABULATED AS PART OF THE SIGNING AND PAVEMENT MARKING PLAN.

⊗ SIGN TO BE REMOVED



**AUDIBLE PEDESTRIAN SIGNAL NOTES**

1. ALL PUSH BUTTONS SHALL BE EQUIPPED WITH LOCATOR TONES.
2. ALL WALK INTERVALS TO HAVE VERBAL MESSAGE DETAILING WALK DIRECTION.
3. VERBAL MESSAGE TO BE PLAYED DURING WALK INTERVAL WHEN BUTTON IS PRESSED.
4. ALL PEDESTRIAN PUSH BUTTONS TO BE LOCATED AT 42" ABOVE GROUND.
5. ALL PUSH BUTTONS TO BE EQUIPPED WITH VIBROTACTILE ARROW.
6. VIBROTACTILE ARROWS TO VIBRATE DURING WALK INTERVAL.
7. WALK AND DON'T WALK MESSAGE SHALL BE AUDIBLE THROUGH THE PUSH BUTTON SPEAKER.

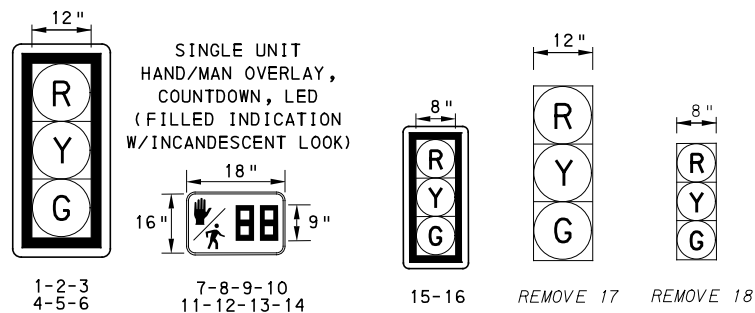
**SIGNAL ASSEMBLY NOTES**

1. ALL VEHICULAR/BICYCLE SIGNALS SHALL BE EQUIPPED WITH L.E.D LENSES, TUNNEL VISORS AND LOUVERED BLACK METAL BACKPLATES WITH 2" REFLECTIVE BORDERS.
2. MIN/MAX HEIGHT TO BOTTOM OF VEHICULAR SIGNALS 17' /18'.
3. MIN HORIZONTAL SPACING FOR VEHICULAR SIGNALS IS 8'.
4. MIN/MAX HEIGHT TO BOTTOM OF PEDESTRIAN SIGNALS 10' /12'.
5. FINAL SIGNAL HEAD PLACEMENT WILL BE DETERMINED BY REPRESENTATIVES OF THE CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE AND THE DISTRICT TRAFFIC UNIT PRIOR TO SIGNAL BEING TURNED ON.
6. ALL PEDESTRIAN SIGNALS SHALL BE PORTLAND ORANGE FULL "PEDESTRIAN HAND" AND WHITE "WALKING PERSON" SYMBOLS AND HAVE INCANDESCENT LOOK WITH COUNTDOWN TIMER.
7. PROVIDE AIRCRAFT STRANDED CABLE FOR MOUNTING SIGNAL AND SIGN BRACKET ASSEMBLIES TO MAST ARMS.
8. PROVIDE BLACK ALUMINUM HOUSINGS FOR ALL SIGNAL HEADS.
9. INSTALL POST MOUNTED SIGNAL HEADS WITH BOTTOMS NO GREATER THAN 15' ABOVE THE SIDEWALK OR PAVEMENT.
10. EXACT LOCATION OF TRAFFIC SIGNAL SUPPORTS SHALL BE DETERMINED BY REPRESENTATIVES OF THE CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE AND THE DISTRICT TRAFFIC UNIT PRIOR TO INSTALLATION.

**PAVEMENT MARKING NOTES**

1. ALL STOP BARS ARE W/24".
2. CROSSWALKS ARE 10' X 24" KEYS WITH 3' TO 5' SPACING.
3. CROSSWALKS ACROSS BICYCLE LANES ARE 6' X 12" KEYS WITH 1' SPACING.

**SIGNAL HEADS**



**LEGEND**

- ▲ MAST ARM
- ▲ MAST ARM WITH LUMINAIRE ARM
- ⊗ PEDESTRIAN SIGNAL HEAD
- VEHICULAR/BICYCLE SIGNAL HEAD
- PEDESTAL
- ▲ SIGN
- ⊗ STOP BAR VIDEO DETECTION ZONE
- AUDIBLE PEDESTRIAN PUSH BUTTON/SIGN
- CC CONTROLLER ASSEMBLY
- JUNCTION BOX
- ⊗ STOP BAR VIDEO DETECTOR
- C/2" CONDUIT/SIZE
- EXISTING VEHICULAR/BICYCLE SIGNAL HEAD
- PROPOSED BOLLARDS
- W/6" SOLID WHITE LINE/WIDTH
- BW/6" BROKEN WHITE LINE/WIDTH
- DY/4" DOUBLE SOLID YELLOW LINE/WIDTH
- CTY/4" COLD THERMOPLASTIC YELLOW LINE/WIDTH
- ▲ EXISTING MAST ARM
- ⊗ EXISTING SIGN

TS-302

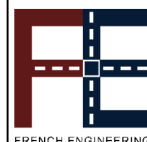
COUNTY: ALLEGHENY  
MUNICIPALITY: CITY OF PITTSBURGH  
INTERSECTION: FIFTH AVENUE AND LYTTON AVENUE

APPROVED AND ACCEPTED: \_\_\_\_\_ DATE \_\_\_\_\_  
CITY TRAFFIC ENGINEER

APPROVED AND ACCEPTED: \_\_\_\_\_ DATE \_\_\_\_\_  
DISTRICT TRAFFIC ENGINEER



Gulf Tower  
707 Grant Street  
5th Floor  
Pittsburgh, PA 15219



French Engineering, LLC  
3064 Morgantown Rd  
Smithfield, PA 15478

NO.	DATE	DESCRIPTION
REVISIONS		

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**(NOT FOR CONSTRUCTION)**

DESIGNED	LJF
DRAWN	WLZ
CHECKED	MSF
IN CHARGE	LJF
DATE	05/01/24
SCALE	AS SHOWN

<b>PORT AUTHORITY OF ALLEGHENY COUNTY</b> PITTSBURGH PENNSYLVANIA	
BUS RAPID TRANSIT UPTOWN TO OAKLAND SIGNAL PLANS FIFTH AVENUE & LYTTON AVENUE	
<b>Port Authority</b> connecting people to life	CONTRACT NO. BRT-001
DWG. NO. SG83	SHT. 1143

**MOVEMENT, PHASING AND SEQUENCE CHART**

SIGNAL	PHASE 2					PHASE 4+8				
	1	2	3	4	5	1	2	3	4	5
1-2	R	G	G	Y	R	R	R	R	R	R
3-4	R	R	R	R	R	R	G	G	Y	R
5-6	R	R	R	R	R	R	G	G	Y	R
7-8	W	W	FD	DW	DW	DW	DW	DW	DW	OFF
9-10	DW	DW	DW	DW	DW	W	W	FD	DW	OFF
11-12	W	W	FD	DW	DW	DW	DW	DW	DW	OFF
13-14	DW	DW	DW	DW	DW	W	W	FD	DW	OFF
15-16	G	G	G	Y	R	R	R	R	R	R
FIXED			3.5	2.5			3.5	2.5		
MINIMUM			15			15				
PASSAGE			3			3				
FREE (MAX)			69			19				
PEDESTRIAN	3	4	10			5	2	16		
MEMORY	MINIMUM RECALL					PED RECALL				

**DETECTOR ZONE INFORMATION**

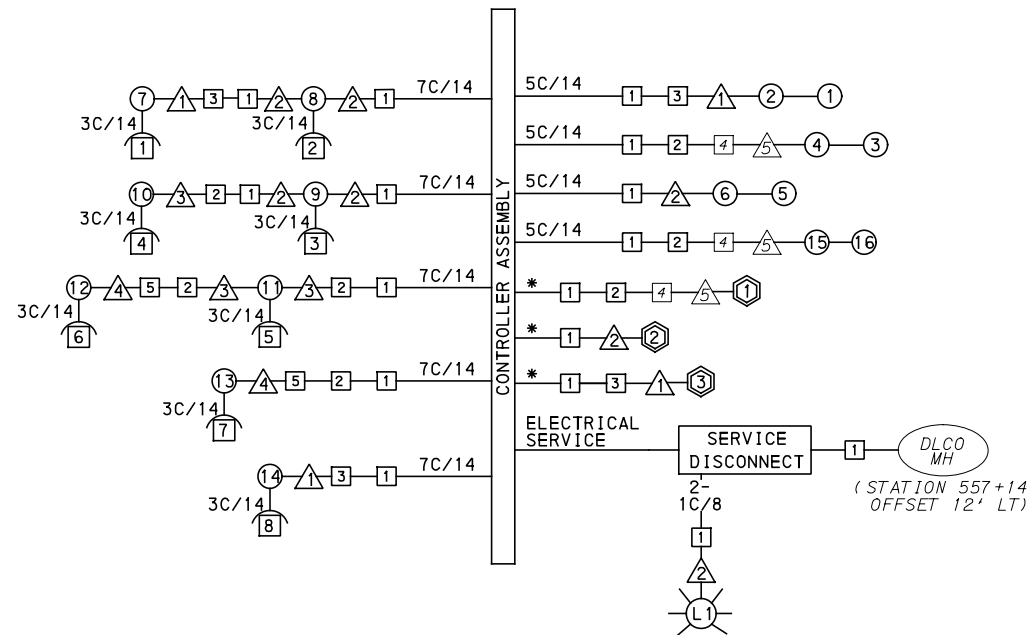
DETECTOR	DETECTION ZONE(S)	MODE	TYPE	ROUTE	PHASE	LOCATION
①	① (6' x60')	PRESENCE	VIDEO (STOP BAR)	LYTTON AVENUE	8	△
②	⑤ (6' x30')	PRESENCE	VIDEO (STOP BAR)	DRIVEWAY	4	△
③	② ③ ④ (6' x60')	PRESENCE	VIDEO (STOP BAR)	FIFTH AVENUE	2	△

**GENERAL NOTES**

- THE CITY OF PITTSBURGH SHALL INSPECT THE NEW SIGNAL EQUIPMENT PRIOR TO ACTIVATION.
- ALL TRAFFIC SIGNAL MAINTENANCE AND OPERATION RESPONSIBILITIES SHALL BE TURNED OVER TO THE CITY OF PITTSBURGH AFTER THE FOLLOWING CONDITIONS ARE IMPLEMENTED TO THE CITY'S SATISFACTION:
1. PERMIT "AS-BUILT" TRAFFIC SIGNAL DRAWINGS ARE SUBMITTED AND APPROVED.
  2. ALL PUNCH LIST ITEMS ARE COMPLETED BY THE CONTRACTOR.
  3. AFTER THE 30-DAY CONTINUOUS UNINTERRUPTED SIGNAL OPERATION WITHOUT MALFUNCTIONS.

**CONSTRUCTION NOTES**

1. ALL JUNCTION BOXES IN WALK AREAS TO BE CITY OF PITTSBURGH STANDARD CONCRETE JUNCTION BOX, TYPE 1.
2. ALL JUNCTION BOXES IN NON-WALK AREAS TO BE CITY STANDARD JB-2 WITH BOTTOM.
3. THERE SHALL BE NO SIGNAL WIRE OR FIBER CABLE SPLICING.
4. SERVICE WIRE FROM THE POWER SOURCE TO THE CONTROLLER CABINET SHALL BE PLACED IN SECONDARY SEPARATE CONDUIT.
5. STREET LIGHT CABLE IS NOT PERMITTED TO RUN THROUGH THE CONTROLLER CABINET AND SHALL BE PLACED IN SEPARATE CONDUIT.
6. TRAFFIC SIGNAL CABLE SHALL BE PLACED IN DEDICATED CONDUIT.
7. MOUNT DISCONNECT ON POLE NEAREST TO THE CONTROLLER CABINET EXCLUDING TYPE X POLES.
8. REMOVE AND DISPOSE OF ALL EXISTING SIGNAL WIRING NO LONGER IN USE.
9. REMOVE EXISTING SIGNAL EQUIPMENT NO LONGER IN USE AND RETURN TO THE CITY OF PITTSBURGH TRAFFIC CONTROL SHOP. COORDINATE DELIVERY OF EQUIPMENT WITH DELMAS MCELHANY, TRAFFIC CONTROL FOREMAN.
10. REMOVE ALL SIGNALS WHILE POLE IS PAINTED, REFER TO SECTION 02892.



**WIRING DIAGRAM**

5C/14 - CABLE (NO. OF CONDUCTORS/SIZE AWG.)

- ① PROPOSED DETECTOR      ① PROPOSED SIGNAL HEAD
- ① PROPOSED AUDIBLE PEDESTRIAN INDICATOR      △ PROPOSED SIGNAL SUPPORT
- ① PROPOSED JUNCTION BOX

3C/14 INCIDENTAL TO ITEM 02895.002

\*INCIDENTAL TO ITEM 02895.001, AS PER MANUFACTURERS SPECIFICATIONS

**TRANSIT PRIORITY PRE-EMPTION NOTES (TO BE INSTALLED BY OTHERS)**

1. COORDINATE TRAFFIC CONTROLLER PROGRAMMING MODIFICATION WITH REPRESENTATIVES OF THE CITY OF PITTSBURGH AND DISTRICT TRAFFIC UNIT.
2. INCLUDE A TRANSIT PRIORITY PHASE THAT WILL EXTEND THE INDICATED PHASE A MAXIMUM OF 10 SECONDS WHEN ACTIVATED BY A PORT AUTHORITY VEHICLE. DO NOT VIOLATE SIDE STREET PEDESTRIAN MINIMUM TIMINGS.
3. MAINTAIN ALL YELLOW CLEARANCES AT ALL TIMES.
4. PROCEED TO THE SUBSEQUENT INTERVAL AS DEFINED IN THE MOVEMENT, SEQUENCE AND TIMING DIAGRAM UPON COMPLETING THE GREEN EXTENSION INTERVAL.
5. ONCE A TRANSIT CALL IS PLACED AND SATISFIED, THE CONTROLLER WILL NOT SATISFY ANOTHER CALL FOR 4 CYCLES.
6. LOCATION OF BUS DETECTORS ARE TO BE FIELD ADJUSTED TO ACHIEVE MAXIMUM OPERATION.

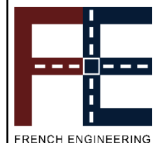
TS-302

COUNTY: ALLEGHENY  
 MUNICIPALITY: CITY OF PITTSBURGH  
 INTERSECTION: FIFTH AVENUE AND LYTTON AVENUE

APPROVED AND ACCEPTED:  
 CITY TRAFFIC ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_  
 APPROVED AND ACCEPTED:  
 DISTRICT TRAFFIC ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_



Gulf Tower  
 707 Grant Street  
 5th Floor  
 Pittsburgh, PA 15219



French Engineering, LLC  
 3064 Morgantown Rd  
 Smithfield, PA 15478

NO.	DATE	DESCRIPTION
REVISIONS		

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**(NOT FOR CONSTRUCTION)**

DESIGNED	LJF
DRAWN	WLZ
CHECKED	MSF
IN CHARGE	LJF
DATE	05/01/24
SCALE	AS SHOWN

<b>PORT AUTHORITY OF ALLEGHENY COUNTY</b> PITTSBURGH PENNSYLVANIA	
BUS RAPID TRANSIT UPTOWN TO OAKLAND SIGNAL PLANS WIRING, MOVEMENT, PHASING & SEQUENCE DIAGRAMS	
<b>Port Authority</b> connecting people to life™	CONTRACT NO. BRT-001
DWG. NO. SG84	SHT. 1144



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**TRAFFIC SIGNAL TABULATION**

FIFTH AVENUE AND LYTTON AVENUE

ITEM NUMBER	MISCELLANEOUS			
UNIT	DESCRIPTION	QTY.	LOCATION	REMARKS
01882.002 EACH	TRAFFIC SIGNAL TIMING MODIFICATIONS	2	CC	
02212.009 LF	POLE FOUNDATION DRILLING, LESS THAN 30" DIAMETER	13	△3 △4	
02212.010 LF	POLE FOUNDATION DRILLING, 30" DIAMETER OR GREATER	24	△1 △2	
02889.002 EACH	LED LUMINAIRE CITY STANDARD, BLACK	1	☀	△
02890.001 EACH	TRAFFIC SIGNAL CONTROLLER ASSEMBLY, TYPE 2070 LC IN WITH TYPE 332 BASE MOUNTED CABINET	1	CC	
02890.003 EACH	ETHERNET SWITCH	1	CC	
02890.005 EACH	GPS TIME CLOCK	1	CC	
02892.501 EACH	EXISTING TRAFFIC SIGNAL SUPPORT, PAINTED BLACK	1	△5	TEMPORARILY REMOVE ATTACHED SIGNAL HARDWARE AND PAINT SIGNAL SUPPORT BLACK. REATTACH HARDWARE WHEN COMPLETE.
02893.001 EACH	REMOVE EXISTING POLE	1	557+44 LT OFFSET 33'	
02894.001 EACH	VEHICULAR SIGNAL HEAD, THREE 12" SECTIONS	6	①②③ ④⑤⑥	BLACK TUNNEL VISORS BLACK ALUMINUM HOUSINGS BLACK METAL LOUVERED BACKPLATE
02894.005 EACH	LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, TYPE A	8	⑦⑧⑨⑩ ⑪⑫⑬⑭	BLACK TUNNEL VISORS BLACK ALUMINUM HOUSINGS
02894.006 EACH	VEHICULAR SIGNAL HEAD, THREE 8" SECTIONS	2	⑮⑯	BLACK TUNNEL VISORS BLACK ALUMINUM HOUSINGS BLACK METAL LOUVERED BACKPLATE
02894.031 EACH	REMOVE VEHICULAR SIGNAL HEAD	2	⑰⑱	
02894.032 EACH	REMOVE PEDESTRIAN SIGNAL HEAD	1	△5	
02895.002 EACH	ACCESSIBLE PEDESTRIAN SIGNALS	8	①②③④ ⑤⑥⑦⑧	
02897.010 EACH	REPLACE EXISTING JUNCTION BOX LID	1	4	

ITEM NUMBER	MISCELLANEOUS (CONT.)			
UNIT	DESCRIPTION	QTY.	LOCATION	REMARKS
02897.011 EACH	CONNECT TO EXISTING JUNCTION BOX	1	4	
02897.012 EACH	REMOVE EXISTING JUNCTION BOX	1		

**DETECTORS**

ITEM NUMBER	DESCRIPTION	SEN. NO.	QTY.	LOCATION
02895.001 EACH	VIDEO DETECTION	①	1	△5
02895.001 EACH	VIDEO DETECTION	②	1	△2
02895.001 EACH	VIDEO DETECTION	③	1	△1

**TRAFFIC SIGNAL SUPPORTS \*\***

POLE NO.	ITEM NUMBER	DESCRIPTION	QTY.	ROUTE	STATION	SIDE	OFFSET	MAST ARM																PEDESTAL							
								ARM "A"								ARM "B"								ARM "C"		SHAFT	SIGNAL				
								H	K	SIGNAL LOCATION				SIGN LOCATION				W	L	SIGNAL LOCATION				SIGN LOCATION							
										M	N	O	P	R	S	T	U	Y			M	N	O	P	R	S	T	U	Y	W	G
△1	02892.606 EACH	TRAFFIC SIGNAL SUPPORT, 36' MAST ARM, PAINTED BLACK	1	FIFTH AVE	556+71	LT	30'	17'	10'	36'	33'	19'			29'	15'	11'	5'	0°												
△2	02892.207 EACH	TRAFFIC SIGNAL SUPPORT, 30' MAST ARM WITH LUMINAIRE ARM (30' MOUNTING HEIGHT), PAINTED BLACK	1	FIFTH AVE	557+31	LT	41'	17'	10'	30'	26'	18'			14'			5'	270°						6'	30'	90°				
△3	02892.003 EACH	TRAFFIC SIGNAL SUPPORT, 15' TYPE X, PAINTED BLACK	1	FIFTH AVE	557+28	RT	34'																						15'	10'	
△4	02892.003 EACH	TRAFFIC SIGNAL SUPPORT, 15' TYPE X, PAINTED BLACK	1	FIFTH AVE	556+72	RT	35'																					15'	10'		
△5		TRAFFIC SIGNAL SUPPORT, 20' MAST ARM AND 12' MAST ARM		FIFTH AVE	557+20	RT	32'	17'		20'	19'	9'			16'	12'			5'	90°	12'	8'	5'							0°	

\*\* REFER TO PENNDOT TC-8800 TRAFFIC STANDARDS-SIGNALS FOR LETTER DESIGNATION

TS-302



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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT UPTOWN TO OAKLAND**  
SIGNAL PLANS  
TRAFFIC SIGNAL TABULATIONS

**Port Authority** connecting people to life™

CONTRACT NO. BRT-001  
DWG. NO. SG85 SHT. 1145

TRAFFIC SIGNAL TABULATION

FIFTH AVENUE AND LYTTON AVENUE

TRENCH, CONDUIT, JUNCTION BOX, ELECTRICAL ITEMS

DESCRIPTION	CITY OF PITTSBURGH STANDARD CONCRETE JUNCTION BOX, TYPE 1	TRENCH AND BACKFILL, TYPE II	TRENCH AND BACKFILL, TYPE IV	2 INCH CONDUIT	3 INCH CONDUIT	AWG 8, UNDERGROUND CABLE, COPPER, 1 CONDUCTOR	SIGNAL CABLE, 14 AWG, 5 CONDUCTOR	SIGNAL CABLE, 14 AWG, 7 CONDUCTOR
ITEM NUMBER	02897	02898	02898	02899	02899	02900	02900	02900
	001	002	005	002	003	001	002	003
UNIT	EACH	LF	LF	LF	LF	LF	LF	LF
LOCATION								
CC TO 1		6		12	12			
1 TO 2	2	29	35	64	128			
1 TO 3	1	41	31	72	144			
2 TO 5	1	63			63			
4 TO 2		28			56			
1 TO 3		9		9	18			
2 TO 1		22		22	44			
3 TO 2		13			13			
4 TO 5		8			8			
ELECTRIC SERVICE MANHOLE TO 1		6	28	34				
COMPLETE INTERSECTION						150	625	930
TOTAL	4	225	94	213	486	150	625	930

SIGNS

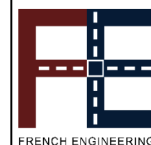
SYMBOL	SERIES	SIZE	AREA EACH (SQ FT)	DESCRIPTION	QUANTITY	02891.001 POST MOUNTED SIGNS, TYPE B	02891.003 POST MOUNTED SIGNS, TYPE F	02891.007 STRUCTURE MOUNTED FLAT SHEET ALUMINUM SIGNS WITH STIFFENERS	02891.021 RESET STRUCTURE MOUNTED FLAT SHEET ALUMINUM SIGNS WITH STIFFENERS	02891.032 REMOVE POST MOUNTED SIGNS TYPE F	02891.033 REMOVE STRUCTURE MOUNTED FLAT SHEET ALUMINUM SIGN
						SF	SF	SF	EACH	EACH	EACH
A	R6-1	36"x12"	3.0	ONE-WAY (TWO SIDED, CITY STANDARD)	2		6.0				
B	R10-3E(MOD)	9"x15"	0.9	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER (MOD)	8		▲				
C	D3-4			<i>Oakland 100 Lytton Ave</i>	1				1		
D	D3-4 *	60"x24"	10.0	4215 Oakland 4214 Fifth Ave	1			10.0			
E	R3-2	24"x24"	4.0	NO LEFT TURN	1	4.0					
G	R3-2			NO LEFT TURN	2				1	1	
H	R10-11	30"x36"	7.5	NO TURN ON RED ●	2			15.0			
I	R3-7-1R	30"x30"	6.3	ALL TRAFFIC MUST TURN RIGHT	1	6.3					
J	R3-1	30"x30"	6.3	NO RIGHT TURN	1			6.3			
K	R3-11B(MOD)	30"x36"	7.5	RIGHT LANE - BUSES ONLY	1			7.5			
L	SS-1	30"x18"	3.8	EXCEPT RIGHT TURNS	1			3.8			
M	R3-1	24"x24"	4.0	NO RIGHT TURN	1		4.0				
N	R10-15A(MOD)	30"x30"	6.3	TURNING TRAFFIC MUST YIELD TO BIKES AND PEDESTRIANS	2	6.3		6.3			
O				RESTRICTED LANE - BUSES ONLY	2						2
P	R9-5	12"x18"	1.5	BICYCLES USE PED SIGNAL	2	1.5	1.5				
Q	R3-7bP	24"x12"	2.0	EXCEPT BICYCLES	3		4.0	2.0			
TOTAL						18.1	15.5	50.9	2	1	2

▲ - INCIDENTAL TO ITEM 02895.002

\* WHITE REFLECTORIZED LEGEND AND BORDER ON BLUE REFLECTORIZED BACKGROUND. UTILIZE 4" CLEARVIEW 3W FOR BLOCK/NEIGHBORHOOD AND 8" CLEARVIEW 3W FOR STREET NAME. ACTUAL WIDTH DETERMINED BY LETTER SPACING. COORDINATE BLOCK NUMBERS AND STREET NAME DETAILS WITH CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE.



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PORT AUTHORITY OF ALLEGHENY COUNTY PITTSBURGH PENNSYLVANIA	
BUS RAPID TRANSIT UPTOWN TO OAKLAND SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	
Port Authority connecting people to life	CONTRACT NO. BRT-001
DWG. NO. SG86	SHT. 1146

**SIGNS**

SIGN	STANDARD	DESCRIPTION	SIZE	QTY
A	R10-3E(MOD)	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER (MOD)	9"x15"	6
B	D3-1	Tennyson Ave		1
C	D3-4	Oakland 100 Tennyson Ave		1
D	D3-4	4300 Oakland 4200 Fifth Ave		1
E	R3-2	NO LEFT TURN		2
F	R3-2	NO LEFT TURN	24"x24"	1
G	R9-5	BICYCLES USE PED SIGNAL	12"x18"	2
H	R10-11	NO TURN ON RED ●	24"x30"	1
I	R10-11	NO TURN ON RED ●	30"x36"	2
J	R3-11B(MOD)	RIGHT LANE - BUSES ONLY	30"x36"	2
K	SS-1	EXCEPT RIGHT TURNS	30"x18"	2
L	R6-1	ONE-WAY (TWO SIDED, CITY STANDARD)	36"x12"	2
M	R3-7-1R	ALL TRAFFIC MUST TURN RIGHT	30"x30"	1
N	R3-7bP	EXCEPT BICYCLES	24"x12"	4
O		CARS/BIKES SHARE THE ROAD		1*

\* SIGN TO BE REMOVED  
 \*\* POST MOUNTED SIGNS TABULATED AS PART OF THE SIGNING AND PAVEMENT MARKING PLAN.

**AUDIBLE PEDESTRIAN SIGNAL NOTES**

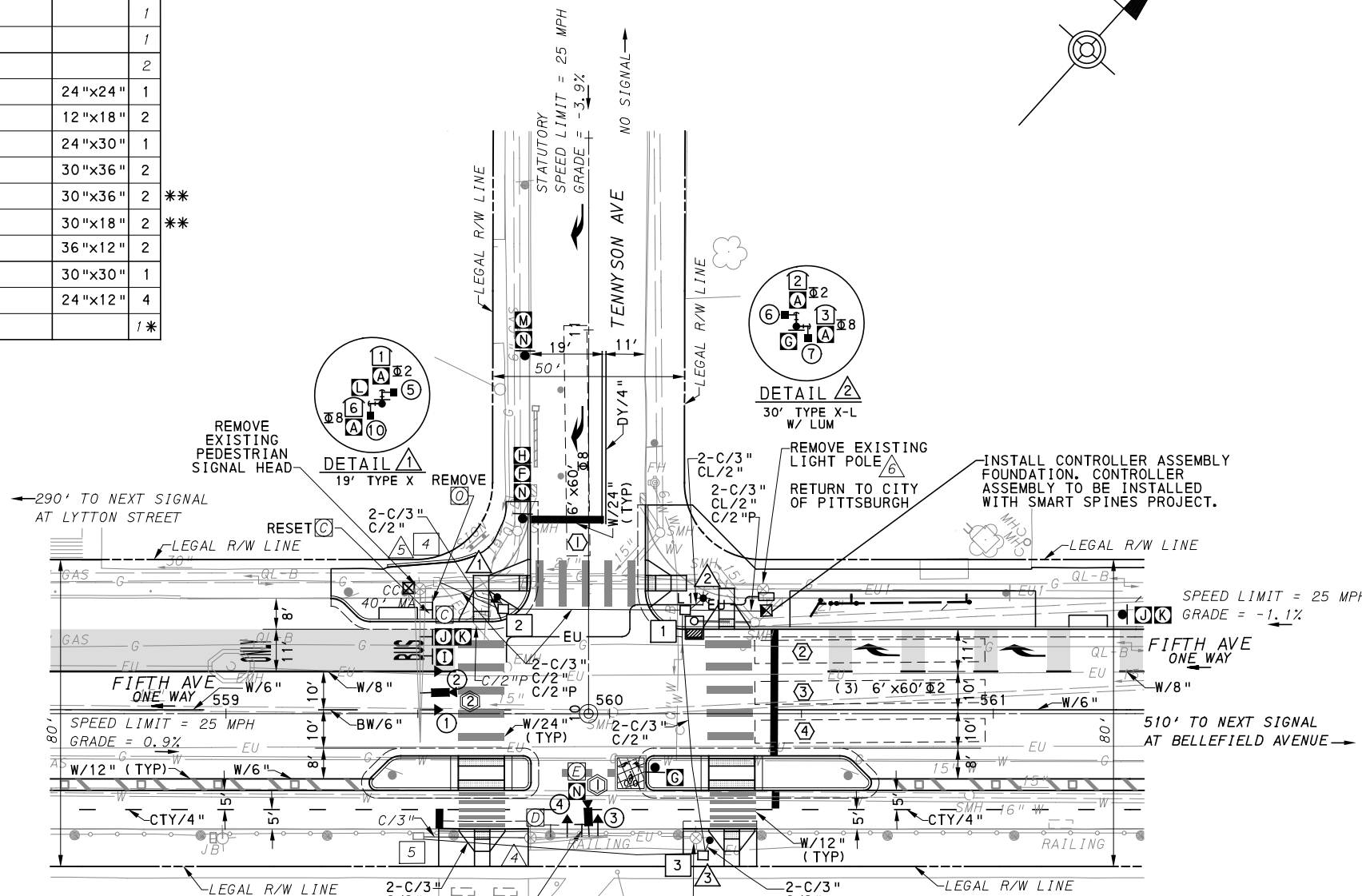
1. ALL PUSH BUTTONS SHALL BE EQUIPPED WITH LOCATOR TONES.
2. ALL WALK INTERVALS TO HAVE VERBAL MESSAGE DETAILING WALK DIRECTION.
3. VERBAL MESSAGE TO BE PLAYED DURING WALK INTERVAL WHEN BUTTON IS PRESSED.
4. ALL PEDESTRIAN PUSH BUTTONS TO BE LOCATED AT 42" ABOVE GROUND.
5. ALL PUSH BUTTONS TO BE EQUIPPED WITH VIBROTACTILE ARROW.
6. VIBROTACTILE ARROWS TO VIBRATE DURING WALK INTERVAL.
7. WALK AND DON'T WALK MESSAGE SHALL BE AUDIBLE THROUGH THE PUSH BUTTON SPEAKER.

**SIGNAL ASSEMBLY NOTES**

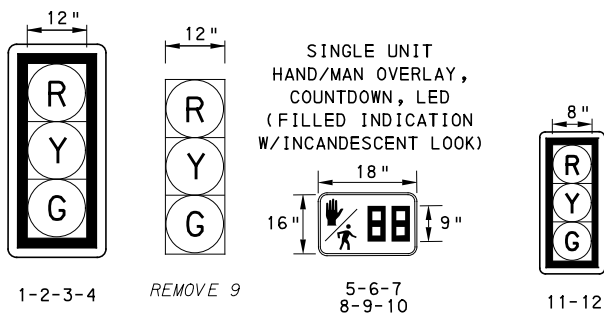
1. ALL VEHICULAR/BICYCLE SIGNALS SHALL BE EQUIPPED WITH L.E.D LENSES, TUNNEL VISORS AND LOUVERED BLACK METAL BACKPLATES WITH 2" REFLECTIVE BORDERS.
2. MIN/MAX HEIGHT TO BOTTOM OF VEHICULAR SIGNALS 17' / 18'.
3. MIN HORIZONTAL SPACING FOR VEHICULAR SIGNALS IS 8'.
4. MIN/MAX HEIGHT TO BOTTOM OF PEDESTRIAN SIGNALS 10' / 12'.
5. FINAL SIGNAL HEAD PLACEMENT WILL BE DETERMINED BY REPRESENTATIVES OF THE CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE AND THE DISTRICT TRAFFIC UNIT PRIOR TO SIGNAL BEING TURNED ON.
6. ALL PEDESTRIAN SIGNALS SHALL BE PORTLAND ORANGE FULL "PEDESTRIAN HAND" AND WHITE "WALKING PERSON" SYMBOLS AND HAVE INCANDESCENT LOOK WITH COUNTDOWN TIMER.
7. PROVIDE AIRCRAFT STRANDED CABLE FOR MOUNTING SIGNAL AND SIGN BRACKET ASSEMBLIES TO MAST ARMS.
8. PROVIDE BLACK ALUMINUM HOUSINGS FOR ALL SIGNAL HEADS.
9. INSTALL POST MOUNTED SIGNAL HEADS WITH BOTTOMS NO GREATER THAN 15' ABOVE THE SIDEWALK OR PAVEMENT.
10. EXACT LOCATION OF TRAFFIC SIGNAL SUPPORTS SHALL BE DETERMINED BY REPRESENTATIVES OF THE CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE AND THE DISTRICT TRAFFIC UNIT PRIOR TO INSTALLATION.

**PAVEMENT MARKING NOTES**

1. ALL STOP BARS ARE W/24".
2. CROSSWALKS ARE 10' X 24" KEYS WITH 3' TO 5' SPACING.
3. CROSSWALKS ACROSS BICYCLE LANES ARE 6' X 12" KEYS WITH 1' SPACING.

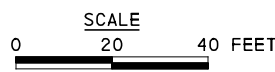


**SIGNAL HEADS**



**LEGEND**

- ② EXISTING VEHICULAR/BICYCLE SIGNAL HEAD
- ④ EXISTING SIGNAL SUPPORT
- ① PEDESTAL WITH LUMINAIRE
- ② PEDESTRIAN SIGNAL HEAD
- ② VEHICULAR/BICYCLE SIGNAL HEAD
- ▲ PEDESTAL
- ▲ SIGN
- ② STOP BAR VIDEO DETECTION ZONE
- ② AUDIBLE PEDESTRIAN PUSH BUTTON/SIGN
- CC CONTROLLER ASSEMBLY FOUNDATION
- JUNCTION BOX
- ② STOP BAR VIDEO DETECTOR
- ▲ EXISTING MAST ARM
- EXISTING JUNCTION BOX
- ▲ EXISTING SIGN
- C/2" CONDUIT/SIZE
- PROPOSED BOLLARDS
- C/2"P POWER CONDUIT/SIZE
- W/6" SOLID WHITE LINE/WIDTH
- BW/6" BROKEN WHITE LINE/WIDTH
- DY/4" DOUBLE SOLID YELLOW LINE/WIDTH
- CTY/4" COLD THERMOPLASTIC YELLOW LINE/WIDTH



TS-315

COUNTY: ALLEGHENY
MUNICIPALITY: CITY OF PITTSBURGH
INTERSECTION: FIFTH AVENUE AND TENNYSON AVENUE
APPROVED AND ACCEPTED:
CITY TRAFFIC ENGINEER _____ DATE _____
APPROVED AND ACCEPTED:
DISTRICT TRAFFIC ENGINEER _____ DATE _____



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BUS RAPID TRANSIT UPTOWN TO OAKLAND SIGNAL PLANS FIFTH AVENUE & TENNYSON AVENUE	
<b>Port Authority</b> connecting people to life®	CONTRACT NO. BRT-001
DWG. NO. SG87	SHT. 1147

**MOVEMENT, PHASING AND SEQUENCE CHART**

SIGNAL	PHASE 2					PHASE 8					FLASHTING
	1	2	3	4	5	1	2	3	4	5	
1-2	G	G	Y	R		R	R	R	R	R	
3-4	R	R	R	R		R	G	G	Y	R	R
5-6	W	FD	DW	DW		DW	DW	DW	DW	DW	OFF
7-8	DW	DW	DW	DW		W	W	FD	DW	DW	OFF
9-10	DW	DW	DW	DW		W	W	FD	DW	DW	OFF
11-12	G	G	Y	R		R	R	R	R	R	R
FIXED	3.5 2.5					4 3					
MINIMUM	15					15					
PASSAGE	3					3					
FREE (MAX)	68					19					
PEDESTRIAN	7	10				5	2	16			
MEMORY	PED RECALL					PED RECALL					

**DETECTOR ZONE INFORMATION**

DETECTOR	DETECTION ZONE(S)	MODE	TYPE	ROUTE	PHASE	LOCATION MAST ARM
①	① (6' x60')	PRESENCE	VIDEO (STOP BAR)	TENNYSON AVENUE	8	△
②	② ③ ④ (6' x60')	PRESENCE	VIDEO (STOP BAR)	FIFTH AVENUE	2	△

**GENERAL NOTES**

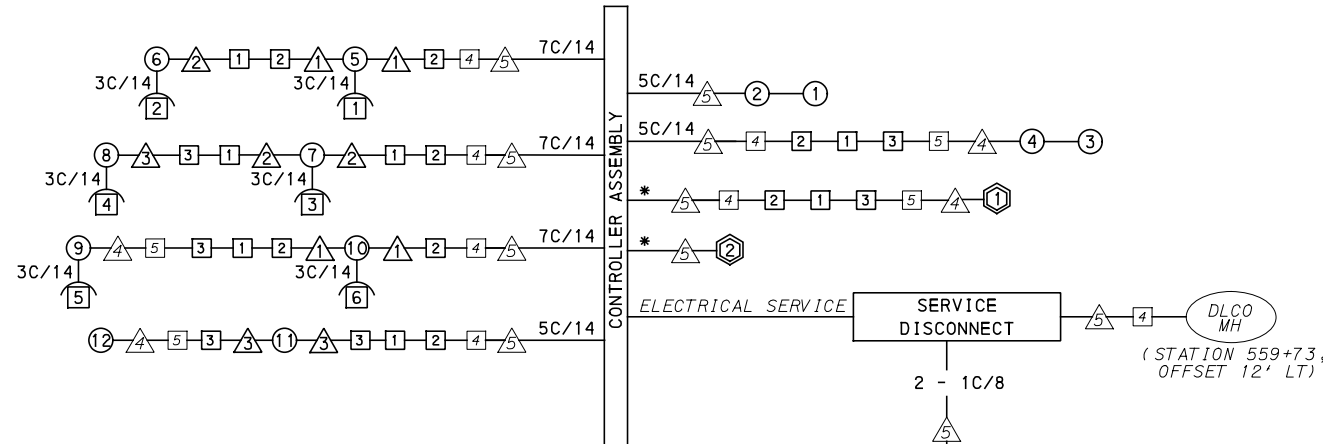
- THE CITY OF PITTSBURGH SHALL INSPECT THE NEW SIGNAL EQUIPMENT PRIOR TO ACTIVATION.
- ALL TRAFFIC SIGNAL MAINTENANCE AND OPERATION RESPONSIBILITIES SHALL BE TURNED OVER TO THE CITY OF PITTSBURGH AFTER THE FOLLOWING CONDITIONS ARE IMPLEMENTED TO THE CITY'S SATISFACTION:
1. PERMIT "AS-BUILT" TRAFFIC SIGNAL DRAWINGS ARE SUBMITTED AND APPROVED.
  2. ALL PUNCH LIST ITEMS ARE COMPLETED BY THE CONTRACTOR.
  3. AFTER THE 30-DAY CONTINUOUS UNINTERRUPTED SIGNAL OPERATION WITHOUT MALFUNCTIONS.

**CONSTRUCTION NOTES**

1. ALL JUNCTION BOXES IN WALK AREAS TO BE CITY OF PITTSBURGH STANDARD CONCRETE JUNCTION BOX, TYPE 1.
2. ALL JUNCTION BOXES IN NON-WALK AREAS TO BE CITY STANDARD JB-2 WITH BOTTOM.
3. THERE SHALL BE NO SIGNAL WIRE OR FIBER CABLE SPLICING.
4. SERVICE WIRE FROM THE POWER SOURCE TO THE CONTROLLER CABINET SHALL BE PLACED IN SECONDARY SEPARATE CONDUIT.
5. STREET LIGHT CABLE IS NOT PERMITTED TO RUN THROUGH THE CONTROLLER CABINET AND SHALL BE PLACED IN SEPARATE CONDUIT.
6. TRAFFIC SIGNAL CABLE SHALL BE PLACED IN DEDICATED CONDUIT.
7. MOUNT DISCONNECT ON POLE NEAREST TO THE CONTROLLER CABINET EXCLUDING TYPE X POLES.
8. REMOVE AND DISPOSE OF ALL EXISTING SIGNAL WIRING NO LONGER IN USE.
9. REMOVE EXISTING SIGNAL EQUIPMENT NO LONGER IN USE AND RETURN TO THE CITY OF PITTSBURGH TRAFFIC CONTROL SHOP. COORDINATE DELIVERY OF EQUIPMENT WITH DELMAS MCELHANY, TRAFFIC CONTROL FOREMAN.
10. REMOVE ALL SIGNALS WHILE POLE IS PAINTED, REFER TO SECTION 02892.

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**WIRING DIAGRAM**

5C/14 - CABLE (NO. OF CONDUCTORS/SIZE AWG.)

- ① PROPOSED DETECTOR
- ① PROPOSED SIGNAL HEAD
- ① PROPOSED AUDIBLE PEDESTRIAN INDICATOR
- △ EXISTING SIGNAL SUPPORT
- ① PROPOSED JUNCTION BOX
- △ PROPOSED SIGNAL SUPPORT
- ① EXISTING JUNCTION BOX
- ⊙ PROPOSED LUMINAIRE

3C/14 INCIDENTAL TO ITEM 02895.002

\* INCIDENTAL TO ITEM 02895.001, AS PER MANUFACTURERS SPECIFICATIONS

TS-315

COUNTY: ALLEGHENY

MUNICIPALITY: CITY OF PITTSBURGH

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APPROVED AND ACCEPTED:

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**(NOT FOR CONSTRUCTION)**

DESIGNED	LJF
DRAWN	WLZ
CHECKED	MSF
IN CHARGE	LJF
DATE	05/01/24
SCALE	AS SHOWN

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
 PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT UPTOWN TO OAKLAND**  
 SIGNAL PLANS  
 WIRING, MOVEMENT, PHASING & SEQUENCE DIAGRAMS

**Port Authority** connecting people to life

CONTRACT NO. BRT-001

DWG. NO. SG88 SHT. 1148







TRAFFIC SIGNAL TABULATION

FIFTH AVENUE AND TENNYSON AVENUE

TRENCH, CONDUIT, JUNCTION BOX, ELECTRICAL ITEMS

DESCRIPTION	CITY OF PITTSBURGH STANDARD CONCRETE JUNCTION BOX, TYPE 1	TRENCH AND BACKFILL, TYPE II	TRENCH AND BACKFILL, TYPE IV	2 INCH CONDUIT	3 INCH CONDUIT	AWG 8, UNDERGROUND CABLE, COPPER, 1 CONDUCTOR	SIGNAL CABLE, 14 AWG, 5 CONDUCTOR	SIGNAL CABLE, 14 AWG, 7 CONDUCTOR
ITEM NUMBER	02897	02898	02898	02899	02899	02900	02900	02900
	001	002	005	002	003	001	002	003
UNIT	EACH	LF	LF	LF	LF	LF	LF	LF
LOCATION								
CC FOUNDATION TO 1	1	21		42	42			
1 TO 2	1	14	34	96	96			
1 TO 3	1	32	33	65	130			
2 TO 4		19		38	38			
3 TO 5		75		75	150			
1 TO 2		4		4	8			
2 TO 1		6		6	12			
3 TO 3		4		4	8			
COMPLETE INTERSECTION						270	765	720
TOTAL	3	175	67	330	484	270	765	720

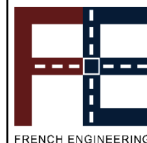
SIGNS

SYMBOL	SERIES	SIZE	AREA EACH (SQ FT)	DESCRIPTION	QUANTITY	02891.001 POST MOUNTED SIGNS, TYPE B	02891.003 POST MOUNTED SIGNS, TYPE F	02891.007 STRUCTURE MOUNTED FLAT SHEET ALUMINUM SIGNS WITH STIFFENERS	02891.013 RESET POST MOUNTED SIGNS, TYPE F	02891.021 RESET STRUCTURE MOUNTED FLAT SHEET ALUMINUM SIGN WITH STIFFENERS	02891.033 REMOVE STRUCTURE MOUNTED FLAT SHEET ALUMINUM SIGN
						SF	SF	SF	EACH	EACH	EACH
A	R10-3E(MOD)	9"x15"	0.9	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER (MOD)	6		▲				
C				Oakland 100 Tennyson Ave	1					1	
E				NO LEFT TURN	2				1	1	
F	R3-2	24"x24"	4.0	NO LEFT TURN	1		4.0				
G	R9-5	12"x18"	1.5	BICYCLES USE PED SIGNAL	2	1.5	1.5				
H	R10-11	24"x30"	5.0	NO TURN ON RED ●	1	5.0					
I	R10-11	30"x36"	7.5	NO TURN ON RED ●	2		7.5	7.5			
J	R3-11B(MOD)	30"x36"	7.5	RIGHT LANE - BUSES ONLY	1			7.5			
K	SS-1	30"x18"	3.8	EXCEPT RIGHT TURNS	1			3.8			
L	R6-1	36"x12"	3.0	ONE-WAY (TWO SIDED, CITY STANDARD)	2		6.0				
M	R3-7-1R	30"x30"	6.3	ALL TRAFFIC MUST TURN RIGHT	1	6.3					
N	R3-7bP	24"x12"	2.0	EXCEPT BICYCLES	4		6.0	2.0			
O				CARS/BIKES SHARE THE ROAD	1						1
TOTAL						12.8	25.0	20.8	1	2	1

▲ - INCIDENTAL TO ITEM 02895.002



Gulf Tower  
707 Grant Street  
5th Floor  
Pittsburgh, PA 15219



French Engineering, LLC  
3064 Morgantown Rd  
Smithfield, PA 15478

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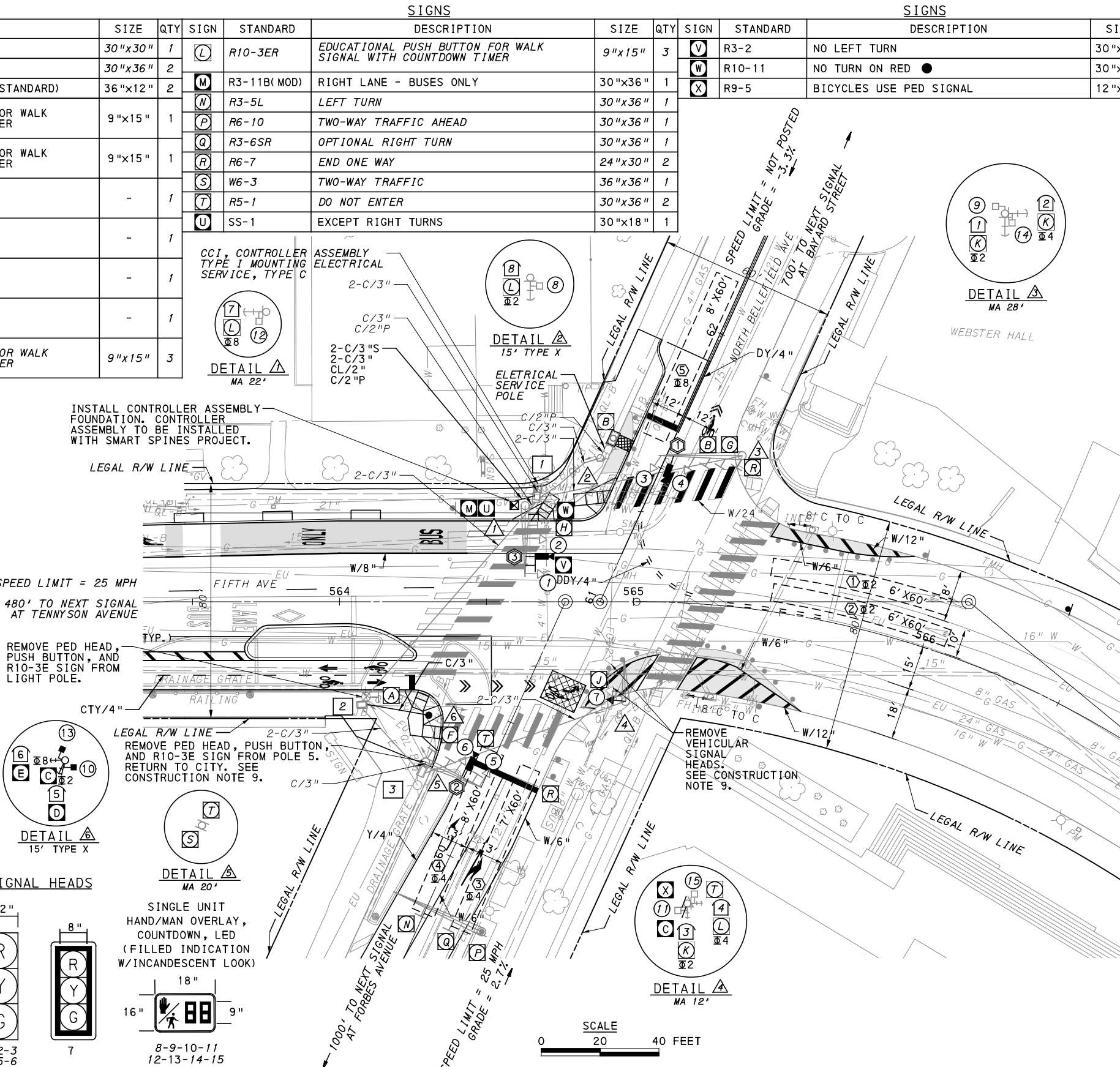
PORT AUTHORITY OF ALLEGHENY COUNTY PITTSBURGH PENNSYLVANIA	
BUS RAPID TRANSIT UPTOWN TO OAKLAND SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	
Port Authority connecting people to life	CONTRACT NO. BRT-001
DWG. NO. SG90	SHT. 1150

SIGNS				
SIGN	STANDARD	DESCRIPTION	SIZE	QTY
A	R3-2	NO LEFT TURN	30"x30"	1
B	R10-11	NO TURN ON RED	30"x36"	2
C	R6-1	ONE-WAY (TWO SIDED, CITY STANDARD)	36"x12"	2
D	R10-3EL	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER	9"x15"	1
E	R10-3ER	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER	9"x15"	1
F	D3-4	4400 OAKLAND 4300 FIFTH AVE	-	1
G	D3-4	4300 OAKLAND 4400 FIFTH AVE	-	1
H	D3-4	300 OAKLAND 100 BELLEFIELD AVE	-	1
J	D3-4	100 OAKLAND 300 BELLEFIELD AVE	-	1
K	R10-3EL	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER	9"x15"	3

SIGNS				
SIGN	STANDARD	DESCRIPTION	SIZE	QTY
L	R10-3ER	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER	9"x15"	3
M	R3-11B(MOD)	RIGHT LANE - BUSES ONLY	30"x36"	1
N	R3-5L	LEFT TURN	30"x36"	1
P	R6-10	TWO-WAY TRAFFIC AHEAD	30"x36"	1
Q	R3-6SR	OPTIONAL RIGHT TURN	30"x36"	1
R	R6-7	END ONE WAY	24"x30"	2
S	W6-3	TWO-WAY TRAFFIC	36"x36"	1
T	R5-1	DO NOT ENTER	30"x36"	2
U	SS-1	EXCEPT RIGHT TURNS	30"x18"	1

SIGNS				
SIGN	STANDARD	DESCRIPTION	SIZE	QTY
V	R3-2	NO LEFT TURN	30"x30"	1
W	R10-11	NO TURN ON RED	30"x36"	1
X	R9-5	BICYCLES USE PED SIGNAL	12"x18"	1

- LEGEND**
- MAST ARM
  - EXISTING MAST ARM WITH LUMINAIRE
  - PEDESTAL
  - EXISTING PEDESTAL
  - EXISTING PEDESTRIAN SIGNAL HEAD
  - PEDESTRIAN SIGNAL HEAD
  - PROPOSED VEHICULAR/BICYCLE SIGNAL HEAD
  - EXISTING VEHICULAR/BICYCLE SIGNAL HEAD
  - EXISTING SIGN
  - PROPOSED SIGN
  - PROPOSED STOP BAR RADAR DETECTION ZONE
  - EXISTING AUDIBLE PEDESTRIAN PUSH BUTTON/SIGN
  - AUDIBLE PEDESTRIAN PUSH BUTTON/SIGN
  - EXISTING CONTROLLER ASSEMBLY
  - CONTROLLER ASSEMBLY FOUNDATION
  - JUNCTION BOX
  - PROPOSED STOP BAR RADAR DETECTOR
  - PROPOSED STOP BAR VIDEO DETECTOR
  - W/6" SOLID WHITE LINE/WIDTH
  - CTY/4" CYCLE TRACK BROKEN YELLOW LINE/WIDTH
  - DOUBLE SOLID YELLOW LINE/WIDTH
  - DOUBLE DASHED YELLOW LINE/WIDTH
  - SOLID GREEN LINE/WIDTH
  - BROKEN WHITE LINE/WIDTH
  - CONDUIT/SIZE
  - LIGHTING CONDUIT/SIZE
  - POWER CONDUIT/SIZE
  - SYSTEM CONDUIT/SIZE
- SIGNAL HEADS**
- 12" (R, Y, G)
  - 8" (R, Y, G)
  - 18" (R, Y, G)
  - 16" (R, Y, G)



- AUDIBLE PEDESTRIAN SIGNAL NOTES**
- ALL PUSH BUTTONS SHALL BE EQUIPPED WITH LOCATOR TONES.
  - ALL WALK INTERVALS TO HAVE VERBAL MESSAGE DETAILING WALK DIRECTION.
  - VERBAL MESSAGE TO BE PLAYED DURING WALK INTERVAL WHEN BUTTON IS PRESSED.
  - ALL PEDESTRIAN PUSH BUTTONS TO BE LOCATED AT 42" ABOVE GROUND.
  - ALL PUSH BUTTONS TO BE EQUIPPED WITH VIBROTACTILE ARROW.
  - VIBROTACTILE ARROWS TO VIBRATE DURING WALK INTERVAL.
  - WALK AND DON'T WALK MESSAGE SHALL BE AUDIBLE THROUGH THE PUSH BUTTON SPEAKER.

- SIGNAL ASSEMBLY NOTES**
- ALL VEHICULAR/BICYCLE SIGNALS SHALL BE EQUIPPED WITH L.E.D LENSES, TUNNEL VISORS AND LOUVERED BLACK METAL BACKPLATES WITH 2" REFLECTIVE BORDERS.
  - MIN/MAX HEIGHT FOR VEHICULAR SIGNALS 17' /18'.
  - MIN HORIZONTAL SPACING FOR VEHICULAR SIGNALS IS 8'.
  - MIN/MAX HEIGHT FOR PEDESTRIAN MOUNTED SIGNALS 10' /12'.
  - FINAL SIGNAL HEAD PLACEMENT WILL BE DETERMINED BY A REPRESENTATIVE OF THE CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE PRIOR TO SIGNAL BEING TURNED ON.
  - ALL PEDESTRIAN SIGNALS SHALL BE PORTLAND ORANGE FULL "PEDESTRIAN HAND" AND WHITE "WALKING PERSON" SYMBOLS AND HAVE INCANDESCENT LOOK WITH COUNTDOWN TIMER.
  - PROVIDE AIRCRAFT STRANDED CABLE FOR MOUNTING SIGNAL AND SIGN BRACKET ASSEMBLIES TO MAST ARMS.
  - PROVIDE BLACK ALUMINUM HOUSINGS FOR ALL SIGNAL HEADS.
  - INSTALL POST MOUNTED SIGNAL HEADS WITH BOTTOMS NO GREATER THAN 15' ABOVE THE SIDEWALK OR PAVEMENT.
  - EXACT LOCATION OF TRAFFIC SIGNAL SUPPORTS SHALL BE DETERMINED BY A REPRESENTATIVE OF THE CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE PRIOR TO INSTALLATION.

- PAVEMENT MARKING NOTES**
- ALL STOP BARS ARE W/24".
  - CROSSWALKS ARE 10' X 24" KEYS WITH 3' TO 5' SPACING.
  - CROSSWALKS ACROSS BICYCLE LANES ARE 6' X 12" KEYS WITH 1' SPACING.

SPEED LIMIT = 25 MPH  
GRADE = -0.7%  
400' TO NEXT SIGNAL AT DITHRIDGE STREET

TS-102

COUNTY: ALLEGHENY

MUNICIPALITY: CITY OF PITTSBURGH

INTERSECTION: FIFTH AVENUE AND NORTH BELLEFIELD AVENUE

APPROVED AND ACCEPTED:

CITY TRAFFIC ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_

APPROVED AND ACCEPTED:

DISTRICT TRAFFIC ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_

**AECOM**

Gulf Tower  
707 Grant Street  
5th Floor  
Pittsburgh, PA 15219

**DRIVE ENGINEERING**

595 Skippack Pk,  
Suite 400  
Blue Bell, PA 19422

NO.	DATE	DESCRIPTION

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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT UPTOWN TO OAKLAND**  
SIGNAL PLANS  
FIFTH AVENUE & BELLEFIELD AVENUE

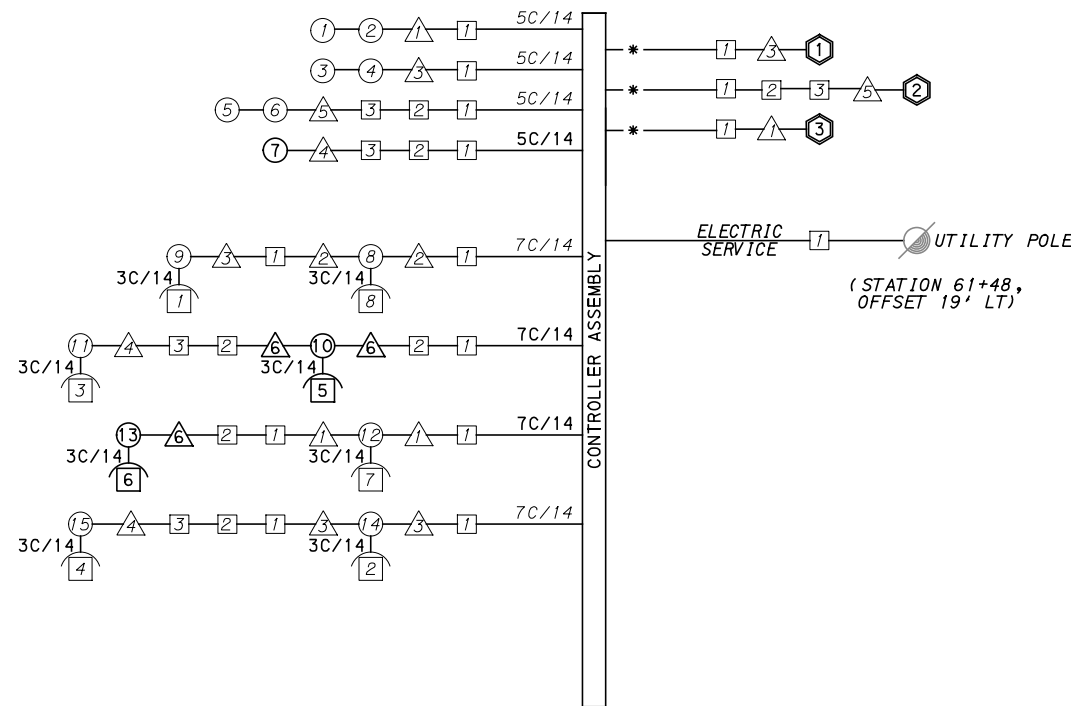
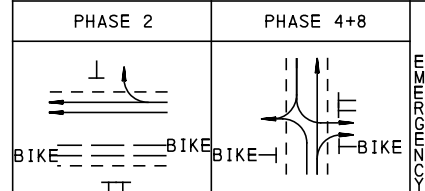
**Port Authority** connecting people to life

CONTRACT NO. BRT-001

DWG. NO. SG91 SHT. 1151

**MOVEMENT, PHASING AND SEQUENCE CHART**

SIGNAL	INTERVAL	PHASE 2					PHASE 4+8					FLASHING
		1	2	3	4	5	1	2	3	4	5	
1-2		R	G	G	Y	R	R	R	R	R	R	R
3-4		R	R	R	R	R	R	G	G	Y	R	R
5-6		R	R	R	R	R	R	G	G	Y	R	R
7		G	G	G	Y	R	R	R	R	R	R	OFF
8-9		W	W	FD	DW	DW	DW	DW	DW	DW	DW	OFF
10-11		W	W	FD	DW	DW	DW	DW	DW	DW	DW	OFF
12-13		DW	DW	DW	DW	DW	W	W	FD	DW	DW	OFF
14-15		DW	DW	DW	DW	DW	W	W	FD	DW	DW	OFF
FIXED		X		4	3	X		4	3			
MINIMUM		15					15					
PASSAGE		3					3					
FREE (MAX)		35					51					
PEDESTRIAN		3	4	14			5	2	20			
MEMORY		MINIMUM RECALL					PED-RECALL					



**WIRING DIAGRAM**

5C/14 - CABLE (NO. OF CONDUCTORS/SIZE AWG.)

- SIGNAL HEAD                      △ SIGNAL SUPPORT
- AUDIBLE PEDESTRIAN INDICATOR      □ JUNCTION BOX
- ⬡ RADAR DETECTOR                      Ⓛ LUMINAIRE

\* INCIDENTAL TO ITEM 02895.001, AS PER MANUFACTURERS SPECIFICATIONS

3C/14 INCIDENTAL TO ITEM 02895.002

**TRANSIT PRIORITY PRE-EMPTION NOTES (TO BE INSTALLED BY OTHERS)**

- COORDINATE TRAFFIC CONTROLLER PROGRAMMING MODIFICATION WITH REPRESENTATIVES OF THE CITY OF PITTSBURGH AND DISTRICT TRAFFIC UNIT.
- INCLUDE A TRANSIT PRIORITY PHASE THAT WILL EXTEND THE INDICATED PHASE A MAXIMUM OF 10 SECONDS WHEN ACTIVATED BY A PORT AUTHORITY VEHICLE. DO NOT VIOLATE SIDE STREET PEDESTRIAN MINIMUM TIMINGS.
- MAINTAIN ALL YELLOW CLEARANCES AT ALL TIMES.
- PROCEED TO THE SUBSEQUENT INTERVAL AS DEFINED IN THE MOVEMENT, SEQUENCE AND TIMING DIAGRAM UPON COMPLETING THE GREEN EXTENSION INTERVAL.
- ONCE A TRANSIT CALL IS PLACED AND SATISFIED, THE CONTROLLER WILL NOT SATISFY ANOTHER CALL FOR 4 CYCLES.
- LOCATION OF BUS DETECTORS ARE TO BE FIELD ADJUSTED TO ACHIEVE MAXIMUM OPERATION.

**DETECTOR ZONE INFORMATION**

DETECTOR	DETECTION ZONE(S)	MODE	TYPE	ROUTE	PHASE	LOCATION MAST ARM
③	① (6' x 60')	PRESENCE	VIDEO (STOP BAR)	FIFTH AVENUE	2	△
③	② (6' x 60')	PRESENCE	VIDEO (STOP BAR)	FIFTH AVENUE	2	△
①	③ (7' x 60')	PRESENCE	VIDEO (STOP BAR)	BELLEFIELD AVENUE	4	△
①	④ (8' x 60')	PRESENCE	VIDEO (STOP BAR)	BELLEFIELD AVENUE	4	△
②	⑤ (8' x 60')	PRESENCE	VIDEO (STOP BAR)	BELLEFIELD AVENUE	8	△

**GENERAL NOTES**

THE CITY OF PITTSBURGH SHALL INSPECT THE NEW SIGNAL EQUIPMENT PRIOR TO ACTIVATION.  
ALL TRAFFIC SIGNAL MAINTENANCE AND OPERATION RESPONSIBILITIES SHALL BE TURNED OVER TO THE CITY OF PITTSBURGH AFTER THE FOLLOWING CONDITIONS ARE IMPLEMENTED TO THE CITY'S SATISFACTION:

- PERMIT "AS-BUILT" TRAFFIC SIGNAL DRAWINGS ARE SUBMITTED AND APPROVED.
- ALL PUNCH LIST ITEMS ARE COMPLETED BY THE CONTRACTOR.
- AFTER THE 30-DAY CONTINUOUS UNINTERRUPTED SIGNAL OPERATION WITHOUT MALFUNCTIONS.

**CONSTRUCTION NOTES**

- ALL JUNCTION BOXES IN WALK AREAS TO BE CITY OF PITTSBURGH STANDARD CONCRETE JUNCTION BOX, TYPE 1.
- ALL JUNCTION BOXES IN NON-WALK AREAS TO BE CITY STANDARD JB-2 WITH BOTTOM.
- THERE SHALL BE NO SIGNAL WIRE OR FIBER CABLE SPLICING.
- SERVICE WIRE FROM THE POWER SOURCE TO THE CONTROLLER CABINET SHALL BE PLACED IN SECONDARY SEPARATE CONDUIT.
- STREET LIGHT CABLE IS NOT PERMITTED TO RUN THROUGH THE CONTROLLER CABINET AND SHALL BE PLACED IN SEPARATE CONDUIT.
- TRAFFIC SIGNAL CABLE SHALL BE PLACED IN DEDICATED CONDUIT.
- MOUNT DISCONNECT ON POLE NEAREST TO THE CONTROLLER CABINET EXCLUDING TYPE X POLES.
- REMOVE AND DISPOSE OF ALL EXISTING SIGNAL WIRING NO LONGER IN USE.
- REMOVE EXISTING SIGNAL EQUIPMENT NO LONGER IN USE AND RETURN TO THE CITY OF PITTSBURGH TRAFFIC CONTROL SHOP. COORDINATE DELIVERY OF EQUIPMENT WITH DELMAS MCELHANY, TRAFFIC CONTROL FOREMAN.

TS-102

COUNTY: ALLEGHENY  
MUNICIPALITY: CITY OF PITTSBURGH  
INTERSECTION: FIFTH AVENUE AND NORTH BELLEFIELD AVENUE

APPROVED AND ACCEPTED:  
CITY TRAFFIC ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_  
APPROVED AND ACCEPTED:  
DISTRICT TRAFFIC ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_



Gulf Tower  
707 Grant Street  
5th Floor  
Pittsburgh, PA 15219



595 Skippack Pk,  
Suite 400  
Blue Bell, PA 19422

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BUS RAPID TRANSIT UPTOWN TO OAKLAND SIGNAL PLANS WIRING, MOVEMENT, PHASING & SEQUENCE DIAGRAMS	
Port Authority connecting people to life	CONTRACT NO. BRT-001
DWG. NO. SG92	SHT. 1152

PLOTTED: 3/21/2024 8:36:34 PM

**TRAFFIC SIGNAL TABULATION**

FIFTH AVENUE AND NORTH BELLEFIELD AVENUE

ITEM NUMBER	MISCELLANEOUS			
UNIT	DESCRIPTION	QTY.	LOCATION	REMARKS
01882.002 EACH	TRAFFIC SIGNAL TIMING MODIFICATIONS	1	CC	
02890.005 EACH	GPS TIME CLOCK	1	CC	
02890.006 EACH	TRAFFIC SIGNAL CONTROLLER ASSEMBLY FOUNDATION, FUTURE INSTALLATION OF TYPE 332 BASE MOUNTED CABINET AND 8" RISER	1	☒	ONLY INSTALL A CONTROLLER CABINET FOUNDATION AND PROPOSED CONDUITS TO FIT A FUTURE TYPE 332 CABINET AND 8" RISER.
02894.006 EACH	VEHICULAR SIGNAL HEAD, THREE 8" SECTIONS	1	⑦	BLACK TUNNEL VISORS BLACK ALUMINUM HOUSINGS BLACK METAL LOUVERED BACKPLATE
02894.005 EACH	LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, TYPE A	2	⑩⑬	BLACK TUNNEL VISORS BLACK ALUMINUM HOUSINGS
02895.002 EACH	ACCESSIBLE PEDESTRIAN SIGNALS	2	⑮⑯	
02897.011 EACH	CONNECT TO EXISTING JUNCTION BOX	2	①②	
02894.031 EACH	REMOVE VEHICULAR SIGNAL HEAD	2	④	SE CORNER
02894.032 EACH	REMOVE PEDESTRIAN SIGNAL HEAD	2	⑤	SW CORNER SIGNAL POLE (1) SW CORNER LIGHT POLE (1)
02895.003 EACH	REMOVE ACCESSIBLE PEDESTRIAN SIGNAL	2	⑥	SW CORNER SIGNAL POLE (1) SW CORNER LIGHT POLE (1)
02212.009 EACH	POLE FOUNDATION DRILLING, LESS THAN 30" DIAMETER	6	⑥	

DETECTORS

ITEM NUMBER	DESCRIPTION	SEN. NO.	QTY.	LOCATION
02895.001 EACH	VIDEO DETECTION	①②③	3	①③⑤

TRAFFIC SIGNAL SUPPORTS \*\*

POLE NO.	ITEM NUMBER	DESCRIPTION	QTY.	ROUTE	STATION	SIDE	OFFSET	MAST ARM															PEDESTAL			
								ARM "A"										ARM "C"					SHAFT		SIGNAL	
								H	K	SIGNAL LOCATION					SIGN LOCATION					W	G	X	Z	H	M	N
								L	M	N	O	P	R	S	T	U	Y									
①		TRAFFIC SIGNAL SUPPORT, 22' MAST ARM		FIFTH AVE.	564+63	LT	24'	17'	10'	22'	21'	10'				16'	5'	0'			0°					
②		TRAFFIC SIGNAL SUPPORT, 15' TYPE X		FIFTH AVE.	564+87	LT	48'	17'	10'													15'		10'		
③		TRAFFIC SIGNAL SUPPORT, 28' MAST ARM		FIFTH AVE.	565+37	LT	48'	17'	10'	28'	26'	15'				11'	5'	0'			90°					
④		TRAFFIC SIGNAL SUPPORT, 12' MAST ARM		FIFTH AVE.	564+96	RT	33'	17'	10'	12'	1'															
⑤		TRAFFIC SIGNAL SUPPORT, 20' MAST ARM		FIFTH AVE.	564+29	RT	53'	17'	10'	20'	19'	9'				16'	6'	0'								
⑥	02892.003 EACH	TRAFFIC SIGNAL SUPPORT, 15' TYPE X, PAINTED BLACK	1	FIFTH AVE.	564+30	RT	39'															15'		10'		

\*\* REFER TO PENNDOT TC-8800 TRAFFIC STANDARDS - SIGNALS FOR LETTER DESIGNATION

OPERATOR: "michael.mcgarry" FILE PATH: c:\pwworking\aecocom.com\d0207710\BRT\_04\_SIG24\_SHT03.dgn



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<b>PORT AUTHORITY OF ALLEGHENY COUNTY</b> PITTSBURGH PENNSYLVANIA	
BUS RAPID TRANSIT UPTOWN TO OAKLAND SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	
<b>Port Authority</b> <small>connecting people to life™</small>	CONTRACT NO. BRT-001 DWG. NO. SG93 SHT. 1153

TRAFFIC SIGNAL TABULATION

FIFTH AVENUE AND NORTH BELLEFIELD AVENUE

TRENCH, CONDUIT, JUNCTION BOX, ELECTRICAL ITEMS

DESCRIPTION	TRENCH AND BACKFILL, TYPE 1	2 INCH CONDUIT	3 INCH CONDUIT	SIGNAL CABLE, 14 AWG, 5 CONDUCTOR	SIGNAL CABLE, 14 AWG, 7 CONDUCTOR
	02898	02899	02899	02900	02900
ITEM NUMBER					
UNIT	001	002	003	002	003
LOCATION	LF	LF	LF	LF	LF
CC TO 1					
1 TO 2					
2 TO 3					
1 TO 1					
1 TO 2					
1 TO 3					
1 TO X	7	14	28		
2 TO 6	22		22		
3 TO 4					
3 TO 5					
COMPLETE INTERSECTION				268	334
TOTAL	29	14	50	268	334

SIGNS

SYMBOL	SERIES	SIZE	AREA EACH (SQ. FT)	DESCRIPTION	QUANTITY	02891.001 POST MOUNTED SIGNS, TYPE B	02891.003 POST MOUNTED SIGNS, TYPE F	02891.007 STRUCTURE MOUNTED FLAT SHEET ALUMINUM SIGNS WITH STIFFENERS
						SF	SF	SF
C	R6-1	36"x12"	3.0	ONE-WAY (TWO SIDED, CITY STANDARD)	2			6.0
D	R10-3EL	9"x15"	0.9	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER	1			▲
E	R10-3ER	9"x15"	0.9	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER	1			▲
M	R3-11B(MOD)	30"x36"	7.5	RIGHT LANE - BUSES ONLY	1	7.5		
U	SS-1	30"x18"	3.8	EXCEPT RIGHT TURNS	1		3.8	
V	R3-2	30"x30"	6.3	NO LEFT TURN	1			6.3
W	R10-11	30"x36"	7.5	NO TURN ON RED ●	1			7.5
X	R9-5	12"x18"	1.5	BICYCLES USE PED SIGNAL	1			1.5
TOTAL						7.5	3.8	21.3

▲ - INCIDENTAL TO ITEM 02895.002

\* WHITE REFLECTORIZED LEGEND AND BORDER ON BLUE REFLECTORIZED BACKGROUND. UTILIZE 4" CLEARVIEW 3W FOR BLOCK/NEIGHBORHOOD AND 8" CLEARVIEW 3W FOR STREET NAME. ACTUAL WIDTH DETERMINED BY LETTER SPACING. COORDINATE BLOCK NUMBERS AND STREET NAME DETAILS WITH CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE.



Gulf Tower  
707 Grant Street  
5th Floor  
Pittsburgh, PA 15219



595 Skippack Pk,  
Suite 400  
Blue Bell, PA 19422

NO.	DATE	DESCRIPTION
REVISIONS		

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(NOT FOR CONSTRUCTION)

DESIGNED	MW
DRAWN	MW
CHECKED	EMC
IN CHARGE	EMC
DATE	05/01/24
SCALE	AS SHOWN

<b>PORT AUTHORITY OF ALLEGHENY COUNTY</b> PITTSBURGH PENNSYLVANIA	
BUS RAPID TRANSIT UPTOWN TO OAKLAND SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	
<b>Port Authority</b> <small>connecting people to life</small>	CONTRACT NO. BRT-001
	DWG. NO. SG94      SHT. 1154



**SIGNS**

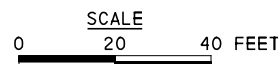
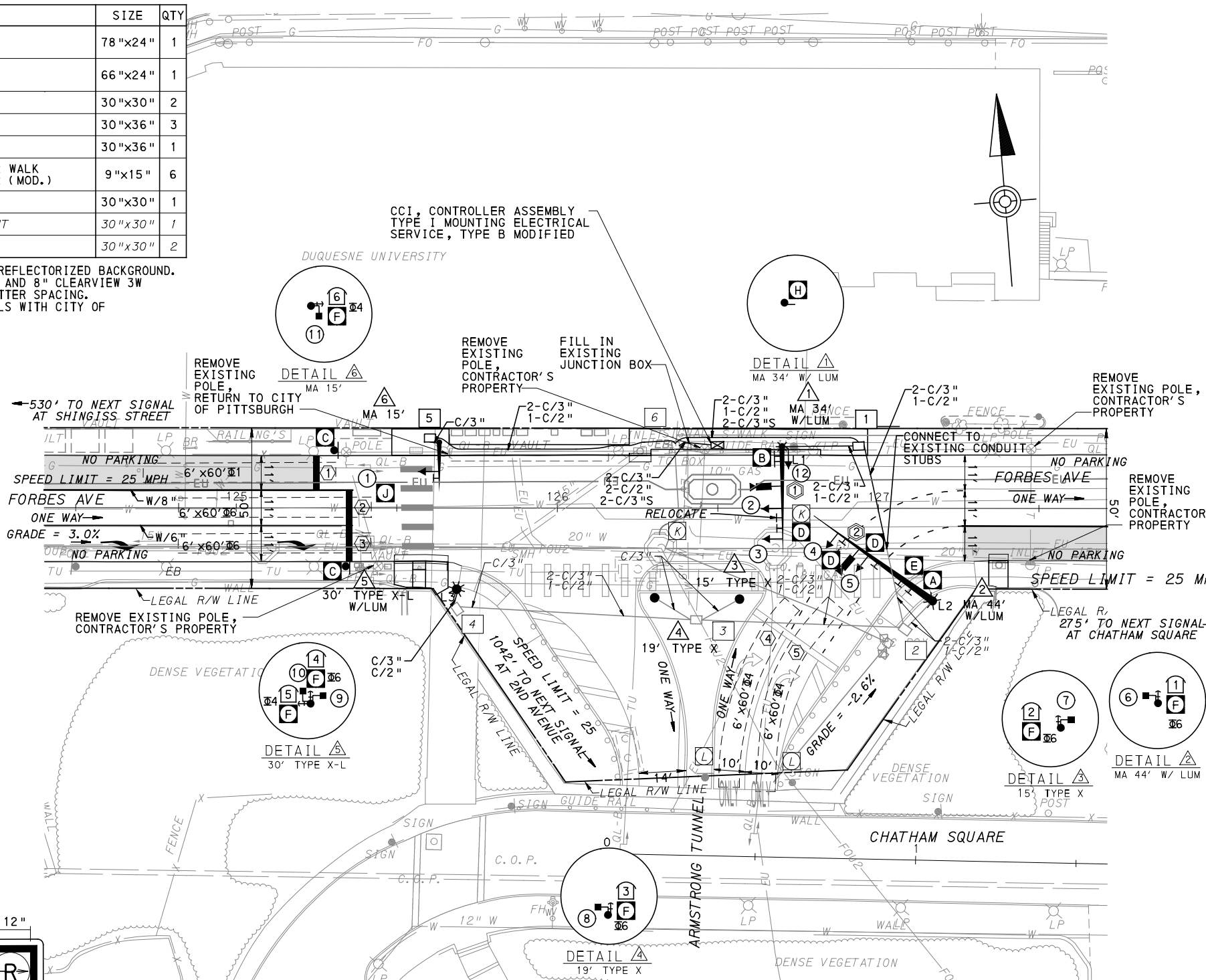
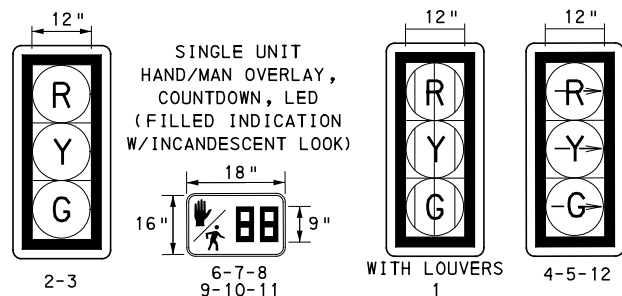
SIGN	STANDARD	DESCRIPTION	SIZE	QTY
A	D3-4 *	700 800 Forbes Ave	78"x24"	1
B	D3-4 *	Armstrong Tunnel	66"x24"	1
C	R5-1	DO NOT ENTER	30"x30"	2
D	R10-11	NO TURN ON RED ●	30"x36"	3
E	R3-5R	RIGHT TURN ONLY	30"x36"	1
F	R10-3E(MOD)	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER (MOD.)	9"x15"	6
J	SPECIAL	BUS LANE SIGNAL	30"x30"	1
K	R3-1(MOD)	NO RIGHT TURN - LED BLANKOUT	30"x30"	1
L	R5-1	DO NOT ENTER	30"x30"	2

\* WHITE REFLECTORIZED LEGEND AND BORDER ON BLUE REFLECTORIZED BACKGROUND. UTILIZE 4" CLEARVIEW 3W FOR BLOCK/NEIGHBORHOOD AND 8" CLEARVIEW 3W FOR STREET NAME. ACTUAL WIDTH DETERMINED BY LETTER SPACING. COORDINATE BLOCK NUMBERS AND STREET NAME DETAILS WITH CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE.

**LEGEND**

- ▲ MAST ARM WITH LUMINAIRE ARM
- ② PEDESTRIAN SIGNAL HEAD
- ➔ VEHICULAR/BICYCLE SIGNAL HEAD
- PEDESTAL
- ▲ SIGN
- ⊡ STOP BAR VIDEO DETECTION ZONE
- ➔ AUDIBLE PEDESTRIAN PUSH BUTTON/SIGN
- ⊠ CONTROLLER ASSEMBLY
- ⊡ JUNCTION BOX
- ➔ STOP BAR VIDEO DETECTOR
- C/2" CONDUIT/SIZE
- CL/2" LIGHTING CONDUIT/SIZE
- C/2"P POWER CONDUIT/SIZE
- W/6" SOLID WHITE LINE/WIDTH
- BW/6" BROKEN WHITE LINE/WIDTH
- DY/4" DOUBLE SOLID YELLOW LINE/WIDTH
- G/24" SOLID GREEN LINE/WIDTH
- C/3"S SYSTEMS CONDUIT/SIZE

**SIGNAL HEADS**



**AUDIBLE PEDESTRIAN SIGNAL NOTES**

- ALL PUSH BUTTONS SHALL BE EQUIPPED WITH LOCATOR TONES.
- ALL WALK INTERVALS TO HAVE VERBAL MESSAGE DETAILED WALK DIRECTION.
- VERBAL MESSAGE TO BE PLAYED DURING WALK INTERVAL WHEN BUTTON IS PRESSED.
- ALL PEDESTRIAN PUSH BUTTONS TO BE LOCATED AT 42" ABOVE GROUND.
- ALL PUSH BUTTONS TO BE EQUIPPED WITH VIBROTACTILE ARROW.
- VIBROTACTILE ARROWS TO VIBRATE DURING WALK INTERVAL.
- WALK AND DON'T WALK MESSAGE SHALL BE AUDIBLE THROUGH THE PUSH BUTTON SPEAKER.

**SIGNAL ASSEMBLY NOTES**

- ALL VEHICULAR/BICYCLE SIGNALS SHALL BE EQUIPPED WITH L.E.D LENSES, TUNNEL VISORS AND LOUVERED BLACK METAL BACKPLATES WITH 2" REFLECTIVE BORDERS.
- MIN/MAX HEIGHT TO BOTTOM OF VEHICULAR SIGNALS 17' / 18'.
- MIN HORIZONTAL SPACING FOR VEHICULAR SIGNALS IS 8'.
- MIN/MAX HEIGHT TO BOTTOM OF PEDESTRIAN SIGNALS 10' / 12'.
- FINAL SIGNAL HEAD PLACEMENT WILL BE DETERMINED BY REPRESENTATIVES OF THE CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE AND THE DISTRICT TRAFFIC UNIT PRIOR TO SIGNAL BEING TURNED ON.
- ALL PEDESTRIAN SIGNALS SHALL BE PORTLAND ORANGE FULL "PEDESTRIAN HAND" AND WHITE "WALKING PERSON" SYMBOLS AND HAVE INCANDESCENT LOOK WITH COUNTDOWN TIMER.
- PROVIDE AIRCRAFT STRANDED CABLE FOR MOUNTING SIGNAL AND SIGN BRACKET ASSEMBLIES TO MAST ARMS.
- PROVIDE BLACK ALUMINUM HOUSINGS FOR ALL SIGNAL HEADS.
- INSTALL POST MOUNTED SIGNAL HEADS WITH BOTTOMS NO GREATER THAN 15" ABOVE THE SIDEWALK OR PAVEMENT.
- EXACT LOCATION OF TRAFFIC SIGNAL SUPPORTS SHALL BE DETERMINED BY REPRESENTATIVES OF THE CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE AND THE DISTRICT TRAFFIC UNIT PRIOR TO INSTALLATION.

**PAVEMENT MARKING NOTES**

- ALL STOP BARS ARE W/24".
- CROSSWALKS ARE 10' X 24" KEYS WITH 3' TO 5' SPACING.
- CROSSWALKS ACROSS BICYCLE LANES ARE 6' X 12" KEYS WITH 1' SPACING.

TS-47

COUNTY: ALLEGHENY
MUNICIPALITY: CITY OF PITTSBURGH
INTERSECTION: FORBES AVENUE AND ARMSTRONG TUNNEL
APPROVED AND ACCEPTED:
CITY TRAFFIC ENGINEER _____ DATE _____
APPROVED AND ACCEPTED:
DISTRICT TRAFFIC ENGINEER _____ DATE _____



NO.	DATE	DESCRIPTION
REVISIONS		

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**(NOT FOR CONSTRUCTION)**

DESIGNED	DWP
DRAWN	NED
CHECKED	AJR
IN CHARGE	JKM
DATE	05/01/24
SCALE	AS SHOWN

<b>PORT AUTHORITY OF ALLEGHENY COUNTY</b> PITTSBURGH PENNSYLVANIA	
<b>BUS RAPID TRANSIT UPTOWN TO OAKLAND</b> SIGNAL PLANS FORBES AVENUE & TENTH ST/ARMSTRONG TUNNEL	
<b>Port Authority</b> connecting people to life™	CONTRACT NO. BRT-001
DWG. NO. SG95	SHT. 1155



TRAFFIC SIGNAL TABULATION

FORBES AVENUE AND ARMSTRONG TUNNEL

ITEM NUMBER	MISCELLANEOUS			
UNIT	DESCRIPTION	QTY.	LOCATION	REMARKS
01882.002 EACH	TRAFFIC SIGNAL TIMING MODIFICATIONS	2	CC	
02212.009 LF	POLE FOUNDATION DRILLING, LESS THAN 30" DIAMETER	9	△5	
02212.010 LF	POLE FOUNDATION DRILLING, GREATER THAN 30" DIAMETER	23	△1△6	
02889.002 EACH	LED LUMINAIRE CITY STANDARD, BLACK	3	☀☀☀	△1△2△5
02890.001 EACH	TRAFFIC SIGNAL CONTROLLER ASSEMBLY, TYPE 2070 LC, WITH TYPE 332 BASE MOUNTED CABINET(MOD)	1	CC	332 CONTROLLER CABINET 8" RISER RE-ESTABLISH INTERCONNECT
02890.003 EACH	ETHERNET SWITCH	1	CC	
02890.007 EACH	TUNNEL PREEMPTION CONNECTION	1	CC	
02894.001 EACH	VEHICULAR SIGNAL HEAD, THREE 12" SECTIONS	5	②③④⑤⑫	BLACK TUNNEL VISORS BLACK ALUMINUM HOUSINGS BLACK METAL LOUVERED BACKPLATE
02894.001 EACH	VEHICULAR SIGNAL HEAD, THREE 12" SECTIONS	1	①	BLACK TUNNEL VISORS BLACK ALUMINUM HOUSINGS BLACK METAL LOUVERED BACKPLATE SIGNAL LOUVERS
02894.005 EACH	LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, TYPE A	6	⑥⑦⑧ ⑨⑩⑪	BLACK TUNNEL VISORS BLACK ALUMINUM HOUSINGS
02895.002 EACH	ACCESSIBLE PEDESTRIAN SIGNALS	6	①②③ ④⑤⑥	
02897.001 EACH	CITY OF PITTSBURGH STANDARD CONCRETE JUNCTION BOX, TYPE 1	1	△6	RECONNECT EXISTING LIGHTING WIRING WITHIN NEW JB
02897.011 EACH	CONNECT TO EXISTING JUNCTION BOX	2	④⑥	

DETECTORS

ITEM NUMBER	DESCRIPTION	SEN. NO.	QTY.	LOCATION
02895.001 EACH	VIDEO DETECTION	①	1	△1
02895.001 EACH	VIDEO DETECTION	②	1	△2

TRAFFIC SIGNAL SUPPORTS \*\*

POLE NO.	ITEM NUMBER	DESCRIPTION	QTY.	ROUTE	STATION	SIDE	OFFSET	MAST ARM																PEDESTAL			
								H	K	ARM "A"										ARM "C"				SHAFT	SIGNAL		
										SIGNAL LOCATION					SIGN LOCATION					W	G	X	Z		H	M	N
										M	N	O	P	R	S	T	U	Y									
△1	02892.209 EACH	TRAFFIC SIGNAL SUPPORT, 34' MAST ARM WITH LUMINAIRE ARM (30' MOUNTING HEIGHT), PAINTED BLACK	1	FORBES AVE	126+70	L	19'	17'	10'	34'	28'	18'	--	--	25'	22'	--	--	4'	0°	6'	30'	0°	--	--	--	
△2	02892.401 EACH	TRAFFIC SIGNAL SUPPORT, 44' MAST ARM WITH LUMINAIRE ARM (30' MOUNTING HEIGHT), PAINTED BLACK (POLE ONLY)	1	FORBES AVE	127+16	R	29'	17'	10'	44'	36'	24'	--	--	33'	21'	11'	--	7'	54°	6'	30'	45°	--	--	--	
△3	02892.006 EACH	TRAFFIC SIGNAL SUPPORT, 15' TYPE X, PAINTED BLACK, POLE ONLY	1	FORBES AVE	126+56	R	28'	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	15'	--	10'		
△4	02892.009 EACH	TRAFFIC SIGNAL SUPPORT, 19' TYPE X, PAINTED BLACK, POLE ONLY	1	FORBES AVE	126+30	R	28'	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	19'	--	10'		
△5	02892.005 EACH	TRAFFIC SIGNAL SUPPORT, 30' TYPE X-L WITH LUMINAIRE ARM, PAINTED BLACK	1	FORBES AVE	125+68	R	25'	--	--	--	--	--	--	--	--	--	--	--	--	--	6'	30'	315°	30'	--	10'	
△6	02892.609 EACH	TRAFFIC SIGNAL SUPPORT, 15' MAST ARM, PAINTED BLACK	1	FORBES AVE	125+63	L	20'	--	--	--	9'	--	--	--	11'	--	--	--	--	--	--	--	--	--	--	10'	

\*\* REFER TO TRAFFIC STANDARDS TC-8800 SERIES FOR LETTER DESIGNATION

TS-47



Gulf Tower  
707 Grant Street  
5th Floor  
Pittsburgh, PA 15219

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REVISIONS		

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(NOT FOR CONSTRUCTION)

DESIGNED	DWP
DRAWN	NED
CHECKED	AJR
IN CHARGE	JKM
DATE	05/01/24
SCALE	AS SHOWN

PORT AUTHORITY OF ALLEGHENY COUNTY PITTSBURGH PENNSYLVANIA	
BUS RAPID TRANSIT UPTOWN TO OAKLAND SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	
Port Authority connecting people to life®	CONTRACT NO. BRT-001
DWG. NO. SG97	SHT. 1157

TRAFFIC SIGNAL TABULATION

FORBES AVENUE AND ARMSTRONG TUNNEL

TRENCH, CONDUIT, JUNCTION BOX, ELECTRICAL ITEMS

DESCRIPTION	ELECTRICAL SERVICE TYPE B	CITY OF PITTSBURGH STANDARD CONCRETE JUNCTION BOX, TYPE I	TRENCH AND BACKFILL, TYPE II	TRENCH AND BACKFILL, TYPE IV	2 INCH CONDUIT	3 INCH CONDUIT	AWG 8, UNDERGROUND CABLE, COPPER, 1 CONDUCTOR	SIGNAL CABLE, 14 AWG, 5 CONDUCTOR	SIGNAL CABLE, 14 AWG, 7 CONDUCTOR
ITEM NUMBER	02896	02897	02898	02898	02899	02899	02900	02900	02900
UNIT	EACH	EACH	LF	LF	LF	LF	LF	LF	LF
LOCATION									
CC TO	6		11		22	44			
6 TO	1	1	59		59	236			
1 TO	1		22		22	44			
1 TO	2		5	30	35	70			
2 TO	2								
2 TO	3								
3 TO	3								
3 TO	4								
4 TO	5		4		4	4			
6 TO	5	1	77		77	154			
5 TO	6		9			9			
COMPLETE INTERSECTION	1						1320	550	1080
TOTAL	1	2	187	30	219	561	1320	550	1080

SIGNS

SYMBOL	SERIES	SIZE	AREA EACH (SQ FT)	DESCRIPTION	QUANTITY	02891.003 POST MOUNTED SIGNS, TYPE F			
						SF	SF	EACH	
A	D3-4*	78"X24"	13.0	700 800 Forbes Ave	1		13.0		
B	D3-4*	66"X24"	11.0	Armstrong Tunnel	1		11.0		
C	R5-1	30"X30"	6.3	DO NOT ENTER	2	12.6			
D	R10-11	30"X36"	7.5	NO TURN ON RED ●	3		7.5		
E	R3-5R	30"X36"	7.5	RIGHT TURN ONLY	1		22.5		
F	R10-3E(MOD)	9"X15"	0.9	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER (MOD)	6	▲			
J	SPECIAL	30"X30"	6.3	BUS LANE SIGNAL	1		6.3		
K	R3-1(MOD)	30"X30"	6.3	NO RIGHT TURN - LED BLANKOUT	1			1	
TOTAL							12.6	60.3	1

▲ - INCIDENTAL TO ITEM 02895.002

\* WHITE REFLECTORIZED LEGEND AND BORDER ON BLUE REFLECTORIZED BACKGROUND. UTILIZE 4" CLEARVIEW 3W FOR BLOCK/NEIGHBORHOOD AND 8" CLEARVIEW 3W FOR STREET NAME. ACTUAL WIDTH DETERMINED BY LETTER SPACING. COORDINATE BLOCK NUMBERS AND STREET NAME DETAILS WITH CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE.



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5th Floor  
Pittsburgh, PA 15219

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BUS RAPID TRANSIT UPTOWN TO OAKLAND SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	
<b>Port Authority</b> <small>connecting people to life</small>	CONTRACT NO. BRT-001
	DWG. NO. SG98      SHT. 1158

**SIGNS**

SIGN	STANDARD	DESCRIPTION	SIZE	QTY
A	D3-1	FORBES AVE	24"x6"	1
B	SPECIAL	MCANULTY DR	24"x6"	1
C	D3-1	CHATHAM SQUARE	24"x6"	1
D	R3-1	NO RIGHT TURN	30"x30"	1
E	R3-2	NO LEFT TURN	24"x24"	2
F	R3-2	NO LEFT TURN	30"x30"	1
G	R6-1	ONE WAY (TWO SIDED, CITY STANDARD)	36"x12"	1
H	R10-3E(MOD)	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER (MOD.)	9"x15"	8
I	R10-11	NO TURN ON RED	30"x36"	2
J	R10-10L	LEFT TURN SIGNAL	30"x36"	1
K	R3-5L	LEFT ONLY	30"x36"	1
L	R3-5S	STRAIGHT ONLY	30"x36"	1
M	R3-6SR	OPTIONAL RIGHT TURN	30"x36"	1
N	R3-11B(MOD)**	RIGHT LANE - BUSES ONLY	30"x36"	2
O	SS-1**	EXCEPT RIGHT TURNS	30"x18"	2
P	R10-12	LEFT TURN YIELD ON GREEN	30"x36"	1

**SIGNS (CONT.)**

SIGN	STANDARD	DESCRIPTION	SIZE	QTY
Q	R3-5Ba	BUS ONLY	30"x36"	1
R	R10-6AL	STOP HERE ON RED, (LEFT)	24"x30"	1
S	R10-6AL	STOP HERE ON RED, (LEFT)	24"x30"	1
T	R3-2	NO LEFT TURN	30"x30"	1
U	R3-1	NO RIGHT TURN	30"x30"	1
V	R5-1	DO NOT ENTER	24"x24"	1
W	R10-6-1	LEFT LANE PLAQUE	24"x18"	1

**AUDIBLE PEDESTRIAN SIGNAL NOTES**

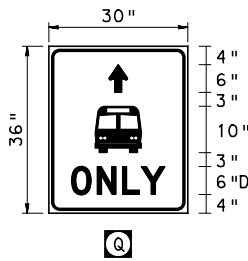
1. ALL PUSH BUTTONS SHALL BE EQUIPPED WITH LOCATOR TONES.
2. ALL WALK INTERVALS TO HAVE VERBAL MESSAGE DETAILED WALK DIRECTION.
3. VERBAL MESSAGE TO BE PLAYED DURING WALK INTERVAL WHEN BUTTON IS PRESSED.
4. ALL PEDESTRIAN PUSH BUTTONS TO BE LOCATED AT 42" ABOVE GROUND.
5. ALL PUSH BUTTONS TO BE EQUIPPED WITH VIBROTACTILE ARROW.
6. VIBROTACTILE ARROWS TO VIBRATE DURING WALK INTERVAL.
7. WALK AND DON'T WALK MESSAGE SHALL BE AUDIBLE THROUGH THE PUSH BUTTON SPEAKER.

**SIGNAL ASSEMBLY NOTES**

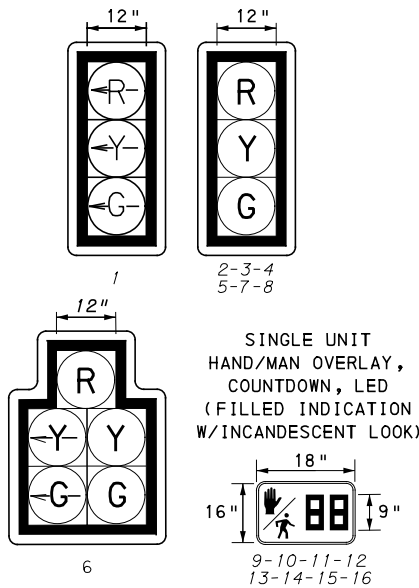
1. ALL VEHICULAR/BICYCLE SIGNALS SHALL BE EQUIPPED WITH L.E.D LENSES, TUNNEL VISORS AND LOUVERED BLACK METAL BACKPLATES WITH 2" REFLECTIVE BORDERS.
2. MIN/MAX HEIGHT TO BOTTOM OF VEHICULAR SIGNALS 17' / 18'.
3. MIN HORIZONTAL SPACING FOR VEHICULAR SIGNALS IS 8'.
4. MIN/MAX HEIGHT TO BOTTOM OF PEDESTRIAN SIGNALS 10' / 12'.
5. FINAL SIGNAL HEAD PLACEMENT WILL BE DETERMINED BY REPRESENTATIVES OF THE CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE AND THE DISTRICT TRAFFIC UNIT PRIOR TO SIGNAL BEING TURNED ON.
6. ALL PEDESTRIAN SIGNALS SHALL BE PORTLAND ORANGE FULL "PEDESTRIAN HAND" AND WHITE "WALKING PERSON" SYMBOLS AND HAVE INCANDESCENT LOOK WITH COUNTDOWN TIMER.
7. PROVIDE AIRCRAFT STRANDED CABLE FOR MOUNTING SIGNAL AND SIGN BRACKET ASSEMBLIES TO MAST ARMS.
8. PROVIDE BLACK ALUMINUM HOUSINGS FOR ALL SIGNAL HEADS.
9. INSTALL POST MOUNTED SIGNAL HEADS WITH BOTTOMS NO GREATER THAN 15" ABOVE THE SIDEWALK OR PAVEMENT.
10. EXACT LOCATION OF TRAFFIC SIGNAL SUPPORTS SHALL BE DETERMINED BY REPRESENTATIVES OF THE CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE AND THE DISTRICT TRAFFIC UNIT PRIOR TO INSTALLATION.

**PAVEMENT MARKING NOTES**

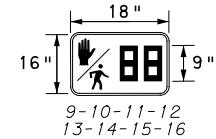
1. ALL STOP BARS ARE W/24".
2. CROSSWALKS ARE 10' X 24" KEYS WITH 3' TO 5' SPACING.
3. CROSSWALKS ACROSS BICYCLE LANES ARE 6' X 12" KEYS WITH 1' SPACING.



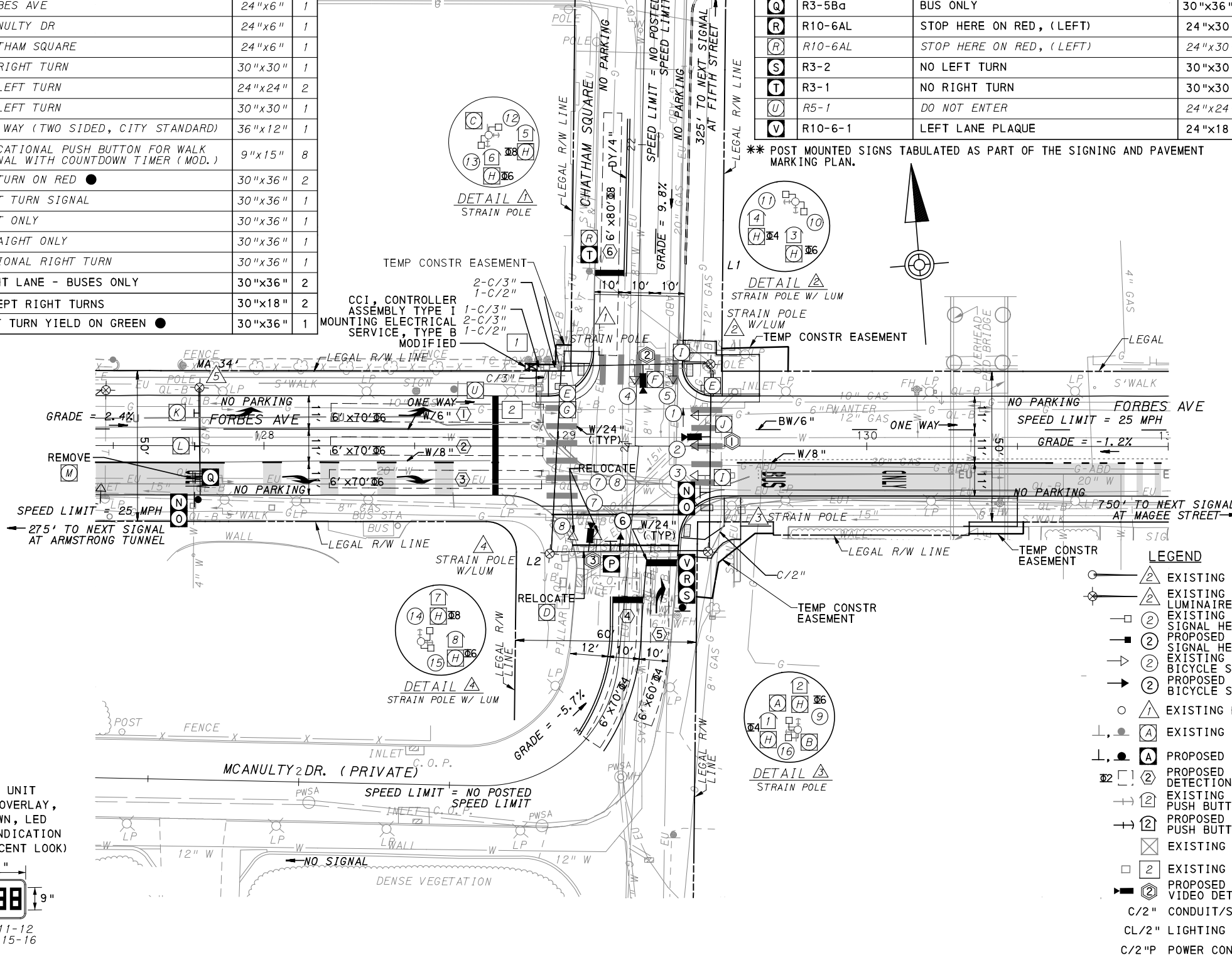
**SIGNAL HEADS**



SINGLE UNIT HAND/MAN OVERLAY, COUNTDOWN, LED (FILLED INDICATION W/ INCANDESCENT LOOK)

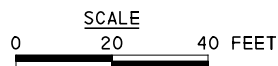


9-10-11-12  
13-14-15-16



**LEGEND**

- EXISTING MAST ARM
- EXISTING MAST ARM WITH LUMINAIRE ARM
- EXISTING PEDESTRIAN SIGNAL HEAD
- PROPOSED PEDESTRIAN SIGNAL HEAD
- EXISTING VEHICULAR/BICYCLE SIGNAL HEAD
- PROPOSED VEHICULAR/BICYCLE SIGNAL HEAD
- EXISTING PEDESTAL
- EXISTING SIGN
- PROPOSED SIGN
- PROPOSED STOP BAR VIDEO DETECTION ZONE
- EXISTING AUDIBLE PEDESTRIAN PUSH BUTTON/SIGN
- PROPOSED AUDIBLE PEDESTRIAN PUSH BUTTON/SIGN
- EXISTING CONTROLLER ASSEMBLY
- EXISTING JUNCTION BOX
- PROPOSED STOP BAR VIDEO DETECTOR
- C/2" CONDUIT/SIZE
- CL/2" LIGHTING CONDUIT/SIZE
- C/2"P POWER CONDUIT/SIZE
- W/6" SOLID WHITE LINE/WIDTH
- BW/6" BROKEN WHITE LINE/WIDTH
- DY/4" DOUBLE SOLID YELLOW LINE/WIDTH
- G/24" SOLID GREEN LINE/WIDTH



TS-588

COUNTY: ALLEGHENY  
MUNICIPALITY: CITY OF PITTSBURGH  
INTERSECTION: FORBES AVENUE  
AND CHATHAM SQUARE  
AND MCANULTY DRIVE

APPROVED AND ACCEPTED:  
CITY TRAFFIC ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_  
APPROVED AND ACCEPTED:  
DISTRICT TRAFFIC ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_



Gulf Tower  
707 Grant Street  
5th Floor  
Pittsburgh, PA 15219

NO.	DATE	DESCRIPTION
REVISIONS		

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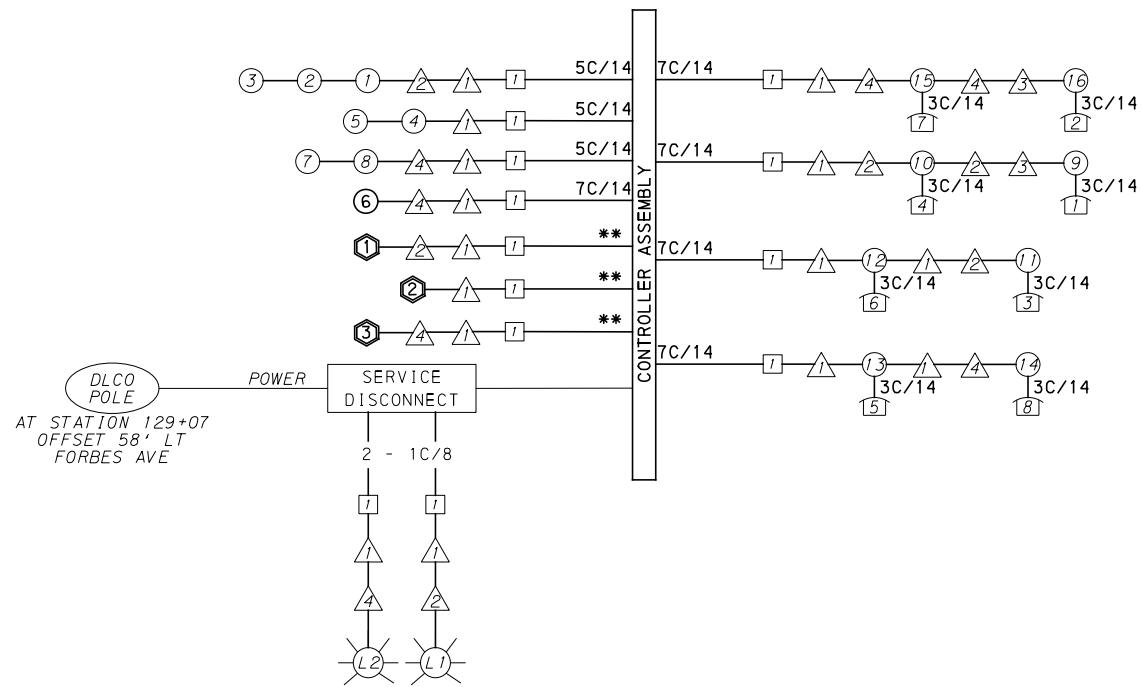
DESIGNED	DWP
DRAWN	NEB
CHECKED	AJR
IN CHARGE	JKM
DATE	05/01/24
SCALE	AS SHOWN

<b>PORT AUTHORITY OF ALLEGHENY COUNTY</b> PITTSBURGH PENNSYLVANIA	
<b>BUS RAPID TRANSIT UPTOWN TO OAKLAND</b> SIGNAL PLANS FORBES AVENUE & CHATHAM SQUARE/MCANULTY DRIVE	
<b>Port Authority</b> connecting people to life™	CONTRACT NO. BRT-001
DWG. NO. SG99	SHT. 1159



**MOVEMENT, PHASING AND SEQUENCE CHART**

SIGNAL	PHASE 6					PHASE 4+8					PHASE 3+8					FLASHING
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	
1	-R-	-G-	-G-	-Y-	-R-	-R-	-R-	-R-	-R-	-R-	-R-	-R-	-R-	-R-	-R-	
2	R	G	G	Y	R	R	R	R	R	R	R	R	R	R	R	R
3	R	G	G	Y	R	R	R	R	R	R	R	R	R	R	R	R
4-5	R	R	R	R	R	R	G	G	Y	R	R	R	R	R	R	R
6	R	R	R	R	R	R	G	G	G	G	G	G	Y	Y	R	R
7-8	R	R	R	R	R	R	G	G	G	G	G	G	Y	R		R
11-12-15-16	W	W	FD	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	OFF
9-10	DW	DW	DW	DW	DW	W	W	FD	DW	DW	DW	DW	DW	DW	DW	OFF
13-14	DW	DW	DW	DW	DW	W	W	FD	DW	DW	W	FD	DW	DW		OFF
FIXED	7		3.5	2.5	3			4	3				4	3		
MINIMUM		15					7					3				
PASSAGE		3					3					3				
FREE (MAX)		90					50					7				
PEDESTRIAN		7	12				7	12				7	12			
MEMORY		MIN RECALL					PED RECALL					MIN RECALL				



**WIRING DIAGRAM**

- 5C/14 - CABLE (NO. OF CONDUCTORS/SIZE AWG.)
- ① EXISTING SIGNAL HEAD      ① PROPOSED SIGNAL HEAD
  - ① EXISTING AUDIBLE PEDESTRIAN INDICATOR      ① PROPOSED AUDIBLE PEDESTRIAN INDICATOR
  - ① EXISTING SIGNAL SUPPORT      ① PROPOSED SIGNAL SUPPORT
  - ① EXISTING JUNCTION BOX      ① PROPOSED JUNCTION BOX
  - ① EXISTING LUMINAIRE      ① PROPOSED LUMINAIRE
  - ① PROPOSED DETECTOR
  - \*\* INCIDENTAL TO ITEM 02895.001, AS PER MANUFACTURERS SPECIFICATIONS

**DETECTOR ZONE INFORMATION**

DETECTOR	DETECTION ZONE(S)	MODE	TYPE	ROUTE	PHASE	LOCATION MAST ARM
①	①②③ (6' x 70')	PRESENCE	VIDEO (STOP BAR)	FORBES AVENUE	6	③ ①
②	④ (6' x 70')	PRESENCE	VIDEO (STOP BAR)	MCANULTY DRIVE	4	① ②
	⑤ (6' x 60')					③ ④
③	⑥ (6' x 80')	PRESENCE	VIDEO (STOP BAR)	CHATHAM SQUARE	8	③ ④

**TRANSIT PRIORITY PRE-EMPTION NOTES (TO BE INSTALLED BY OTHERS)**

- COORDINATE TRAFFIC CONTROLLER PROGRAMMING MODIFICATION WITH REPRESENTATIVES OF THE CITY OF PITTSBURGH AND DISTRICT TRAFFIC UNIT.
- INCLUDE A TRANSIT PRIORITY PHASE THAT WILL EXTEND THE INDICATED PHASE A MAXIMUM OF 10 SECONDS WHEN ACTIVATED BY A PORT AUTHORITY VEHICLE. DO NOT VIOLATE SIDE STREET PEDESTRIAN MINIMUM TIMINGS.
- MAINTAIN ALL YELLOW CLEARANCES AT ALL TIMES.
- PROCEED TO THE SUBSEQUENT INTERVAL AS DEFINED IN THE MOVEMENT, SEQUENCE AND TIMING DIAGRAM UPON COMPLETING THE GREEN EXTENSION INTERVAL.
- ONCE A TRANSIT CALL IS PLACED AND SATISFIED, THE CONTROLLER WILL NOT SATISFY ANOTHER CALL FOR 4 CYCLES.
- LOCATION OF BUS DETECTORS ARE TO BE FIELD ADJUSTED TO ACHIEVE MAXIMUM OPERATION.

**GENERAL NOTES**

THE CITY OF PITTSBURGH SHALL INSPECT THE NEW SIGNAL EQUIPMENT PRIOR TO ACTIVATION.

ALL TRAFFIC SIGNAL MAINTENANCE AND OPERATION RESPONSIBILITIES SHALL BE TURNED OVER TO THE CITY OF PITTSBURGH AFTER THE FOLLOWING CONDITIONS ARE IMPLEMENTED TO THE CITY'S SATISFACTION:

- PERMIT "AS-BUILT" TRAFFIC SIGNAL DRAWINGS ARE SUBMITTED AND APPROVED.
- ALL PUNCH LIST ITEMS ARE COMPLETED BY THE CONTRACTOR.
- AFTER THE 30-DAY CONTINUOUS UNINTERRUPTED SIGNAL OPERATION WITHOUT MALFUNCTIONS.

**CONSTRUCTION NOTES**

- ALL JUNCTION BOXES IN WALK AREAS TO BE CITY OF PITTSBURGH STANDARD CONCRETE JUNCTION BOX, TYPE 1.
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- THERE SHALL BE NO SIGNAL WIRE OR FIBER CABLE SPLICING.
- SERVICE WIRE FROM THE POWER SOURCE TO THE CONTROLLER CABINET SHALL BE PLACED IN SECONDARY SEPARATE CONDUIT.
- STREET LIGHT CABLE IS NOT PERMITTED TO RUN THROUGH THE CONTROLLER CABINET AND SHALL BE PLACED IN SEPARATE CONDUIT.
- TRAFFIC SIGNAL CABLE SHALL BE PLACED IN DEDICATED CONDUIT.
- MOUNT DISCONNECT ON POLE NEAREST TO THE CONTROLLER CABINET EXCLUDING TYPE X POLES.
- REMOVE AND DISPOSE OF ALL EXISTING SIGNAL WIRING NO LONGER IN USE.
- REMOVE EXISTING SIGNAL EQUIPMENT NO LONGER IN USE AND RETURN TO THE CITY OF PITTSBURGH TRAFFIC CONTROL SHOP. COORDINATE DELIVERY OF EQUIPMENT WITH DELMAS MCELHANY, TRAFFIC CONTROL FOREMAN.

TS-588

COUNTY: ALLEGHENY

MUNICIPALITY: CITY OF PITTSBURGH

INTERSECTION: FORBES AVENUE AND CHATHAM SQUARE AND MCANULTY DRIVE

APPROVED AND ACCEPTED:

CITY TRAFFIC ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_

APPROVED AND ACCEPTED:

DISTRICT TRAFFIC ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_



Gulf Tower  
707 Grant Street  
5th Floor  
Pittsburgh, PA 15219

NO.	DATE	DESCRIPTION
REVISIONS		

THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE FEDERAL TRANSIT ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1984, AS AMENDED, FOR THE PORT AUTHORITY OF ALLEGHENY COUNTY, PENNSYLVANIA.

**(NOT FOR CONSTRUCTION)**

DESIGNED	DWP
DRAWN	NED
CHECKED	AJR
IN CHARGE	JKM
DATE	05/01/24
SCALE	AS SHOWN

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT UPTOWN TO OAKLAND**  
SIGNAL PLANS  
WIRING, MOVEMENT, PHASING & SEQUENCE DIAGRAMS

**Port Authority** connecting people to life

CONTRACT NO. BRT-001

DWG. NO. SG100 SHT. 1160

TRAFFIC SIGNAL TABULATION

FORBES AVENUE AND CHATHAM SQUARE AND MCANULTY DRIVE

MISCELLANEOUS				
ITEM NUMBER	DESCRIPTION	QTY.	LOCATION	REMARKS
01882.002 EACH	TRAFFIC SIGNAL TIMING MODIFICATIONS	2	CC	
02890.002 EACH	TRAFFIC SIGNAL CONTROLLER ASSEMBLY, TYPE 2070 LC IN EXISTING CABINET	1	CC	332 CONTROLLER CABINET 8" RISER RE-ESTABLISH INTERCONNECT
02890.003 EACH	ETHERNET SWITCH	1	CC	
02890.005 EACH	GPS TIME CLOCK	1	CC	
02894.021 EACH	RESET VEHICULAR SIGNAL HEAD	2	⑦⑧	
02894.003 EACH	VEHICULAR SIGNAL HEAD, FIVE 12" SECTIONS	1	⑥	BLACK TUNNEL VISORS BLACK ALUMINUM HOUSINGS BLACK METAL LOUVERED BACKPLATE

DETECTORS				
ITEM NUMBER	DESCRIPTION	SEN. NO.	QTY.	LOCATION
02895.001 EACH	VIDEO DETECTION	①	1	② ③
02895.001 EACH	VIDEO DETECTION	②	1	① ②
02895.001 EACH	VIDEO DETECTION	③	1	③ ④

TRAFFIC SIGNAL SUPPORTS \*\*

POLE NO.	ITEM NUMBER	DESCRIPTION	QTY.	ROUTE	STATION	SIDE	OFFSET	MAST ARM																PEDESTAL		
								ARM "A"								ARM "C"				SHAFT		SIGNAL				
								H	K	SIGNAL LOCATION				SIGN LOCATION				W	G	X	Z	H	M	N		
								L	M	N	O	P	R	S	T	U	Y									
①		TRAFFIC SIGNAL SUPPORT, 24' STRAIN POLE	1	FORBES AVE	128+99	L	26'	24'	10'	59'	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
②		TRAFFIC SIGNAL SUPPORT, 24' STRAIN POLE WITH LUMINAIRE ARM	1	FORBES AVE	129+48	L	27'	24'	10'	47'	23'	11'	--	--	19'	7'	--	--	--	--	--	30'	45°	--	--	--
③		TRAFFIC SIGNAL SUPPORT, 24' STRAIN POLE	1	MCANULTY DR	3+67	R	26'	24'	10'	59'	43'	34'	24'	--	41'	22'	18'	--	--	--	--	--	--	--	--	
④		TRAFFIC SIGNAL SUPPORT, 24' STRAIN POLE WITH LUMINAIRE ARM	1	MCANULTY DR	3+62	L	26'	24'	10'	50'	23'	15'	7'	--	20'	9'	--	--	--	--	--	30'	45°	--	--	--
⑤		TRAFFIC SIGNAL SUPPORT, 34' MAST ARM	1	FORBES AVE	127+79	R	19'	17'	--	34'	--	--	--	--	30'	18'	7'	--	--	0°	--	--	--	--	--	

\*\* REFER TO TRAFFIC STANDARDS TC-8800 SERIES FOR LETTER DESIGNATION



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(NOT FOR CONSTRUCTION)

DESIGNED	DWP
DRAWN	NED
CHECKED	AJR
IN CHARGE	JKM
DATE	05/01/24
SCALE	AS SHOWN

PORT AUTHORITY OF ALLEGHENY COUNTY PITTSBURGH PENNSYLVANIA		
BUS RAPID TRANSIT UPTOWN TO OAKLAND SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS		
Port Authority connecting people to life®	CONTRACT NO. BRT-001	
DWG. NO. SG101	SHT. 1161	

**TRAFFIC SIGNAL TABULATION**

FORBES AVENUE AND CHATHAM SQUARE  
 AND MCANULTY DRIVE

TRENCH, CONDUIT, JUNCTION BOX, ELECTRICAL ITEMS

DESCRIPTION	ELECTRICAL SERVICE TYPE B	AWG 8, UNDERGROUND CABLE, COPPER, 1 CONDUCTOR	SIGNAL CABLE, 14 AWG, 5 CONDUCTOR	SIGNAL CABLE, 14 AWG, 7 CONDUCTOR
ITEM NUMBER	02896	02900	02900	02900
UNIT	002	001	002	003
LOCATION	EACH	LF	LF	LF
COMPLETE INTERSECTION	1	380	350	800
TOTAL	1	380	350	800

SIGNS

SYMBOL	SERIES	SIZE	AREA EACH (SQ FT)	DESCRIPTION	QUANTITY	02891.001 POST MOUNTED SIGNS, TYPE B				
						SF	SF	SF	EACH	EACH
D	R3-1	30"x30"	6.3	NO RIGHT TURN	1				1	
M	R3-1	30"x36"	7.5	OPTIONAL RIGHT TURN	1					1
P	R10-12	30"x36"	7.5	LEFT TURN YIELD ON GREEN ●	1			7.5		
Q	R3-5Ba	30"x36"	7.5	BUS ONLY	1			7.5		
R	R10-6AL	24"x30"	5.0	STOP HERE ON RED, (LEFT)	1		5.0			
S	R3-2	30"x30"	6.3	NO LEFT TURN	1	6.3				
T	R3-1	30"x30"	6.3	NO RIGHT TURN	1		6.3			
V	R10-6-1	24"x18"	3.0	LEFT LANE PLAQUE	1		3.0			
TOTAL						6.3	14.3	15.0	1	1

TS-588



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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
 PITTSBURGH PENNSYLVANIA  
**BUS RAPID TRANSIT UPTOWN TO OAKLAND**  
 SIGNAL PLANS  
 TRAFFIC SIGNAL TABULATIONS

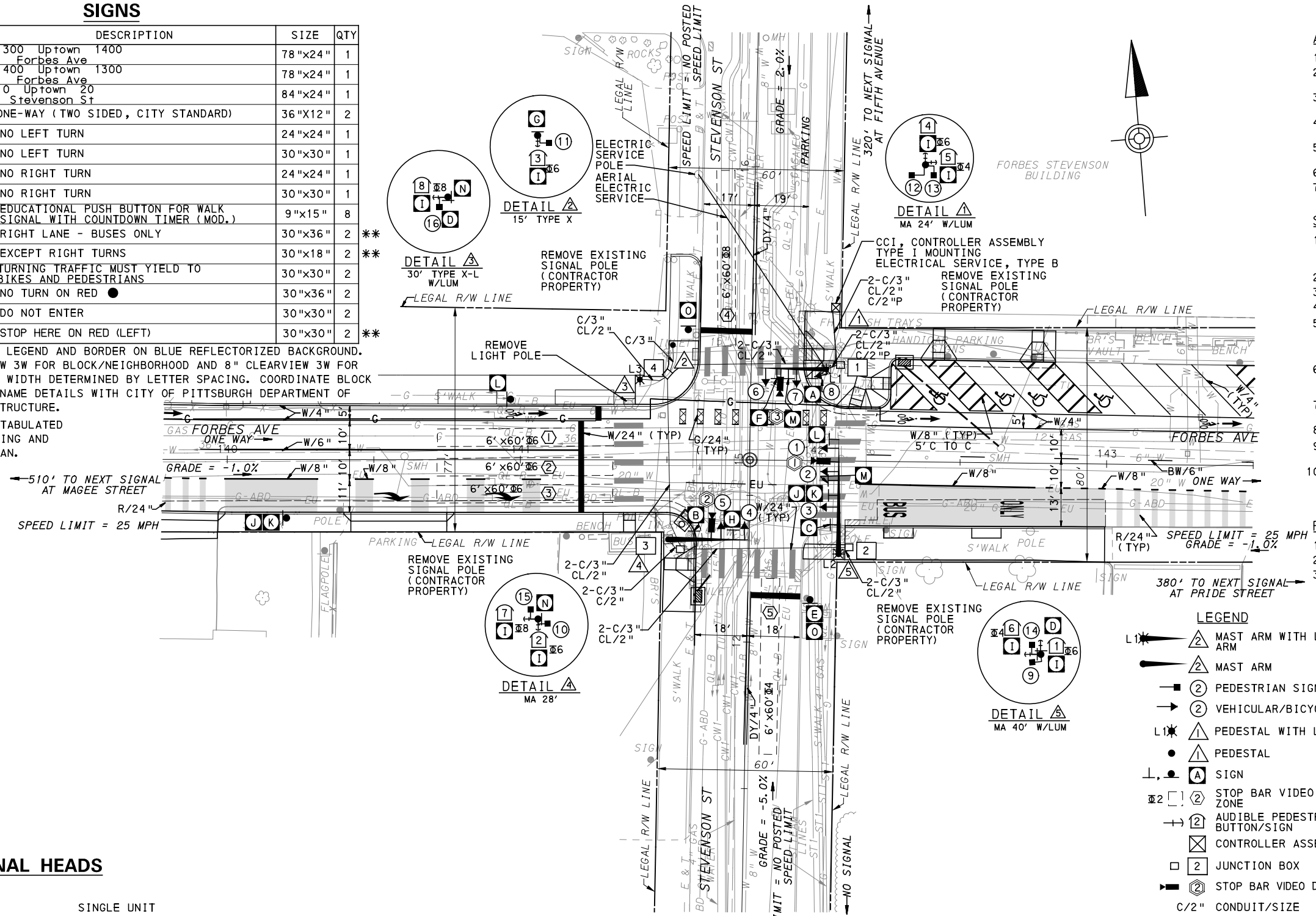
<b>Port Authority</b> connecting people to life™	CONTRACT NO. BRT-001
DWG. NO. SG102	SHT. 1162

**SIGNS**

SIGN	STANDARD	DESCRIPTION	SIZE	QTY
A	D3-4 *	1300 Uptown 1400 Forbes Ave	78"x24"	1
B	D3-4 *	1400 Uptown 1300 Forbes Ave	78"x24"	1
C	D3-4 *	10 Uptown 20 Stevenson St	84"x24"	1
D	R6-1	ONE-WAY (TWO SIDED, CITY STANDARD)	36"x12"	2
E	R3-2	NO LEFT TURN	24"x24"	1
F	R3-2	NO LEFT TURN	30"x30"	1
G	R3-1	NO RIGHT TURN	24"x24"	1
H	R3-1	NO RIGHT TURN	30"x30"	1
I	R10-3E(MOD)	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER (MOD.)	9"x15"	8
J	R3-11B(MOD)	RIGHT LANE - BUSES ONLY	30"x36"	2 **
K	SS-1	EXCEPT RIGHT TURNS	30"x18"	2 **
L	R10-15AL(MOD)	TURNING TRAFFIC MUST YIELD TO BIKES AND PEDESTRIANS	30"x30"	2
M	R10-11	NO TURN ON RED	30"x36"	2
N	R5-1	DO NOT ENTER	30"x30"	2
O	R10-6AL	STOP HERE ON RED (LEFT)	30"x30"	2 **

\* WHITE REFLECTORIZED LEGEND AND BORDER ON BLUE REFLECTORIZED BACKGROUND. UTILIZE 4" CLEARVIEW 3W FOR BLOCK/NEIGHBORHOOD AND 8" CLEARVIEW 3W FOR STREET NAME. ACTUAL WIDTH DETERMINED BY LETTER SPACING. COORDINATE BLOCK NUMBERS AND STREET NAME DETAILS WITH CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE.

\*\* POST MOUNTED SIGNS TABULATED AS PART OF THE SIGNING AND PAVEMENT MARKING PLAN.



- AUDIBLE PEDESTRIAN SIGNAL NOTES**
1. ALL PUSH BUTTONS SHALL BE EQUIPPED WITH LOCATOR TONES.
  2. ALL WALK INTERVALS TO HAVE VERBAL MESSAGE DETAILING WALK DIRECTION.
  3. VERBAL MESSAGE TO BE PLAYED DURING WALK INTERVAL WHEN BUTTON IS PRESSED.
  4. ALL PEDESTRIAN PUSH BUTTONS TO BE LOCATED AT 42" ABOVE GROUND.
  5. ALL PUSH BUTTONS TO BE EQUIPPED WITH VIBROTACTILE ARROW.
  6. VIBROTACTILE ARROWS TO VIBRATE DURING WALK INTERVAL.
  7. WALK AND DON'T WALK MESSAGE SHALL BE AUDIBLE THROUGH THE PUSH BUTTON SPEAKER.

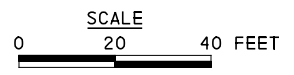
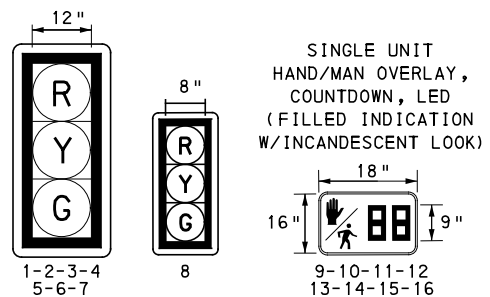
- SIGNAL ASSEMBLY NOTES**
1. ALL VEHICULAR/BICYCLE SIGNALS SHALL BE EQUIPPED WITH L.E.D LENSES, TUNNEL VISORS AND LOUVERED BLACK METAL BACKPLATES WITH 2" REFLECTIVE BORDERS.
  2. MIN/MAX HEIGHT TO BOTTOM OF VEHICULAR SIGNALS 17' /18'.
  3. MIN HORIZONTAL SPACING FOR VEHICULAR SIGNALS IS 8'.
  4. MIN/MAX HEIGHT TO BOTTOM OF PEDESTRIAN SIGNALS 10' /12'.
  5. FINAL SIGNAL HEAD PLACEMENT WILL BE DETERMINED BY REPRESENTATIVES OF THE CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE AND THE DISTRICT TRAFFIC UNIT PRIOR TO SIGNAL BEING TURNED ON.
  6. ALL PEDESTRIAN SIGNALS SHALL BE PORTLAND ORANGE FULL "PEDESTRIAN HAND" AND WHITE "WALKING PERSON" SYMBOLS AND HAVE INCANDESCENT LOOK WITH COUNTDOWN TIMER.
  7. PROVIDE AIRCRAFT STRANDED CABLE FOR MOUNTING SIGNAL AND SIGN BRACKET ASSEMBLIES TO MAST ARMS.
  8. PROVIDE BLACK ALUMINUM HOUSINGS FOR ALL SIGNAL HEADS.
  9. INSTALL POST MOUNTED SIGNAL HEADS WITH BOTTOMS NO GREATER THAN 15' ABOVE THE SIDEWALK OR PAVEMENT.
  10. EXACT LOCATION OF TRAFFIC SIGNAL SUPPORTS SHALL BE DETERMINED BY REPRESENTATIVES OF THE CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE AND THE DISTRICT TRAFFIC UNIT PRIOR TO INSTALLATION.

- PAVEMENT MARKING NOTES**
1. ALL STOP BARS ARE W/24".
  2. CROSSWALKS ARE 10' X 24" KEYS WITH 3' TO 5' SPACING.
  3. CROSSWALKS ACROSS BICYCLE LANES ARE 6' X 12" KEYS WITH 1' SPACING.

**LEGEND**

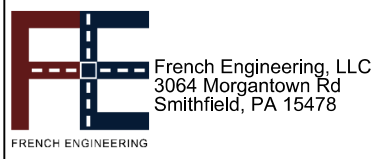
	1 MAST ARM WITH LUMINAIRE ARM
	2 MAST ARM
	3 PEDESTRIAN SIGNAL HEAD
	4 VEHICULAR/BICYCLE SIGNAL HEAD
	5 PEDESTAL WITH LUMINAIRE
	6 PEDESTAL
	7 SIGN
	8 STOP BAR VIDEO DETECTION ZONE
	9 AUDIBLE PEDESTRIAN PUSH BUTTON/SIGN
	10 CONTROLLER ASSEMBLY
	11 JUNCTION BOX
	12 STOP BAR VIDEO DETECTOR
	C/2" CONDUIT/SIZE
	CL/2" LIGHTING CONDUIT/SIZE
	C/2"P POWER CONDUIT/SIZE
	W/6" SOLID WHITE LINE/WIDTH
	BW/6" BROKEN WHITE LINE/WIDTH
	DY/4" DOUBLE SOLID YELLOW LINE/WIDTH
	G/24" SOLID GREEN LINE/WIDTH
	R/24" SOLID RED LINE/WIDTH

**SIGNAL HEADS**



TS-340

COUNTY: ALLEGHENY
MUNICIPALITY: CITY OF PITTSBURGH
INTERSECTION: FORBES AVENUE AND STEVENSON STREET
APPROVED AND ACCEPTED:
CITY TRAFFIC ENGINEER _____ DATE _____
APPROVED AND ACCEPTED:
DISTRICT TRAFFIC ENGINEER _____ DATE _____



NO.	DATE	DESCRIPTION
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**(NOT FOR CONSTRUCTION)**

DESIGNED	LJF
DRAWN	WLZ
CHECKED	MSF
IN CHARGE	LJF
DATE	05/01/24
SCALE	AS SHOWN

<b>PORT AUTHORITY OF ALLEGHENY COUNTY</b> PITTSBURGH PENNSYLVANIA	
<b>BUS RAPID TRANSIT UPTOWN TO OAKLAND</b> SIGNAL PLANS FORBES AVENUE & STEVENSON STREET	
<b>Port Authority</b> connecting people to life	CONTRACT NO. BRT-001
DWG. NO. SG103	SHT. 1163



**MOVEMENT, PHASING AND SEQUENCE CHART**

SIGNAL	PHASE 6					PHASE 4+8				
	1	2	3	4	5	1	2	3	4	5
1-2-3	R	G	G	Y	R	R	R	R	R	R
4-5	R	R	R	R	R	R	G	G	Y	R
6-7	R	R	R	R	R	R	G	G	Y	R
8	R	G	G	Y	R	R	R	R	R	R
9-10-11-12	W	W	FD	DW	DW	DW	DW	DW	DW	OFF
13-14-15-16	DW	DW	DW	DW	DW	W	W	FD	DW	OFF
FIXED			3.5	2.5			4	3		
MINIMUM			10			10				
PASSAGE			3			3				
FREE (MAX)			34			28				
PEDESTRIAN	3	4	13			3	4	14		
MEMORY	MIN RECALL					PED RECALL				

**DETECTOR ZONE INFORMATION**

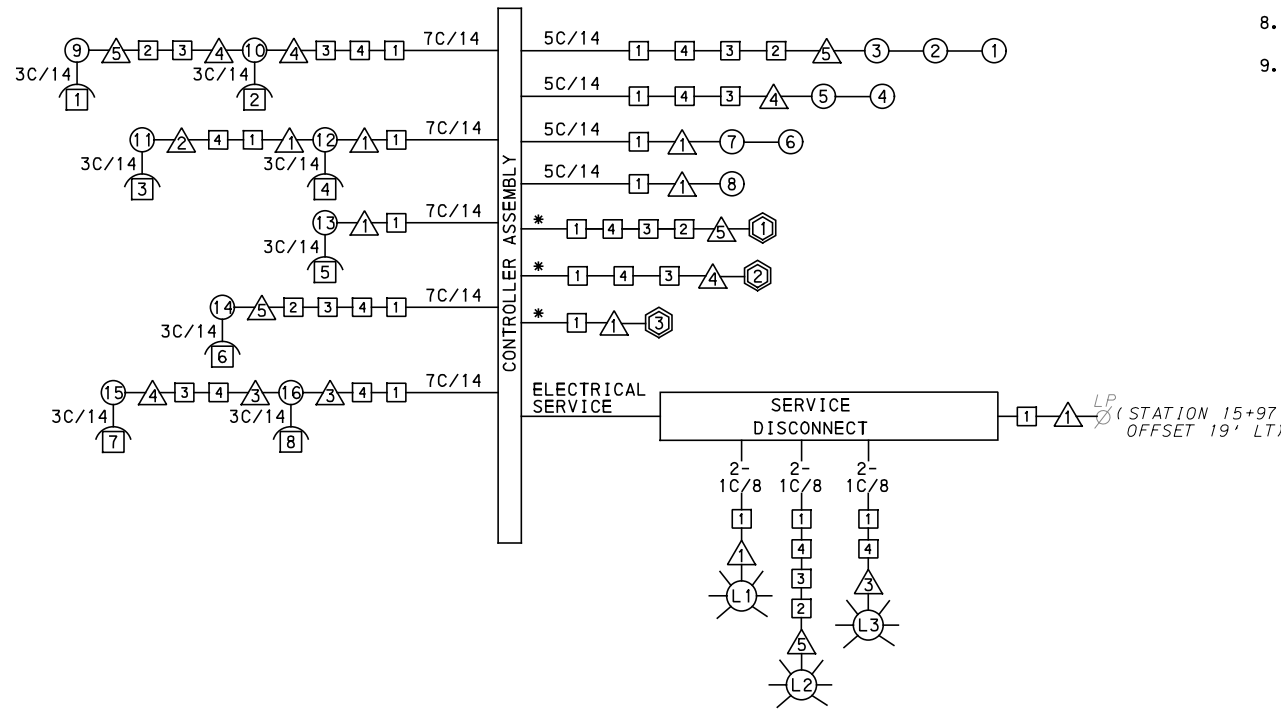
DETECTOR	DETECTION ZONE(S)	MODE	TYPE	ROUTE	PHASE	LOCATION MAST ARM
①	① ② ③ (6' x 60')	PRESENCE	VIDEO (STOP BAR)	FORBES AVENUE	6	△
②	④ (6' x 60')	PRESENCE	VIDEO (STOP BAR)	STEVENSON STREET	8	△
③	⑤ (6' x 60')	PRESENCE	VIDEO (STOP BAR)	STEVENSON STREET	4	△

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7. MOUNT DISCONNECT ON POLE NEAREST TO THE CONTROLLER CABINET EXCLUDING TYPE X POLES.
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9. REMOVE EXISTING SIGNAL EQUIPMENT NO LONGER IN USE AND RETURN TO THE CITY OF PITTSBURGH TRAFFIC CONTROL SHOP. COORDINATE DELIVERY OF EQUIPMENT WITH DELMAS MCELHANY, TRAFFIC CONTROL FOREMAN.



**WIRING DIAGRAM**

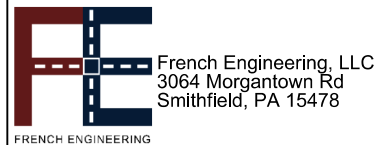
- 5C/14 - CABLE (NO. OF CONDUCTORS/SIZE AWG.)
- ① PROPOSED DETECTOR
  - ① PROPOSED SIGNAL HEAD
  - ① PROPOSED AUDIBLE PEDESTRIAN INDICATOR
  - △ PROPOSED SIGNAL SUPPORT
  - L1 PROPOSED LUMINAIRE
  - PROPOSED JUNCTION BOX
- 3C/14 INCIDENTAL TO ITEM 02895.002
- \* INCIDENTAL TO ITEM 02895.001, AS PER MANUFACTURERS SPECIFICATIONS

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3. MAINTAIN ALL YELLOW CLEARANCES AT ALL TIMES.
4. PROCEED TO THE SUBSEQUENT INTERVAL AS DEFINED IN THE MOVEMENT, SEQUENCE AND TIMING DIAGRAM UPON COMPLETING THE GREEN EXTENSION INTERVAL.
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TS-340

COUNTY: ALLEGHENY
MUNICIPALITY: CITY OF PITTSBURGH
INTERSECTION: FORBES AVENUE AND STEVENSON STREET
APPROVED AND ACCEPTED:
CITY TRAFFIC ENGINEER _____ DATE _____
APPROVED AND ACCEPTED:
DISTRICT TRAFFIC ENGINEER _____ DATE _____



NO.	DATE	DESCRIPTION
REVISIONS		

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**(NOT FOR CONSTRUCTION)**

DESIGNED	LJF
DRAWN	WLZ
CHECKED	MSF
IN CHARGE	LJF
DATE	05/01/24
SCALE	AS SHOWN

<b>PORT AUTHORITY OF ALLEGHENY COUNTY</b>	
PITTSBURGH PENNSYLVANIA	
BUS RAPID TRANSIT UPTOWN TO OAKLAND SIGNAL PLANS	
WIRING, MOVEMENT, PHASING & SEQUENCE DIAGRAMS	
<b>Port Authority</b> connecting people to life	CONTRACT NO. BRT-001
DWG. NO. SG104	SHT. 1164



TRAFFIC SIGNAL TABULATION

FORBES AVENUE AND STEVENSON STREET

ITEM NUMBER	MISCELLANEOUS			
UNIT	DESCRIPTION	QTY.	LOCATION	REMARKS
01882.002 EACH	TRAFFIC SIGNAL TIMING MODIFICATIONS	2	CC	
02212.009 LF	POLE FOUNDATION DRILLING, LESS THAN 30" DIAMETER	15	△△	
02212.010 LF	POLE FOUNDATION DRILLING, 30" DIAMETER OR GREATER	36	△△△	
02889.002 EACH	LED LUMINAIRE CITY STANDARD, BLACK	3	⊙⊙⊙	△△△
02890.001 EACH	TRAFFIC SIGNAL CONTROLLER ASSEMBLY, TYPE 2070 LC WITH TYPE 332 BASE MOUNTED CABINET	1	CC	332 CONTROLLER CABINET 8" RISER RE-ESTABLISH INTERCONNECT
02890.003 EACH	ETHERNET SWITCH	1	CC	
02890.005 EACH	GPS TIME CLOCK	1	CC	
02893.001 EACH	REMOVE EXISTING POLE	1	STATION 141+37 OFFSET: 19' LT	EXISTING LIGHT POLE
02894.001 EACH	VEHICULAR SIGNAL HEAD, THREE 12" SECTIONS	7	①②③ ④⑤⑥⑦	BLACK TUNNEL VISORS BLACK ALUMINUM HOUSINGS BLACK METAL LOUVERED BACKPLATE
02894.005 EACH	LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, TYPE A	8	⑨⑩⑪⑫ ⑬⑭⑮⑯	BLACK TUNNEL VISORS BLACK ALUMINUM HOUSINGS
02894.006 EACH	VEHICULAR SIGNAL HEAD, THREE 8" SECTIONS	1	⑧	BLACK TUNNEL VISORS BLACK ALUMINUM HOUSINGS BLACK METAL LOUVERED BACKPLATE
02895.002 EACH	ACCESSIBLE PEDESTRIAN SIGNALS	8	①②③④ ⑤⑥⑦⑧	

DETECTORS				
ITEM NUMBER	DESCRIPTION	SEN. NO.	QTY.	LOCATION
02895.001 EACH	VIDEO DETECTION	①	1	△5
02895.001 EACH	VIDEO DETECTION	②	1	△4
02895.001 EACH	VIDEO DETECTION	③	1	△1

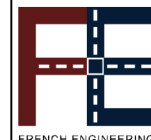
TRAFFIC SIGNAL SUPPORTS \*\*

POLE NO.	ITEM NUMBER	DESCRIPTION	QTY.	ROUTE	STATION	SIDE	OFFSET	MAST ARM																PEDESTAL		
								ARM "A"												ARM "C"				SHAFT	SIGNAL	
								H	K	L	SIGNAL LOCATION				SIGN LOCATION				W	G	X	Z	H		M	N
											M	N	O	P	R	S	T	U						Y		
1	02892.204 EACH	TRAFFIC SIGNAL SUPPORT, 24' MAST ARM WITH LUMINAIRE ARM (30' MOUNTING HEIGHT), PAINTED BLACK	1	STEVENSON ST	15+31	RT	25.5'	17'	10'	24'	20'	9'	0'	16'	12'			4'	0°	6'	30'	90°				
2	02892.003 EACH	TRAFFIC SIGNAL SUPPORT, 15' TYPE X, PAINTED BLACK	1	STEVENSON ST	15+39	LT	27'															15'		10'		
3	02892.005 EACH	TRAFFIC SIGNAL SUPPORT, 30' TYPE X-L WITH LUMINAIRE ARM, PAINTED BLACK	1	FORBES AVE	141+40	LT	27'													6'	30'	0°	30'		10'	
4	02892.604 EACH	TRAFFIC SIGNAL SUPPORT, 28' MAST ARM, PAINTED BLACK	1	FORBES AVE	141+50	RT	27'	17'	10'	28'	25'	17'		21'				8'	270°							
5	02892.213 EACH	TRAFFIC SIGNAL SUPPORT, 40' MAST ARM WITH LUMINAIRE ARM (30' MOUNTING HEIGHT), PAINTED BLACK	1	FORBES AVE	142+09	RT	32'	17'	10'	40'	35'	27'	15'	38'	24'	19'		9'	0°	6'	30'	0°				

\*\* REFER TO PENNDOT TC-8800 TRAFFIC STANDARDS-SIGNALS FOR LETTER DESIGNATION



Gulf Tower  
707 Grant Street  
5th Floor  
Pittsburgh, PA 15219



French Engineering, LLC  
3064 Morgantown Rd  
Smithfield, PA 15478

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BUS RAPID TRANSIT UPTOWN TO OAKLAND SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS		
Port Authority connecting people to life	CONTRACT NO. BRT-001	
DWG. NO. SG105	SHT. 1165	

TRAFFIC SIGNAL TABULATION

FORBES AVENUE AND STEVENSON STREET

TRENCH, CONDUIT, JUNCTION BOX, ELECTRICAL ITEMS

DESCRIPTION	ELECTRICAL SERVICE TYPE B	CITY OF PITTSBURGH STANDARD CONCRETE JUNCTION BOX, TYPE 1	TRENCH AND BACKFILL, TYPE II	TRENCH AND BACKFILL, TYPE IV	2 INCH CONDUIT	3 INCH CONDUIT	AWG 8, UNDERGROUND CABLE, COPPER, 1 CONDUCTOR	SIGNAL CABLE, 14 AWG, 5 CONDUCTOR	SIGNAL CABLE, 14 AWG, 7 CONDUCTOR
ITEM NUMBER	02896	02897	02898	02898	02899	02899	02900	02900	02900
	002	001	002	005	002	003	001	002	003
UNIT	EACH	EACH	LF	LF	LF	LF	LF	LF	LF
LOCATION									
CC TO 1		1	20		40	40			
1 TO 4		1	24	36	60	120			
2 TO 3		2	21	37	58	116			
3 TO 4			22	38	60	120			
1 TO 1			5		10	10			
2 TO 4			11			11			
3 TO 4			11		11	11			
4 TO 3			5		5	10			
5 TO 2			6		6	12			
COMPLETE INTERSECTION	1						970	710	995
TOTAL	1	4	125	111	250	450	970	710	995

SIGNS

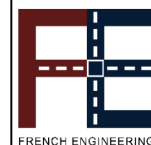
SYMBOL	SERIES	SIZE	AREA EACH (SQ FT)	DESCRIPTION	QUANTITY	02891.001 POST MOUNTED SIGNS, TYPE B		
						SF	SF	SF
A	D3-4 *	78 "X24 "	13.0	1300 Uptown 1400 Forbes Ave	1			13.0
B	D3-4 *	78 "X24 "	13.0	1400 Uptown 1300 Forbes Ave	1			13.0
C	D3-4 *	84 "X24 "	14.0	10 Uptown 20 Stevenson St	1			14.0
D	R6-1	36 "X12 "	3.0	ONE-WAY (TWO SIDED, CITY STANDARD)	2		6.0	
E	R3-2	24 "x24 "	4.0	NO LEFT TURN	1		4.0	
F	R3-2	30 "x30 "	6.3	NO LEFT TURN	1			6.3
G	R3-1	24 "x24 "	4.0	NO RIGHT TURN	1		4.0	
H	R3-1	30 "x30 "	6.3	NO RIGHT TURN	1			6.3
I	R10-3E(MOD)	9 "x15 "	0.9	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER (MOD.)	8		▲	
J	R3-11B(MOD)	30 "x36 "	7.5	RIGHT LANE - BUSES ONLY	1			7.5
K	SS-1	30 "x18 "	3.8	EXCEPT BUSES	1			3.8
L	R10-15AL(MOD)	30 "x30 "	6.3	TURNING TRAFFIC MUST YIELD TO BIKES AND PEDESTRIANS	2	6.3		6.3
M	R10-11	30 "X36 "	7.5	NO TURN ON RED ●	2			15.0
N	R5-1	30 "X30 "	6.3	DO NOT ENTER	2		12.6	
TOTAL						6.3	26.6	85.2

▲ - INCIDENTAL TO ITEM 02895.002

\* WHITE REFLECTORIZED LEGEND AND BORDER ON BLUE REFLECTORIZED BACKGROUND. UTILIZE 4" CLEARVIEW 3W FOR BLOCK/NEIGHBORHOOD AND 8" CLEARVIEW 3W FOR STREET NAME. ACTUAL WIDTH DETERMINED BY LETTER SPACING. COORDINATE BLOCK NUMBERS AND STREET NAME DETAILS WITH CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE.



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BUS RAPID TRANSIT UPTOWN TO OAKLAND SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	
Port Authority connecting people to life	CONTRACT NO. BRT-001
DWG. NO. SG106	SHT. 1166

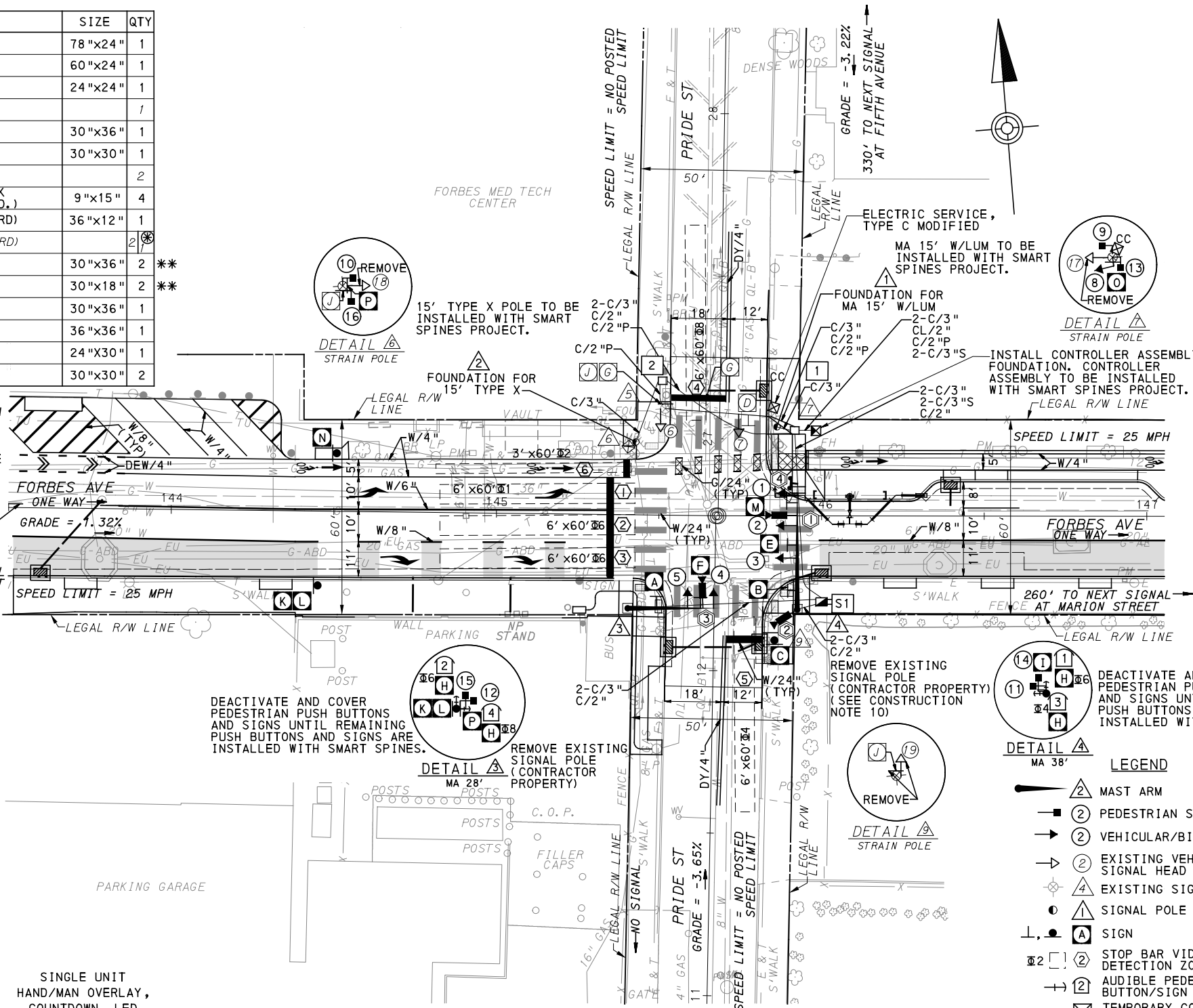
**SIGNS**

SIGN	STANDARD	DESCRIPTION	SIZE	QTY
A	D3-4 *	1500 Uptown 1400 Forbes Ave	78"x24"	1
B	D3-4 *	30 Uptown 40 Pride St	60"x24"	1
C	R3-2	NO LEFT TURN	24"x24"	1
D	R3-2	NO LEFT TURN		1
E	R10-11	NO TURN ON RED ●	30"x36"	1
F	R3-1	NO RIGHT TURN	30"x30"	1
G	R3-1	NO RIGHT TURN		2
H	R10-3E(MOD)	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER (MOD.)	9"x15"	4
I	R6-1	ONE-WAY (TWO SIDED, CITY STANDARD)	36"x12"	1
J	R6-1	ONE-WAY (TWO SIDED, CITY STANDARD)		2
K	R3-11B(MOD)	RIGHT LANE - BUSES ONLY	30"x36"	2 **
L	SS-1	EXCEPT RIGHT TURNS	30"x18"	2 **
M	R10-10L	LEFT TURN SIGNAL	30"x36"	1
N	R3-7L	LEFT LANE MUST TURN LEFT	36"x36"	1
O	R10-11	NO TURN ON RED ●	24"x30"	1
P	R5-1	DO NOT ENTER	30"x30"	2

\* WHITE REFLECTORIZED LEGEND AND BORDER ON BLUE REFLECTORIZED BACKGROUND. UTILIZE 4" CLEARVIEW 3W FOR BLOCK/NEIGHBORHOOD AND 8" CLEARVIEW 3W FOR STREET NAME. ACTUAL WIDTH DETERMINED BY LETTER SPACING. COORDINATE BLOCK NUMBERS AND STREET NAME DETAILS WITH CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE.

⊗ SIGN TO BE REMOVED

\*\* POST MOUNTED SIGNS TABULATED AS PART OF THE SIGNING AND PAVEMENT MARKING PLAN.

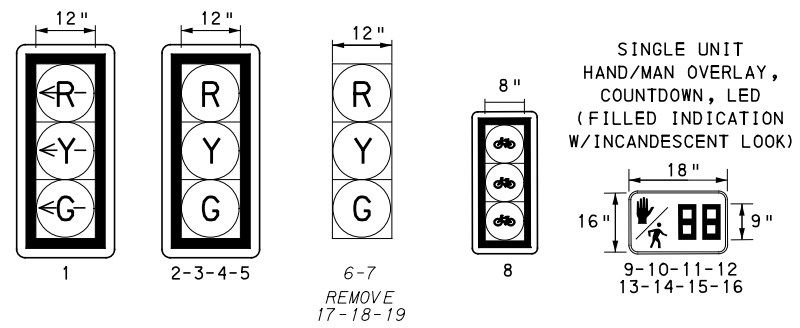


- AUDIBLE PEDESTRIAN SIGNAL NOTES**
1. ALL PUSH BUTTONS SHALL BE EQUIPPED WITH LOCATOR TONES.
  2. ALL WALK INTERVALS TO HAVE VERBAL MESSAGE DETAILING WALK DIRECTION.
  3. VERBAL MESSAGE TO BE PLAYED DURING WALK INTERVAL WHEN BUTTON IS PRESSED.
  4. ALL PEDESTRIAN PUSH BUTTONS TO BE LOCATED AT 42" ABOVE GROUND.
  5. ALL PUSH BUTTONS TO BE EQUIPPED WITH VIBROTACTILE ARROW.
  6. VIBROTACTILE ARROWS TO VIBRATE DURING WALK INTERVAL.
  7. WALK AND DON'T WALK MESSAGE SHALL BE AUDIBLE THROUGH THE PUSH BUTTON SPEAKER.

- SIGNAL ASSEMBLY NOTES**
1. ALL VEHICULAR/BICYCLE SIGNALS SHALL BE EQUIPPED WITH L.E.D LENSES, TUNNEL VISORS AND LOUVERED BLACK METAL BACKPLATES WITH 2" REFLECTIVE BORDERS.
  2. MIN/MAX HEIGHT TO BOTTOM OF VEHICULAR SIGNALS 17' / 18'.
  3. MIN HORIZONTAL SPACING FOR VEHICULAR SIGNALS IS 8'.
  4. MIN/MAX HEIGHT TO BOTTOM OF PEDESTRIAN SIGNALS 10' / 12'.
  5. FINAL SIGNAL HEAD PLACEMENT WILL BE DETERMINED BY REPRESENTATIVES OF THE CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE AND THE DISTRICT TRAFFIC UNIT PRIOR TO SIGNAL BEING TURNED ON.
  6. ALL PEDESTRIAN SIGNALS SHALL BE PORTLAND ORANGE FULL "PEDESTRIAN HAND" AND WHITE "WALKING PERSON" SYMBOLS AND HAVE INCANDESCENT LOOK WITH COUNTDOWN TIMER.
  7. PROVIDE AIRCRAFT STRANDED CABLE FOR MOUNTING SIGNAL AND SIGN BRACKET ASSEMBLIES TO MAST ARMS.
  8. PROVIDE BLACK ALUMINUM HOUSINGS FOR ALL SIGNAL HEADS.
  9. INSTALL POST MOUNTED SIGNAL HEADS WITH BOTTOMS NO GREATER THAN 15' ABOVE THE SIDEWALK OR PAVEMENT.
  10. EXACT LOCATION OF TRAFFIC SIGNAL SUPPORTS SHALL BE DETERMINED BY REPRESENTATIVES OF THE CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE AND THE DISTRICT TRAFFIC UNIT PRIOR TO INSTALLATION.

- PAVEMENT MARKING NOTES**
1. ALL STOP BARS ARE W/24".
  2. CROSSWALKS ARE 10' X 24" KEYS WITH 3' TO 5' SPACING.
  3. CROSSWALKS ACROSS BICYCLE LANES ARE 6' X 12" KEYS WITH 1' SPACING.

**SIGNAL HEADS**



**LEGEND**

- ▲ MAST ARM
- ② PEDESTRIAN SIGNAL HEAD
- ➔ VEHICULAR/BICYCLE SIGNAL HEAD
- ➔ EXISTING VEHICULAR/BICYCLE SIGNAL HEAD
- ⊕ EXISTING SIGNAL SUPPORT
- SIGNAL POLE FOUNDATION
- ▲ SIGN
- ⊗ STOP BAR VIDEO/RADAR DETECTION ZONE
- ➔ AUDIBLE PEDESTRIAN PUSH BUTTON/SIGN
- ⊗ TEMPORARY CONTROLLER ASSEMBLY
- ⊗ CONTROLLER ASSEMBLY FOUNDATION
- C/2"P POWER CONDUIT/SIZE
- W/6" SOLID WHITE LINE/WIDTH
- BW/6" BROKEN WHITE LINE/WIDTH
- DY/4" DOUBLE SOLID YELLOW LINE/WIDTH
- G/24" SOLID GREEN LINE/WIDTH
- ⊗ STOP BAR VIDEO DETECTOR
- ⊗ DIGITAL WAVE RADAR DETECTOR
- C/2" CONDUIT/SIZE
- CL/2" LIGHTING CONDUIT/SIZE
- C/3"S SYSTEM CONDUIT/SIZE
- ⊗ JUNCTION BOX
- ⊗ SYSTEM JUNCTION BOX

COUNTY: ALLEGHENY

MUNICIPALITY: CITY OF PITTSBURGH

INTERSECTION: FORBES AVENUE AND PRIDE STREET

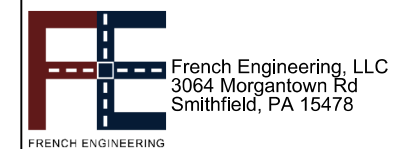
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APPROVED AND ACCEPTED:

CITY TRAFFIC ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_

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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH, PENNSYLVANIA

**BUS RAPID TRANSIT UPTOWN TO OAKLAND**  
SIGNAL PLANS  
FORBES AVENUE & PRIDE STREET

**Port Authority** connecting people to life

CONTRACT NO. BRT-001

DWG. NO. SG107 SHT. 1167

**MOVEMENT, PHASING AND SEQUENCE CHART**

SIGNAL	PHASE 4+8					PHASE 2+6					PHASE 1+6					FLASHING
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	
1	<R-	<R-	<R-	<R-	<R-	<R-	<R-	<R-	<R-	<R-	<G-	<G-	<Y-	<R-		OFF
2-3	R	R	R	R	R	G	G	Y	R		G	G	Y	R		R
4-5	R	G	G	Y	R	R	R	R	R		R	R	R	R		R
6-7	R	G	G	Y	R	R	R	R	R		R	R	R	R		R
8	R	R	R	R	R	G	G	Y	R		R	R	R	R		R
9-10	DW	DW	DW	DW	DW	W	FD	DW	DW		DW	DW	DW	DW		OFF
11-12	DW	DW	DW	DW	DW	W	FD	DW	DW		W	FD	DW	DW		OFF
13-14-15-16	W	W	FD	DW	DW	DW	DW	DW			DW	DW	DW	DW		OFF
FIXED	3.5		2.5			3.5		2.5			3.5		2.5			
MINIMUM	10					5					10					
PASSAGE	3										3					
FREE (MAX)	21					57					47					
PEDESTRIAN	3	4	12			7	10				7	10				
MEMORY	PED RECALL					PED RECALL					NON-LOCKING					

- ① - G IF FOLLOWED BY 1+6.
- ② - W IF FOLLOWED BY 1+6.

**DETECTOR ZONE INFORMATION**

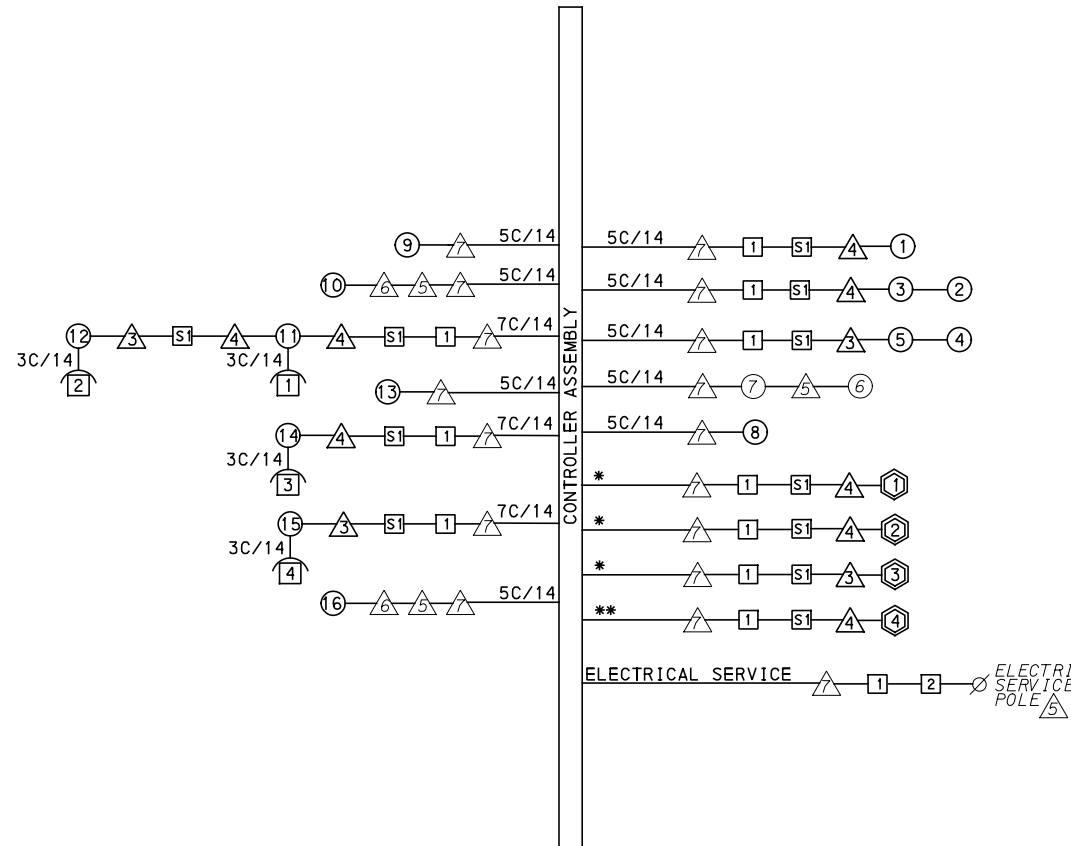
DETECTOR	DETECTION ZONE(S)	MODE	TYPE	ROUTE	PHASE	LOCATION MAST ARM
①	① (6' x60')	PRESENCE	VIDEO (STOP BAR)	FORBES AVENUE	1	④
	②③ (6' x60')	PRESENCE	VIDEO (STOP BAR)	FORBES AVENUE	6	
②	⑤ (6' x60')	PRESENCE	VIDEO (STOP BAR)	PRIDE STREET	4	④
③	④ (6' x60')	PRESENCE	VIDEO (STOP BAR)	PRIDE STREET	8	③
④	⑥ (3' x60')	PRESENCE	RADAR (STOP BAR)	PRIDE STREET	2	④

**GENERAL NOTES**

- THE CITY OF PITTSBURGH SHALL INSPECT THE NEW SIGNAL EQUIPMENT PRIOR TO ACTIVATION.
- ALL TRAFFIC SIGNAL MAINTENANCE AND OPERATION RESPONSIBILITIES SHALL BE TURNED OVER TO THE CITY OF PITTSBURGH AFTER THE FOLLOWING CONDITIONS ARE IMPLEMENTED TO THE CITY'S SATISFACTION:
- PERMIT "AS-BUILT" TRAFFIC SIGNAL DRAWINGS ARE SUBMITTED AND APPROVED.
  - ALL PUNCH LIST ITEMS ARE COMPLETED BY THE CONTRACTOR.
  - AFTER THE 30-DAY CONTINUOUS UNINTERRUPTED SIGNAL OPERATION WITHOUT MALFUNCTIONS.

**CONSTRUCTION NOTES**

- ALL JUNCTION BOXES IN WALK AREAS TO BE CITY OF PITTSBURGH STANDARD CONCRETE JUNCTION BOX, TYPE 1.
- ALL JUNCTION BOXES IN NON-WALK AREAS TO BE CITY STANDARD JB-2 WITH BOTTOM.
- THERE SHALL BE NO SIGNAL WIRE OR FIBER CABLE SPLICING.
- SERVICE WIRE FROM THE POWER SOURCE TO THE CONTROLLER CABINET SHALL BE PLACED IN SECONDARY SEPARATE CONDUIT.
- STREET LIGHT CABLE IS NOT PERMITTED TO RUN THROUGH THE CONTROLLER CABINET AND SHALL BE PLACED IN SEPARATE CONDUIT.
- TRAFFIC SIGNAL CABLE SHALL BE PLACED IN DEDICATED CONDUIT.
- MOUNT DISCONNECT ON POLE NEAREST TO THE CONTROLLER CABINET EXCLUDING TYPE X POLES.
- REMOVE AND DISPOSE OF ALL EXISTING SIGNAL WIRING NO LONGER IN USE.
- REMOVE EXISTING SIGNAL EQUIPMENT NO LONGER IN USE AND RETURN TO THE CITY OF PITTSBURGH TRAFFIC CONTROL SHOP. COORDINATE DELIVERY OF EQUIPMENT WITH DELMAS MCELHANY, TRAFFIC CONTROL FOREMAN.
- SEE 01720 UTILITY COORDINATION FOR INFORMATION ON RELOCATION OF EXISTING SECURITY CAMERAS AND SHOT SPOTTERS.
- PROVIDE ENOUGH CABLE SLACK IN JB #1 TO ENABLE FUTURE REWIRING OF SIGNAL BASED ON BASE MOUNTED CABINET FOUNDATION LOCATION.



**WIRING DIAGRAM**

5C/14 - CABLE (NO. OF CONDUCTORS/SIZE AWG.)

- ① PROPOSED DETECTOR
- ② PROPOSED AUDIBLE PEDESTRIAN INDICATOR
- ③ PROPOSED JUNCTION BOX
- ④ EXISTING SIGNAL HEAD
- ⑤ PROPOSED SIGNAL HEAD
- ⑥ PROPOSED SIGNAL SUPPORT
- ⑦ EXISTING SIGNAL SUPPORT

3C/14 INCIDENTAL TO ITEM 02895.002

\* INCIDENTAL TO ITEM 02895.001, AS PER MANUFACTURERS SPECIFICATIONS

\*\* INCIDENTAL TO ITEM 02895.005, AS PER MANUFACTURERS SPECIFICATIONS

**TRANSIT PRIORITY PRE-EMPTION NOTES (TO BE INSTALLED BY OTHERS)**

- COORDINATE TRAFFIC CONTROLLER PROGRAMMING MODIFICATION WITH REPRESENTATIVES OF THE CITY OF PITTSBURGH AND DISTRICT TRAFFIC UNIT.
- INCLUDE A TRANSIT PRIORITY PHASE THAT WILL EXTEND THE INDICATED PHASE A MAXIMUM OF 10 SECONDS WHEN ACTIVATED BY A PORT AUTHORITY VEHICLE. DO NOT VIOLATE SIDE STREET PEDESTRIAN MINIMUM TIMINGS.
- MAINTAIN ALL YELLOW CLEARANCES AT ALL TIMES.
- PROCEED TO THE SUBSEQUENT INTERVAL AS DEFINED IN THE MOVEMENT, SEQUENCE AND TIMING DIAGRAM UPON COMPLETING THE GREEN EXTENSION INTERVAL.
- ONCE A TRANSIT CALL IS PLACED AND SATISFIED, THE CONTROLLER WILL NOT SATISFY ANOTHER CALL FOR 4 CYCLES.
- LOCATION OF BUS DETECTORS ARE TO BE FIELD ADJUSTED TO ACHIEVE MAXIMUM OPERATION.

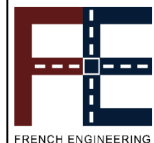
TS-334

COUNTY: ALLEGHENY  
MUNICIPALITY: CITY OF PITTSBURGH  
INTERSECTION: FORBES AVENUE AND PRIDE STREET

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DATE	05/01/24
SCALE	AS SHOWN

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT UPTOWN TO OAKLAND SIGNAL PLANS**  
WIRING, MOVEMENT, PHASING & SEQUENCE DIAGRAMS

**Port Authority** connecting people to life

CONTRACT NO. BRT-001  
DWG. NO. SG108 SHT. 1168







TRAFFIC SIGNAL TABULATION

FORBES AVENUE AND PRIDE STREET

TRENCH, CONDUIT, JUNCTION BOX, ELECTRICAL ITEMS

DESCRIPTION	ELECTRICAL SERVICE, TYPE C (NEW)	CITY OF PITTSBURGH STANDARD CONCRETE JUNCTION BOX, TYPE 1	TRENCH AND BACKFILL, TYPE II	TRENCH AND BACKFILL, TYPE IV	2 INCH CONDUIT	3 INCH CONDUIT	2 INCH EXPOSED CONDUIT	3 INCH EXPOSED CONDUIT	SIGNAL CABLE, 14 AWG, 5 CONDUCTOR	SIGNAL CABLE, 14 AWG, 7 CONDUCTOR
ITEM NUMBER	02896	02897	02898	02898	02899	02899	02899	02899	02900	02900
	004	001	002	005	002	003	004	005	002	003
UNIT	EACH	EACH	LF	LF	LF	LF	LF	LF	LF	LF
LOCATION										
CC FOUNDATION TO [1]		1	7		14	28				
[1] TO [2]		1	12	34	92	92				
[S1] TO [1]			32	24	56	224				
[1] TO [1]			6			6				
[2] TO [2]			21			21				
[3] TO [S1]			28	32	60	120				
[4] TO [S1]			8		8	16				
[1] TO [1]			9		18	9	30	10		
[5] TO [2]			9		9		30	20		
COMPLETE INTERSECTION	1								930	490
TOTAL	1	2	132	90	257	516	60	30	930	490

[S1] - TABULATED ON SYSTEMS PLAN

SIGNS

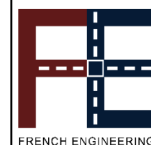
SYMBOL	SERIES	SIZE	AREA EACH (SQ FT)	DESCRIPTION	QUANTITY	02891.001 POST MOUNTED SIGNS, TYPE B			
						SF	SF	SF	EACH
[A]	D3-4 *	78"x24"	13.0	1500 Uptown 1400 Forbes Ave	1				13.0
[B]	D3-4 *	60"x24"	10.0	30 Uptown 40 Pride St	1				10.0
[C]	R3-2	24"x24"	4.0	NO LEFT TURN	1	4.0			
[E]	R10-11	30"x36"	7.5	NO TURN ON RED ●	1				7.5
[F]	R3-1	30"x30"	6.3	NO RIGHT TURN	1				6.3
[H]	R10-3E(MOD)	9"x15"	0.9	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER (MOD)	4			▲	
[I]	R6-1	36"x12"	3.0	ONE-WAY (TWO SIDED, CITY STANDARD)	1			3.0	
[J]	R6-1			ONE-WAY (TWO SIDED, CITY STANDARD)	1				1
[K]	R3-11B(MOD)	30"x36"	7.5	RIGHT LANE - BUSES ONLY	1			7.5	
[L]	SS-1	30"x18"	3.8	EXCEPT RIGHT TURNS	1			3.8	
[M]	R10-10L	30"x36"	7.5	LEFT TURN SIGNAL	1				7.5
[N]	R3-7L	36"x36"	9.0	LEFT LANE MUST TURN LEFT	1	9.0			
[O]	R10-11	24"x30"	5.0	NO TURN ON RED ●	1			5.0	
[P]	R5-1	30"x30"	6.3	DO NOT ENTER	2			12.6	
TOTAL						13.0	31.9	44.3	1

▲ - INCIDENTAL TO ITEM 02895.002

\* WHITE REFLECTORIZED LEGEND AND BORDER ON BLUE REFLECTORIZED BACKGROUND. UTILIZE 4" CLEARVIEW 3W FOR BLOCK/NEIGHBORHOOD AND 8" CLEARVIEW 3W FOR STREET NAME. ACTUAL WIDTH DETERMINED BY LETTER SPACING. COORDINATE BLOCK NUMBERS AND STREET NAME DETAILS WITH CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE.



Gulf Tower  
707 Grant Street  
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Pittsburgh, PA 15219



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(NOT FOR CONSTRUCTION)

DESIGNED	LJF
DRAWN	WLZ
CHECKED	MSF
IN CHARGE	LJF
DATE	05/01/24
SCALE	AS SHOWN

PORT AUTHORITY OF ALLEGHENY COUNTY PITTSBURGH PENNSYLVANIA	
BUS RAPID TRANSIT UPTOWN TO OAKLAND SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	
Port Authority connecting people to life	CONTRACT NO. BRT-001
DWG. NO. SG110	SHT. 1170

**SIGNS**

SIGN	STANDARD	DESCRIPTION	SIZE	QTY
A	R5-1	DO NOT ENTER	30"x30"	2
B	R10-11	NO TURN ON RED ●	30"x36"	1
C	R6-1	ONE-WAY (TWO SIDED, CITY STANDARD)	36"x12"	2
D	R10-15AL(MOD)	TURNING TRAFFIC MUST YIELD TO BIKES AND PEDESTRIANS	30"x30"	2
E	D3-4*	10' Uptown 20' Marion St	66"x24"	1
F	R10-3E(MOD)	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER (MOD)	9"x15"	4
G	R3-11B(MOD)	RIGHT LANE - BUSES ONLY	30"x36"	2
H	SS-1	EXCEPT RIGHT TURNS	30"x18"	2
I	R3-2	NO LEFT TURN	24"x24"	1
J	R3-2	NO LEFT TURN	30"x30"	2
K	R6-1	HORIZONTAL ONE-WAY ARROW (TWO SIDED, CITY STANDARD)	36"x12"	2
L	D3-4*	1500 Uptown 1600 Forbes Ave	78"x24"	1
M	R10-11	NO TURN ON RED ●	24"x30"	1
N	R10-6AL	STOP HERE ON RED (LEFT)	24"x30"	1

\* WHITE REFLECTORIZED LEGEND AND BORDER ON BLUE REFLECTORIZED BACKGROUND. UTILIZE 4" CLEARVIEW 3W FOR BLOCK/NEIGHBORHOOD AND 8" CLEARVIEW 3W FOR STREET NAME. ACTUAL WIDTH DETERMINED BY LETTER SPACING. COORDINATE BLOCK NUMBERS AND STREET NAME DETAILS WITH CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE.

\*\* POST MOUNTED SIGNS TABULATED AS PART OF THE SIGNING AND PAVEMENT MARKING PLAN.

**AUDIBLE PEDESTRIAN SIGNAL NOTES**

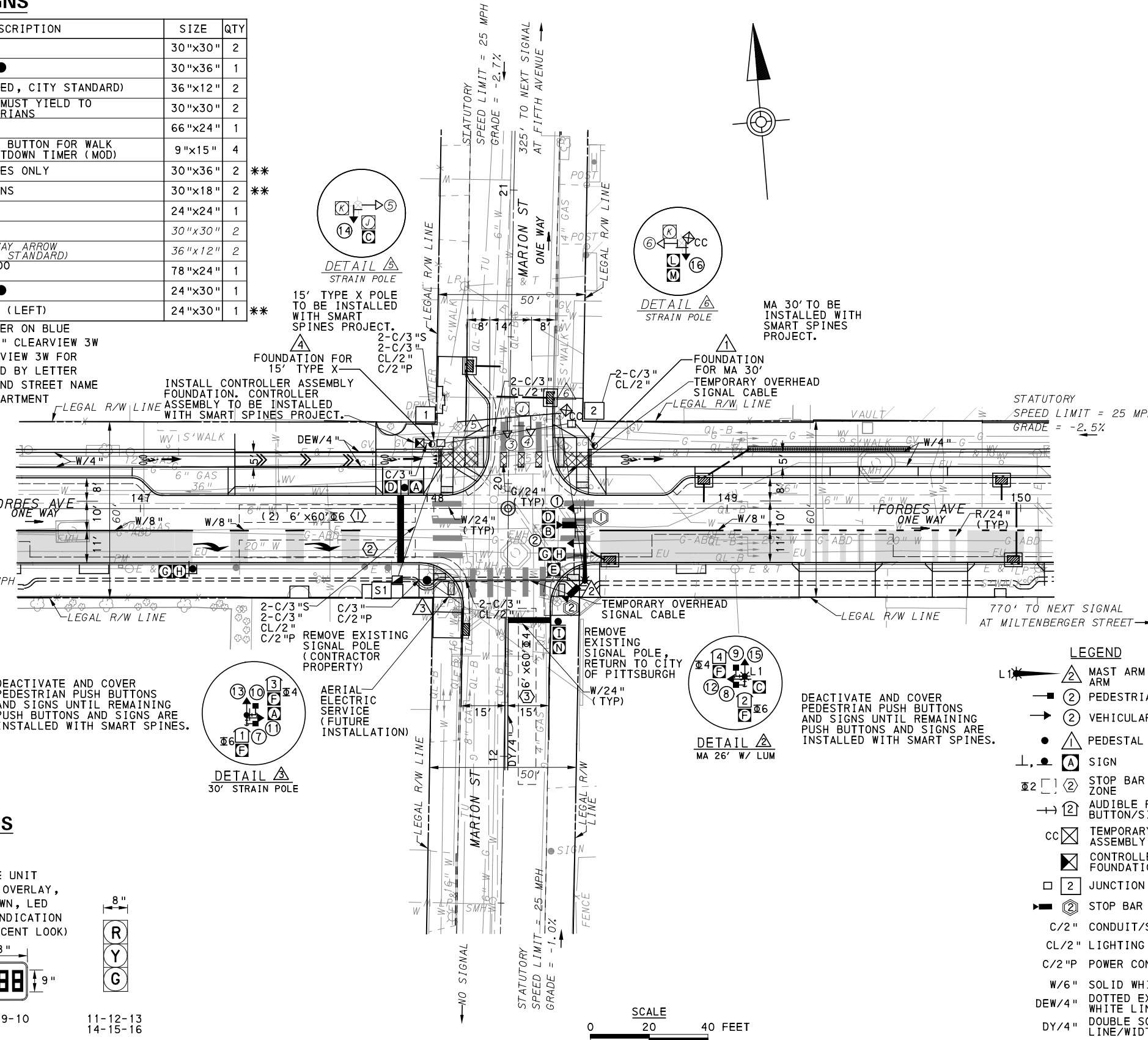
1. ALL PUSH BUTTONS SHALL BE EQUIPPED WITH LOCATOR TONES.
2. ALL WALK INTERVALS TO HAVE VERBAL MESSAGE DETAILING WALK DIRECTION.
3. VERBAL MESSAGE TO BE PLAYED DURING WALK INTERVAL WHEN BUTTON IS PRESSED.
4. ALL PEDESTRIAN PUSH BUTTONS TO BE LOCATED AT 42" ABOVE GROUND.
5. ALL PUSH BUTTONS TO BE EQUIPPED WITH VIBROTACTILE ARROW.
6. VIBROTACTILE ARROWS TO VIBRATE DURING WALK INTERVAL.
7. WALK AND DON'T WALK MESSAGE SHALL BE AUDIBLE THROUGH THE PUSH BUTTON SPEAKER.

**SIGNAL ASSEMBLY NOTES**

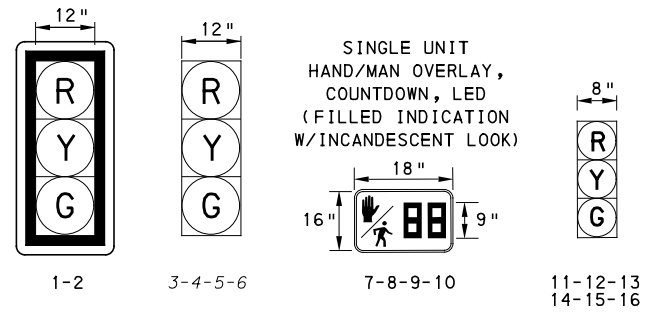
1. ALL VEHICULAR/BICYCLE SIGNALS SHALL BE EQUIPPED WITH L.E.D LENSES, TUNNEL VISORS AND LOUVERED BLACK METAL BACKPLATES WITH 2" REFLECTIVE BORDERS.
2. MIN/MAX HEIGHT TO BOTTOM OF VEHICULAR SIGNALS 17' /18'.
3. MIN HORIZONTAL SPACING FOR VEHICULAR SIGNALS IS 8'.
4. MIN/MAX HEIGHT TO BOTTOM OF PEDESTRIAN SIGNALS 10' /12'.
5. FINAL SIGNAL HEAD PLACEMENT WILL BE DETERMINED BY REPRESENTATIVES OF THE CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE AND THE DISTRICT TRAFFIC UNIT PRIOR TO SIGNAL BEING TURNED ON.
6. ALL PEDESTRIAN SIGNALS SHALL BE PORTLAND ORANGE FULL "PEDESTRIAN HAND" AND WHITE "WALKING PERSON" SYMBOLS AND HAVE INCANDESCENT LOOK WITH COUNTDOWN TIMER.
7. PROVIDE AIRCRAFT STRANDED CABLE FOR MOUNTING SIGNAL AND SIGN BRACKET ASSEMBLIES TO MAST ARMS.
8. PROVIDE BLACK ALUMINUM HOUSINGS FOR ALL SIGNAL HEADS.
9. INSTALL POST MOUNTED SIGNAL HEADS WITH BOTTOMS NO GREATER THAN 15' ABOVE THE SIDEWALK OR PAVEMENT.
10. EXACT LOCATION OF TRAFFIC SIGNAL SUPPORTS SHALL BE DETERMINED BY REPRESENTATIVES OF THE CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE AND THE DISTRICT TRAFFIC UNIT PRIOR TO INSTALLATION.

**PAVEMENT MARKING NOTES**

1. ALL STOP BARS ARE W/24".
2. CROSSWALKS ARE 10' X 24" KEYS WITH 3' TO 5' SPACING.
3. CROSSWALKS ACROSS BICYCLE LANES ARE 6' X 12" KEYS WITH 1' SPACING.



**SIGNAL HEADS**

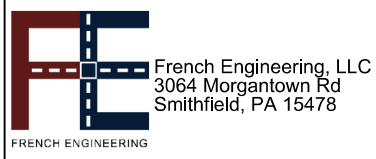


**LEGEND**

- ▲ MAST ARM WITH LUMINAIRE ARM
- ② PEDESTRIAN SIGNAL HEAD
- ➔ ② VEHICULAR/BICYCLE SIGNAL HEAD
- ⊙ ④ EXISTING SIGNAL SUPPORT
- ④ SIGNAL POLE FOUNDATION
- ⊥ ④ SIGN
- ⊙ ② STOP BAR VIDEO DETECTION ZONE
- ➔ ② AUDIBLE PEDESTRIAN PUSH BUTTON/SIGN
- CC ④ TEMPORARY CONTROLLER ASSEMBLY
- ⊠ ④ CONTROLLER ASSEMBLY FOUNDATION
- ② JUNCTION BOX
- ▶ ② STOP BAR VIDEO DETECTOR
- C/2" CONDUIT/SIZE
- CL/2" LIGHTING CONDUIT/SIZE
- C/2"P POWER CONDUIT/SIZE
- W/6" SOLID WHITE LINE/WIDTH
- DEW/4" DOTTED EXTENSION WHITE LINE/WIDTH
- DY/4" DOUBLE SOLID YELLOW LINE/WIDTH
- G/24" SOLID GREEN LINE/WIDTH
- R/24" SOLID RED LINE/WIDTH
- ➔ ② EXISTING VEHICULAR/BICYCLE SIGNAL HEAD
- ⊙ ④ EXISTING SIGNAL SUPPORT
- ④ SIGNAL POLE FOUNDATION
- C/3"S SYSTEM CONDUIT/SIZE
- ⊠ ④ SYSTEM JUNCTION BOX
- ⊥ ④ EXISTING SIGN

TS-590

COUNTY: ALLEGHENY
MUNICIPALITY: CITY OF PITTSBURGH
INTERSECTION: FORBES AVENUE AND MARION STREET
APPROVED AND ACCEPTED:
CITY TRAFFIC ENGINEER _____ DATE _____
APPROVED AND ACCEPTED:
DISTRICT TRAFFIC ENGINEER _____ DATE _____



NO.	DATE	DESCRIPTION
REVISIONS		

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**(NOT FOR CONSTRUCTION)**

DESIGNED	LJF
DRAWN	WLZ
CHECKED	MSF
IN CHARGE	LJF
DATE	05/01/24
SCALE	AS SHOWN

<b>PORT AUTHORITY OF ALLEGHENY COUNTY</b> PITTSBURGH, PENNSYLVANIA	
<b>BUS RAPID TRANSIT UPTOWN TO OAKLAND</b>	
<b>SIGNAL PLANS</b>	
<b>FORBES AVENUE &amp; MARION STREET</b>	
<b>Port Authority</b> <small>connecting people to life</small>	CONTRACT NO. BRT-001
	DWG. NO. SG111      SHT. 1171

**MOVEMENT, PHASING AND SEQUENCE CHART**

SIGNAL	PHASE 6					PHASE 4					FLASHING
	1	2	3	4	5	1	2	3	4	5	
1-2	G	G	Y	R		R	R	R	R	R	R
3-4	R	R	R	R		R	G	G	Y	R	R
5-6	G	G	Y	R		R	R	R	R	R	R
7-8	W	FDW	DW	DW		DW	DW	DW	DW	DW	OFF
9-10	DW	DW	DW	DW		W	W	FDW	DW	DW	OFF
11-12	G	G	Y	R		R	R	R	R	R	R
13-14-15-16	R	R	R	R		R	G	G	Y	R	R
FIXED			3.5	2.5				3.5	2.5		
MINIMUM	10					10					
PASSAGE	3					3					
FREE (MAX)	46					17					
PEDESTRIAN	7	11				3	4	12			
MEMORY	MAX RECALL					PED RECALL					

- NOTES:
- PEDESTRIAN SIGNAL HEADS 7 THROUGH 10 TO BE BAGGED AT THE CONCLUSION OF SUCCESSFUL 30-DAY TEST PERIOD.
  - VEHICULAR SIGNAL HEADS 5-6 AND 11 THROUGH 16 USED FOR PEDESTRIAN CROSSINGS DURING THE INTERIM CONDITION UNTIL THE INSTALLATION OF SMART SPINES EQUIPMENT.
  - PHASE 4 LPI NOT TO BE IMPLEMENTED IN THE INTERIM CONDITION.

**DETECTOR ZONE INFORMATION**

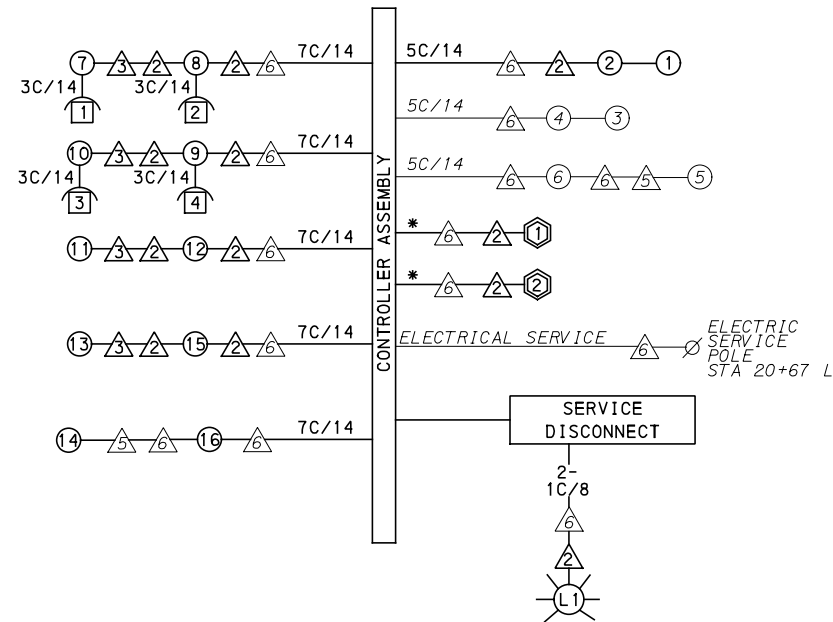
DETECTOR	DETECTION ZONE(S)	MODE	TYPE	ROUTE	PHASE	LOCATION
①	① ② (6' x60')	PRESENCE	VIDEO (STOP BAR)	FORBES AVENUE	6	△
②	③ (6' x60')	PRESENCE	VIDEO (STOP BAR)	MARION STREET	4	△

**GENERAL NOTES**

- THE CITY OF PITTSBURGH SHALL INSPECT THE NEW SIGNAL EQUIPMENT PRIOR TO ACTIVATION.
- ALL TRAFFIC SIGNAL MAINTENANCE AND OPERATION RESPONSIBILITIES SHALL BE TURNED OVER TO THE CITY OF PITTSBURGH AFTER THE FOLLOWING CONDITIONS ARE IMPLEMENTED TO THE CITY'S SATISFACTION:
1. PERMIT "AS-BUILT" TRAFFIC SIGNAL DRAWINGS ARE SUBMITTED AND APPROVED.
  2. ALL PUNCH LIST ITEMS ARE COMPLETED BY THE CONTRACTOR.
  3. AFTER THE 30-DAY CONTINUOUS UNINTERRUPTED SIGNAL OPERATION WITHOUT MALFUNCTIONS.

**CONSTRUCTION NOTES**

1. ALL JUNCTION BOXES IN WALK AREAS TO BE CITY OF PITTSBURGH STANDARD CONCRETE JUNCTION BOX, TYPE 1.
2. ALL JUNCTION BOXES IN NON-WALK AREAS TO BE CITY STANDARD JB-2 WITH BOTTOM.
3. THERE SHALL BE NO SIGNAL WIRE OR FIBER CABLE SPLICING.
4. SERVICE WIRE FROM THE POWER SOURCE TO THE CONTROLLER CABINET SHALL BE PLACED IN SECONDARY SEPARATE CONDUIT.
5. STREET LIGHT CABLE IS NOT PERMITTED TO RUN THROUGH THE CONTROLLER CABINET AND SHALL BE PLACED IN SEPARATE CONDUIT.
6. TRAFFIC SIGNAL CABLE SHALL BE PLACED IN DEDICATED CONDUIT.
7. MOUNT DISCONNECT ON POLE NEAREST TO THE CONTROLLER CABINET EXCLUDING TYPE X POLES.
8. REMOVE AND DISPOSE OF ALL EXISTING SIGNAL WIRING NO LONGER IN USE.
9. REMOVE EXISTING SIGNAL EQUIPMENT NO LONGER IN USE AND RETURN TO THE CITY OF PITTSBURGH TRAFFIC CONTROL SHOP. COORDINATE DELIVERY OF EQUIPMENT WITH DELMAS MCELHANY, TRAFFIC CONTROL FOREMAN.



**WIRING DIAGRAM**

5C/14 - CABLE (NO. OF CONDUCTORS/SIZE AWG.)

- ① PROPOSED DETECTOR
- ② PROPOSED AUDIBLE PEDESTRIAN INDICATOR
- ⊕ PROPOSED LUMINAIRE
- △ EXISTING SIGNAL SUPPORT
- ① PROPOSED SIGNAL HEAD
- △ PROPOSED SIGNAL SUPPORT
- ⊕ PROPOSED JUNCTION BOX
- ① EXISTING SIGNAL HEAD

3C/14 INCIDENTAL TO ITEM 02895.002  
 \* INCIDENTAL TO ITEM 02895.001, AS PER MANUFACTURERS SPECIFICATIONS

**TRANSIT PRIORITY PRE-EMPTION NOTES (TO BE INSTALLED BY OTHERS)**

1. COORDINATE TRAFFIC CONTROLLER PROGRAMMING MODIFICATION WITH REPRESENTATIVES OF THE CITY OF PITTSBURGH AND DISTRICT TRAFFIC UNIT.
2. INCLUDE A TRANSIT PRIORITY PHASE THAT WILL EXTEND THE INDICATED PHASE A MAXIMUM OF 10 SECONDS WHEN ACTIVATED BY A PORT AUTHORITY VEHICLE. DO NOT VIOLATE SIDE STREET PEDESTRIAN MINIMUM TIMINGS.
3. MAINTAIN ALL YELLOW CLEARANCES AT ALL TIMES.
4. PROCEED TO THE SUBSEQUENT INTERVAL AS DEFINED IN THE MOVEMENT, SEQUENCE AND TIMING DIAGRAM UPON COMPLETING THE GREEN EXTENSION INTERVAL.
5. ONCE A TRANSIT CALL IS PLACED AND SATISFIED, THE CONTROLLER WILL NOT SATISFY ANOTHER CALL FOR 4 CYCLES.
6. LOCATION OF BUS DETECTORS ARE TO BE FIELD ADJUSTED TO ACHIEVE MAXIMUM OPERATION.

TS-590

COUNTY: ALLEGHENY  
 MUNICIPALITY: CITY OF PITTSBURGH  
 INTERSECTION: FORBES AVENUE AND MARION STREET

APPROVED AND ACCEPTED:  
 CITY TRAFFIC ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_  
 APPROVED AND ACCEPTED:  
 DISTRICT TRAFFIC ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_



NO.	DATE	DESCRIPTION
REVISIONS		

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DRAWN	WLZ
CHECKED	MSF
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DATE	05/01/24
SCALE	AS SHOWN

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
 PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT UPTOWN TO OAKLAND**  
 SIGNAL PLANS  
 WIRING, MOVEMENT, PHASING & SEQUENCE DIAGRAMS

**Port Authority** connecting people to life™

CONTRACT NO. BRT-001  
 DWG. NO. SG112 SHT. 1172





**TRAFFIC SIGNAL TABULATION**

FORBES AVENUE AND MARION STREET

**TRENCH, CONDUIT, JUNCTION BOX, ELECTRICAL ITEMS**

DESCRIPTION	CITY OF PITTSBURGH STANDARD CONCRETE JUNCTION BOX, TYPE 1	TRENCH AND BACKFILL, TYPE II	TRENCH AND BACKFILL, TYPE IV	2 INCH CONDUIT	3 INCH CONDUIT	SIGNAL CABLE, 14 AWG, 5 CONDUCTOR	SIGNAL CABLE, 14 AWG, 7 CONDUCTOR	AWG 8, ABOVE GROUND CABLE, COPPER, 1 CONDUCTOR
ITEM NUMBER	02897	02898	02898	02899	02899	02900	02900	02900
UNIT	EACH	LF	LF	LF	LF	LF	LF	LF
LOCATION								
CC FOUNDATION TO 1	1	7		14	28			
1 TO 2	1	23	22	45	90			
1 TO S1		25	24	98	196			
1 TO 2		12		12	24			
2 TO S1		30	36*	66	132			
3 TO S1		10		10	10			
4 TO CC FOUNDATION		4			4			
COMPLETE INTERSECTION						475	680	225
TOTAL	2	111	46	245	484	475	680	225

\* TYPE IV TRENCH TABULATED AS PART OF THE SYSTEMS PLAN.

S1 - TABULATED ON SYSTEMS PLAN

**SIGNS**

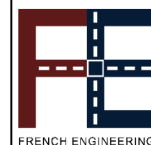
SYMBOL	SERIES	SIZE	AREA EACH (SQ FT)	DESCRIPTION	QUANTITY	02891.001 POST MOUNTED SIGNS, TYPE B		
						SF	SF	SF
A	R5-1	30"x30"	6.3	DO NOT ENTER	2	6.3	6.3	
B	R10-11	30"x36"	7.5	NO TURN ON RED ●	1			7.5
C	R6-1	36"x12"	3.0	HORIZONTAL ONE-WAY ARROW (TWO SIDED, CITY STANDARD)	2		6.0	
D	R10-15AL(MOD)	30"x30"	6.3	TURNING TRAFFIC MUST YIELD TO BIKES AND PEDESTRIANS	2		6.3	6.3
E	D3-4*	66"x24"	11.0	10 Uptown 20 Marion St	1			11.0
F	R10-3E(MOD)	9"x15"	0.9	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER (MOD)	4		▲	
G	R3-11B(MOD)	30"x36"	7.5	RIGHT LANE - BUSES ONLY	1			7.5
H	SS-1	30"x18"	3.8	EXCEPT RIGHT TURNS	1			3.8
I	R3-2	24"x24"	4.0	NO LEFT TURN	1	4.0		
L	D3-4*	78"x24"	13.0	1500 Uptown 1600 Forbes Ave	1			13.0
M	R10-11	24"x30"	5.0	NO TURN ON RED ●	1		5.0	
TOTAL						10.3	23.6	49.1

▲ - INCIDENTAL TO ITEM 02895.002

\* WHITE REFLECTORIZED LEGEND AND BORDER ON BLUE REFLECTORIZED BACKGROUND. UTILIZE 4" CLEARVIEW 3W FOR BLOCK/NEIGHBORHOOD AND 8" CLEARVIEW 3W FOR STREET NAME. ACTUAL WIDTH DETERMINED BY LETTER SPACING. COORDINATE BLOCK NUMBERS AND STREET NAME DETAILS WITH CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE.



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DRAWN	WLZ
CHECKED	MSF
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<b>PORT AUTHORITY OF ALLEGHENY COUNTY</b> PITTSBURGH PENNSYLVANIA	
<b>BUS RAPID TRANSIT UPTOWN TO OAKLAND</b> SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	
<b>Port Authority</b> <small>connecting people to life</small>	CONTRACT NO. BRT-001
	DWG. NO. SG114      SHT. 1174

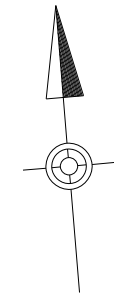


**SIGNS**

SIGN	STANDARD	DESCRIPTION	SIZE	QTY
A	R3-1	NO RIGHT TURN	30"x30"	1
B	R10-11	NO TURN ON RED ●	30"x36"	2
C	R3-2	NO LEFT TURN	30"x30"	1
D	R10-3E(MOD)	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER	9"x15"	8
E	R15-8(MOD)**	LOOK BOTH WAYS FOR BIKES	24"x24"	2
F	R6-1	ONE WAY(TWO SIDED, CITY STANDARD)	36"x12"	2
G	R3-1	NO RIGHT TURN	24"x24"	1
H	R3-2	NO LEFT TURN	24"x24"	1
J	R5-1	DO NOT ENTER	30"x30"	1
K	R10-15AL(MOD)	TURNING TRAFFIC MUST YIELD TO BIKES AND PEDS	30"x30"	2
L	R3-11B(MOD)**	RIGHT LANE - BUSES ONLY	30"x36"	2
M	SS-1**	EXCEPT RIGHT TURNS	30"x18"	2
N	D3-4*	1600 UPTOWN 1700 FORBES AVE	72"x24"	1
P	D3-4*	1700 UPTOWN 1600 FORBES AVE	72"x24"	1
R	D3-4*	100 UPTOWN 000 VAN BRAAM ST	72"x24"	1
T	R3-1	NO RIGHT TURN	24"x24"	1
U	R3-2	NO LEFT TURN	24"x24"	1
V	R5-1	DO NOT ENTER	30"x30"	1

\* WHITE REFLECTORIZED LEGEND AND BORDER ON BLUE REFLECTORIZED BACKGROUND. UTILIZE 4" CLEARVIEW 3W FOR BLOCK/NEIGHBORHOOD AND 8" CLEARVIEW 3W FOR STREET NAME. ACTUAL WIDTH DETERMINED BY LETTER SPACING. COORDINATE BLOCK NUMBERS AND STREET NAME DETAILS WITH CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE.

\*\* POST MOUNTED SIGNS TABULATED AS PART OF THE SIGNING AND PAVEMENT MARKING PLAN.



**AUDIBLE PEDESTRIAN SIGNAL NOTES**

1. ALL PUSH BUTTONS SHALL BE EQUIPPED WITH LOCATOR TONES.
2. ALL WALK INTERVALS TO HAVE VERBAL MESSAGE DETAILING WALK DIRECTION.
3. VERBAL MESSAGE TO BE PLAYED DURING WALK INTERVAL WHEN BUTTON IS PRESSED.
4. ALL PEDESTRIAN PUSH BUTTONS TO BE LOCATED AT 42" ABOVE GROUND.
5. ALL PUSH BUTTONS TO BE EQUIPPED WITH VIBROTACTILE ARROW.
6. VIBROTACTILE ARROWS TO VIBRATE DURING WALK INTERVAL.
7. WALK AND DON'T WALK MESSAGE SHALL BE AUDIBLE THROUGH THE PUSH BUTTON SPEAKER.

**SIGNAL ASSEMBLY NOTES**

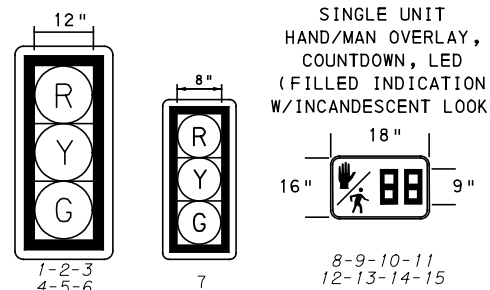
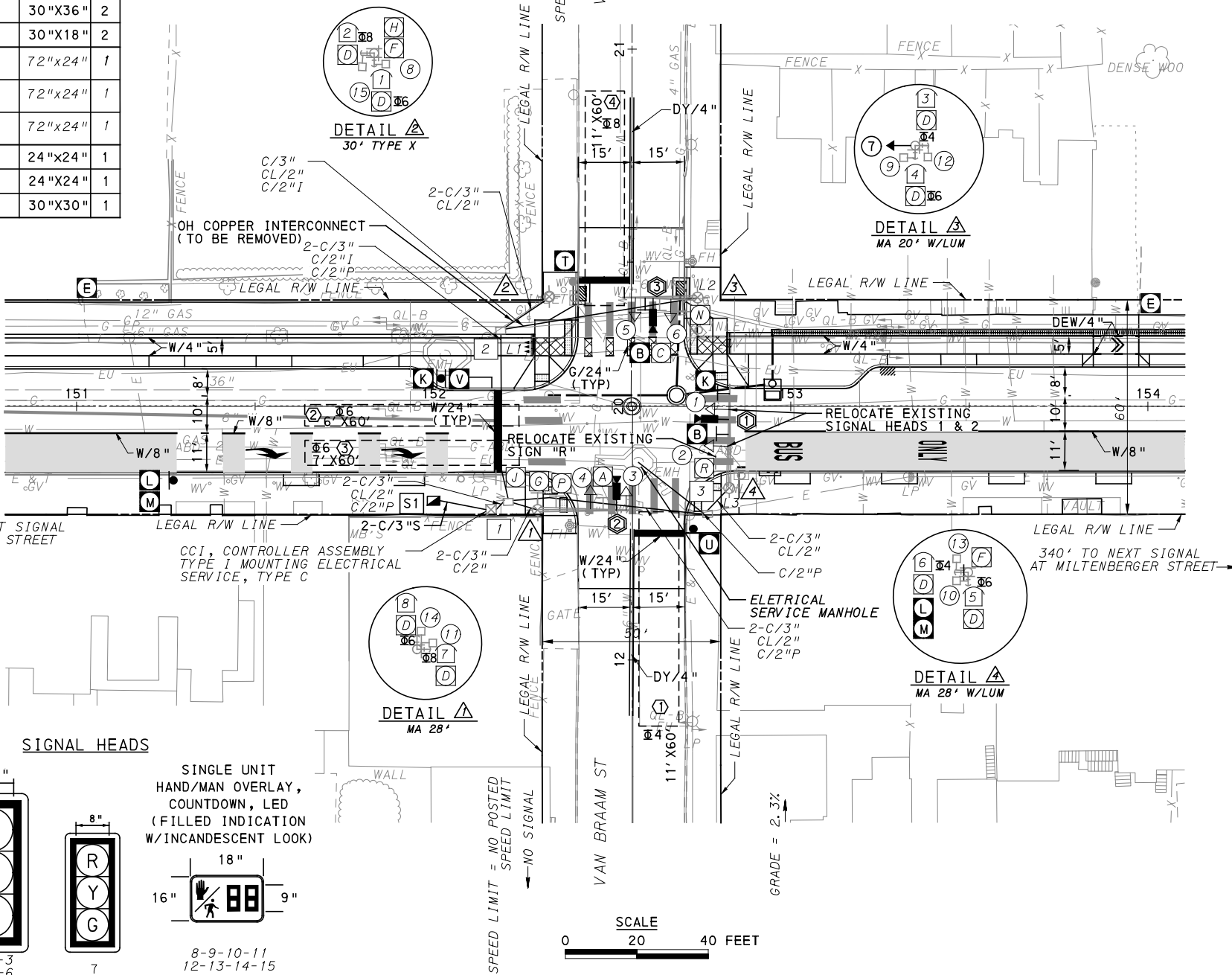
1. ALL VEHICULAR/BICYCLE SIGNALS SHALL BE EQUIPPED WITH L.E.D LENSES, TUNNEL VISORS AND LOUVERED BLACK METAL BACKPLATES WITH 2" REFLECTIVE BORDERS.
2. MIN/MAX HEIGHT FOR VEHICULAR SIGNALS 17' / 18'.
3. MIN HORIZONTAL SPACING FOR VEHICULAR SIGNALS IS 8'.
4. MIN/MAX HEIGHT FOR PEDESTRIAN MOUNTED SIGNALS 10' / 12'.
5. FINAL SIGNAL HEAD PLACEMENT WILL BE DETERMINED BY A REPRESENTATIVE OF THE CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE PRIOR TO SIGNAL BEING TURNED ON.
6. ALL PEDESTRIAN SIGNALS SHALL BE PORTLAND ORANGE FULL "PEDESTRIAN HAND" AND WHITE "WALKING PERSON" SYMBOLS AND HAVE INCANDESCENT LOOK WITH COUNTDOWN TIMER.
7. PROVIDE AIRCRAFT STRANDED CABLE FOR MOUNTING SIGNAL AND SIGN BRACKET ASSEMBLIES TO MAST ARMS.
8. PROVIDE BLACK ALUMINUM HOUSINGS FOR ALL SIGNAL HEADS.
9. INSTALL POST MOUNTED SIGNAL HEADS WITH BOTTOMS NO GREATER THAN 15' ABOVE THE SIDEWALK OR PAVEMENT.
10. EXACT LOCATION OF TRAFFIC SIGNAL SUPPORTS SHALL BE DETERMINED BY A REPRESENTATIVE OF THE CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE PRIOR TO INSTALLATION.

**PAVEMENT MARKING NOTES**

1. ALL STOP BARS ARE W/24".
2. CROSSWALKS ARE 10' X 24" KEYS WITH 3' TO 5' SPACING.
3. CROSSWALKS ACROSS BICYCLE LANES ARE 6' X 12" KEYS WITH 1' SPACING.

**LEGEND**

- ◉ EXISTING MAST ARM WITH WITH LUMINAIRE
- EXISTING PEDESTAL
- ◻ EXISTING PEDESTRIAN SIGNAL HEAD
- ➔ EXISTING VEHICULAR/BICYCLE SIGNAL HEAD
- ➔ EXISTING VEHICULAR/BICYCLE SIGNAL HEAD
- ▲ EXISTING SIGN
- ▲ PROPOSED SIGN
- ◻ PROPOSED STOP BAR RADAR DETECTION ZONE
- ➔ EXISTING AUDIBLE PEDESTRIAN PUSH BUTTON/SIGN
- ◻ EXISTING CONTROLLER ASSEMBLY
- ◻ EXISTING JUNCTION BOX
- ◻ S1 SYSTEM JUNCTION BOX
- ➔ PROPOSED STOP BAR VIDEO DETECTOR
- C/2" EXISTING CONDUIT/SIZE
- CL/2" EXISTING LIGHTING CONDUIT/SIZE
- C/3"P EXISTING POWER CONDUIT/SIZE
- C/3" I EXISTING INTERCONNECT CONDUIT/SIZE
- C/3" S SYSTEM CONDUIT/SIZE
- W/6" SOLID WHITE LINE/WIDTH
- BW/6" BROKEN WHITE LINE/WIDTH
- DY/4" DOUBLE SOLID YELLOW LINE/WIDTH
- G/24" SOLID GREEN LINE/WIDTH
- DEW/4" DOTTED WHITE PAVEMENT MARKING/WIDTH



TS-721

COUNTY: ALLEGHENY
MUNICIPALITY: CITY OF PITTSBURGH
INTERSECTION: FORBES AVENUE AND VAN BRAAM STREET
APPROVED AND ACCEPTED:
CITY TRAFFIC ENGINEER _____ DATE _____
APPROVED AND ACCEPTED:
DISTRICT TRAFFIC ENGINEER _____ DATE _____

**AECOM**  
Gulf Tower  
707 Grant Street  
5th Floor  
Pittsburgh, PA 15219

**DRIVE ENGINEERING**  
595 Skippack Pk,  
Suite 400  
Blue Bell, PA 19422

NO.	DATE	DESCRIPTION
REVISIONS		

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**(NOT FOR CONSTRUCTION)**

DESIGNED	MW
DRAWN	MW
CHECKED	EMC
IN CHARGE	EMC
DATE	05/01/24
SCALE	AS SHOWN

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT UPTOWN TO OAKLAND**  
SIGNAL PLANS  
FORBES AVENUE & VAN BRAAM STREET

**Port Authority** connecting people to life™

CONTRACT NO. BRT-001  
DWG. NO. SG115 SHT. 1175

**MOVEMENT, PHASING AND SEQUENCE CHART**

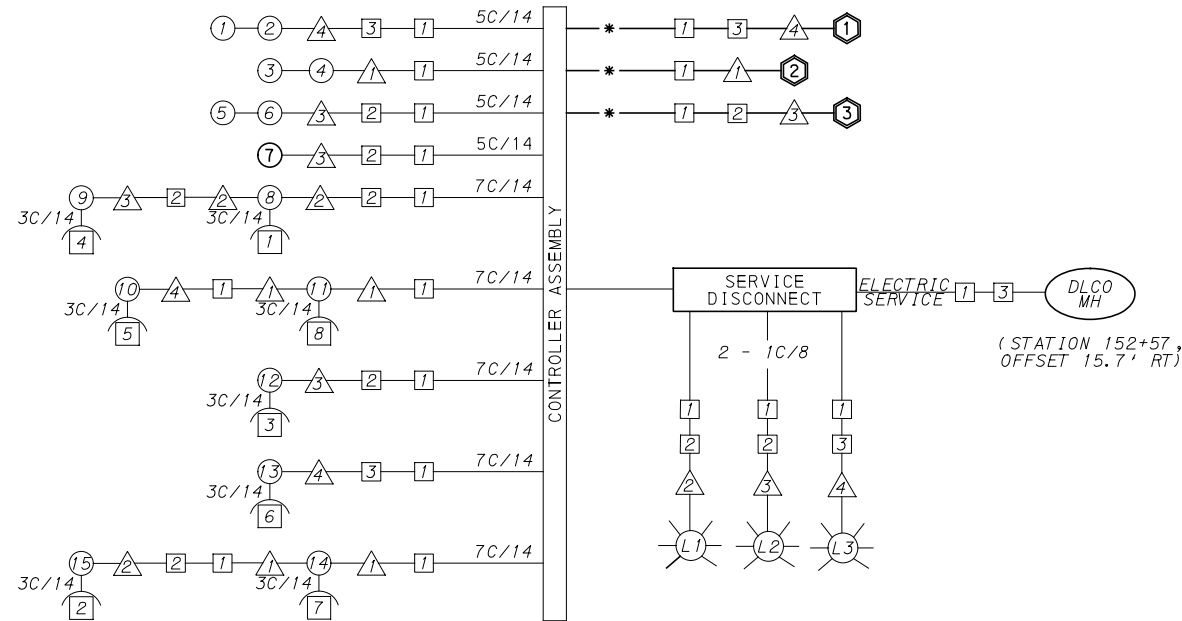
SIGNAL	INTERVAL	PHASE 6					PHASE 4+8					OFF
		1	2	3	4	5	1	2	3	4	5	
	1-2	G	G	Y	R		R	R	R	R	R	R
	3-4-5-6	R	R	R	R		R	G	G	Y	R	R
	7	G	G	Y	R		R	R	R	R	R	R
	8-9-10-11	W	FD	DW	DW		DW	DW	DW	DW	DW	OFF
	12-13-14-15	DW	DW	DW	DW		W	W	FD	DW	DW	OFF
FIXED		3.5		2.5			3.5		2.5			
MINIMUM		10					10					
PASSAGE		3					3					
FREE (MAX)		46					17					
PEDESTRIAN		7	10				3	7	10			
MEMORY		PED RECALL					PED RECALL					

**DETECTOR ZONE INFORMATION**

DETECTOR	DETECTION ZONE(S)	MODE	TYPE	ROUTE	PHASE	LOCATION MAST ARM
3	1 (11' x 60')	PRESENCE	VIDEO (STOP BAR)	VAN BRAAM ST.	4	3
1	2 (6' x 60')	PRESENCE	VIDEO (STOP BAR)	FORBES AVE.	6	4
1	3 (7' x 60')	PRESENCE	VIDEO (STOP BAR)	FORBES AVE.	6	4
2	4 (11' x 60')	PRESENCE	VIDEO (STOP BAR)	VAN BRAAM ST.	8	1

**TRANSIT PRIORITY PRE-EMPTION NOTES (TO BE INSTALLED BY OTHERS)**

- COORDINATE TRAFFIC CONTROLLER PROGRAMMING MODIFICATION WITH REPRESENTATIVES OF THE CITY OF PITTSBURGH AND DISTRICT TRAFFIC UNIT.
- INCLUDE A TRANSIT PRIORITY PHASE THAT WILL EXTEND THE INDICATED PHASE A MAXIMUM OF 10 SECONDS WHEN ACTIVATED BY A PORT AUTHORITY VEHICLE. DO NOT VIOLATE SIDE STREET PEDESTRIAN MINIMUM TIMINGS.
- MAINTAIN ALL YELLOW CLEARANCES AT ALL TIMES.
- PROCEED TO THE SUBSEQUENT INTERVAL AS DEFINED IN THE MOVEMENT, SEQUENCE AND TIMING DIAGRAM UPON COMPLETING THE GREEN EXTENSION INTERVAL.
- ONCE A TRANSIT CALL IS PLACED AND SATISFIED, THE CONTROLLER WILL NOT SATISFY ANOTHER CALL FOR 4 CYCLES.
- LOCATION OF BUS DETECTORS ARE TO BE FIELD ADJUSTED TO ACHIEVE MAXIMUM OPERATION.



**WIRING DIAGRAM**

- 5C/14 - CABLE (NO. OF CONDUCTORS/SIZE AWG.)
- SIGNAL HEAD
  - △ SIGNAL SUPPORT
  - AUDIBLE PEDESTRIAN INDICATOR
  - JUNCTION BOX
  - ⬡ RADAR DETECTOR
  - ⊙ LUMINAIRE
- \* INCIDENTAL TO ITEM 02895.001, AS PER MANUFACTURERS SPECIFICATIONS

**GENERAL NOTES**

- THE CITY OF PITTSBURGH SHALL INSPECT THE NEW SIGNAL EQUIPMENT PRIOR TO ACTIVATION.
- ALL TRAFFIC SIGNAL MAINTENANCE AND OPERATION RESPONSIBILITIES SHALL BE TURNED OVER TO THE CITY OF PITTSBURGH AFTER THE FOLLOWING CONDITIONS ARE IMPLEMENTED TO THE CITY'S SATISFACTION:
- PERMIT "AS-BUILT" TRAFFIC SIGNAL DRAWINGS ARE SUBMITTED AND APPROVED.
  - ALL PUNCH LIST ITEMS ARE COMPLETED BY THE CONTRACTOR.
  - AFTER THE 30-DAY CONTINUOUS UNINTERRUPTED SIGNAL OPERATION WITHOUT MALFUNCTIONS.

**CONSTRUCTION NOTES**

- ALL JUNCTION BOXES IN WALK AREAS TO BE CITY OF PITTSBURGH STANDARD CONCRETE JUNCTION BOX, TYPE 1.
- ALL JUNCTION BOXES IN NON-WALK AREAS TO BE CITY STANDARD JB-2 WITH BOTTOM.
- THERE SHALL BE NO SIGNAL WIRE OR FIBER CABLE SPLICING.
- SERVICE WIRE FROM THE POWER SOURCE TO THE CONTROLLER CABINET SHALL BE PLACED IN SECONDARY SEPARATE CONDUIT.
- STREET LIGHT CABLE IS NOT PERMITTED TO RUN THROUGH THE CONTROLLER CABINET AND SHALL BE PLACED IN SEPARATE CONDUIT.
- TRAFFIC SIGNAL CABLE SHALL BE PLACED IN DEDICATED CONDUIT.
- MOUNT DISCONNECT ON POLE NEAREST TO THE CONTROLLER CABINET EXCLUDING TYPE X POLES.
- REMOVE AND DISPOSE OF ALL EXISTING SIGNAL WIRING NO LONGER IN USE.
- REMOVE EXISTING SIGNAL EQUIPMENT NO LONGER IN USE AND RETURN TO THE CITY OF PITTSBURGH TRAFFIC CONTROL SHOP. COORDINATE DELIVERY OF EQUIPMENT WITH DELMAS MCELHANY, TRAFFIC CONTROL FOREMAN.

TS-721

COUNTY: ALLEGHENY

MUNICIPALITY: CITY OF PITTSBURGH

INTERSECTION: FORBES AVENUE AND VAN BRAAM STREET

APPROVED AND ACCEPTED:

CITY TRAFFIC ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_

APPROVED AND ACCEPTED:

DISTRICT TRAFFIC ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_



NO.	DATE	DESCRIPTION
REVISIONS		

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**(NOT FOR CONSTRUCTION)**

DESIGNED	MW
DRAWN	MW
CHECKED	EMC
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SCALE	AS SHOWN

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT UPTOWN TO OAKLAND**  
SIGNAL PLANS  
WIRING, MOVEMENT, PHASING & SEQUENCE DIAGRAMS

**Port Authority** connecting people to life

CONTRACT NO. BRT-001

DWG. NO. SG116 SHT. 1176

PLOTTED: 3/21/2024 8:42:32 PM

OPERATOR: "michae.l.mcgarry" FILE PATH: c:\pwworking\aecocom.com\d0207710\BRT\_04\_SIG31\_SHT03.dgn

**TRAFFIC SIGNAL TABULATION**

FORBES AVENUE  
AND VAN BRAAM STREET

MISCELLANEOUS				
ITEM NUMBER	DESCRIPTION	QTY.	LOCATION	REMARKS
01882.002 EACH	TRAFFIC SIGNAL TIMING MODIFICATIONS	2	CC	
02890.003 EACH	ETHERNET SWITCH	1	CC	
02891.021 EACH	RESET STRUCTURE MOUNTED FLAT SHEET ALUMINIUM SIGN	1	△4	
02894.021 EACH	RESET VEHICULAR SIGNAL HEAD	2	△4	
02894.006 EACH	VEHICULAR SIGNAL HEAD, THREE 8" SECTIONS	1	⑦	BLACK TUNNEL VISORS BLACK ALUMINUM HOUSINGS

**DETECTORS**

ITEM NUMBER	DESCRIPTION	SEN. NO.	QTY.	LOCATION
02895.001 EACH	VIDEO DETECTION	①②③	3	△1△3△4

**TRAFFIC SIGNAL SUPPORTS \*\***

POLE NO.	ITEM NUMBER	DESCRIPTION	QTY.	ROUTE	STATION	SIDE	OFFSET	MAST ARM												PEDESTAL					
								ARM "A"						ARM "C"						SHAFT		SIGNAL			
								H	K	SIGNAL LOCATION				SIGN LOCATION				W	G	X	Z	H	M	N	
								L	M	N	O	P	R	S	T	U	Y								
△1		TRAFFIC SIGNAL SUPPORT, 28' MAST ARM		FORBES AVE.	152+29	RT	29'	17'	10'	28'	24'	14'			19'			4'	90°						
△2		TRAFFIC SIGNAL SUPPORT, TYPE X WITH LUMINAIRE ARM, 30' MOUNTING		FORBES AVE.	152+24	LT	21'													6'	30'	45°	30'	10'	
△3		TRAFFIC SIGNAL SUPPORT, 20' MAST ARM WITH LUMINAIRE ARM, 30' MOUNTING		FORBES AVE.	152+74	LT	30'	17'	10'	20'	17'	7'			14'	12'			3'	90°	6'	30'	45°		
△4		TRAFFIC SIGNAL SUPPORT, 28' MAST ARM WITH LUMINAIRE ARM, 30' MOUNTING		FORBES AVE.	152+83	RT	23'	17'	10'	28'	21'	11'			25'	14'			6'	0°	6'	30'	45°		

\*\* REFER TO PENNDOT TC-8800 TRAFFIC STANDARDS - SIGNALS FOR LETTER DESIGNATION



Gulf Tower  
707 Grant Street  
5th Floor  
Pittsburgh, PA 15219



595 Skippack Pk,  
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Blue Bell, PA 19422

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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT UPTOWN TO OAKLAND**  
SIGNAL PLANS  
TRAFFIC SIGNAL TABULATIONS



CONTRACT NO. BRT-001

DWG. NO. SG117

SHT. 1177

TRAFFIC SIGNAL TABULATION

FORBES AVENUE  
AND VAN BRAAM STREET

TRENCH, CONDUIT, JUNCTION BOX, ELECTRICAL ITEMS

DESCRIPTION	3 INCH CONDUIT	TRENCH AND BACKFILL, TYPE I	SIGNAL CABLE, 14 AWG, 5 CONDUCTOR
ITEM NUMBER	02899	02898	02900
UNIT	003	001	002
LOCATION	LF	LF	LF
CC TO [S1]	27	14	
TOTAL	27	14	159

[S1] - TABULATED ON SYSTEMS PLAN

SIGNS

SYMBOL	SERIES	SIZE	AREA EACH (SQ FT)	DESCRIPTION	QUANTITY	02891.001 POST MOUNTED SIGNS, TYPE B	02891.003 POST MOUNTED SIGNS, TYPE F	02891.007 STRUCTURE MOUNTED FLAT SHEET ALUMINUM SIGNS WITH STIFFENERS
						SF	SF	SF
[B]	R10-11	30 "X36 "	7.5	NO TURN ON RED ●	2			15
[K]	R10-15AL(MOD)	30 "X30 "	6.3	TURNING TRAFFIC MUST YIELD TO BIKES AND PEDS	2		6.3	6.3
[T]	R3-1	24 "X24 "	4	NO RIGHT TURN	1		4	
[U]	R3-2	24 "X24 "	4	NO LEFT TURN	1		4	
[V]	R5-1	30 "X30 "	6.3	DO NOT ENTER	1	6.3		
TOTAL						6.3	14.3	21.3



Gulf Tower  
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5th Floor  
Pittsburgh, PA 15219



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PORT AUTHORITY OF ALLEGHENY COUNTY  
PITTSBURGH PENNSYLVANIA

BUS RAPID TRANSIT UPTOWN TO OAKLAND  
SIGNAL PLANS  
TRAFFIC SIGNAL TABULATIONS



CONTRACT NO. BRT-001

DWG. NO. SG118

SHT. 1178

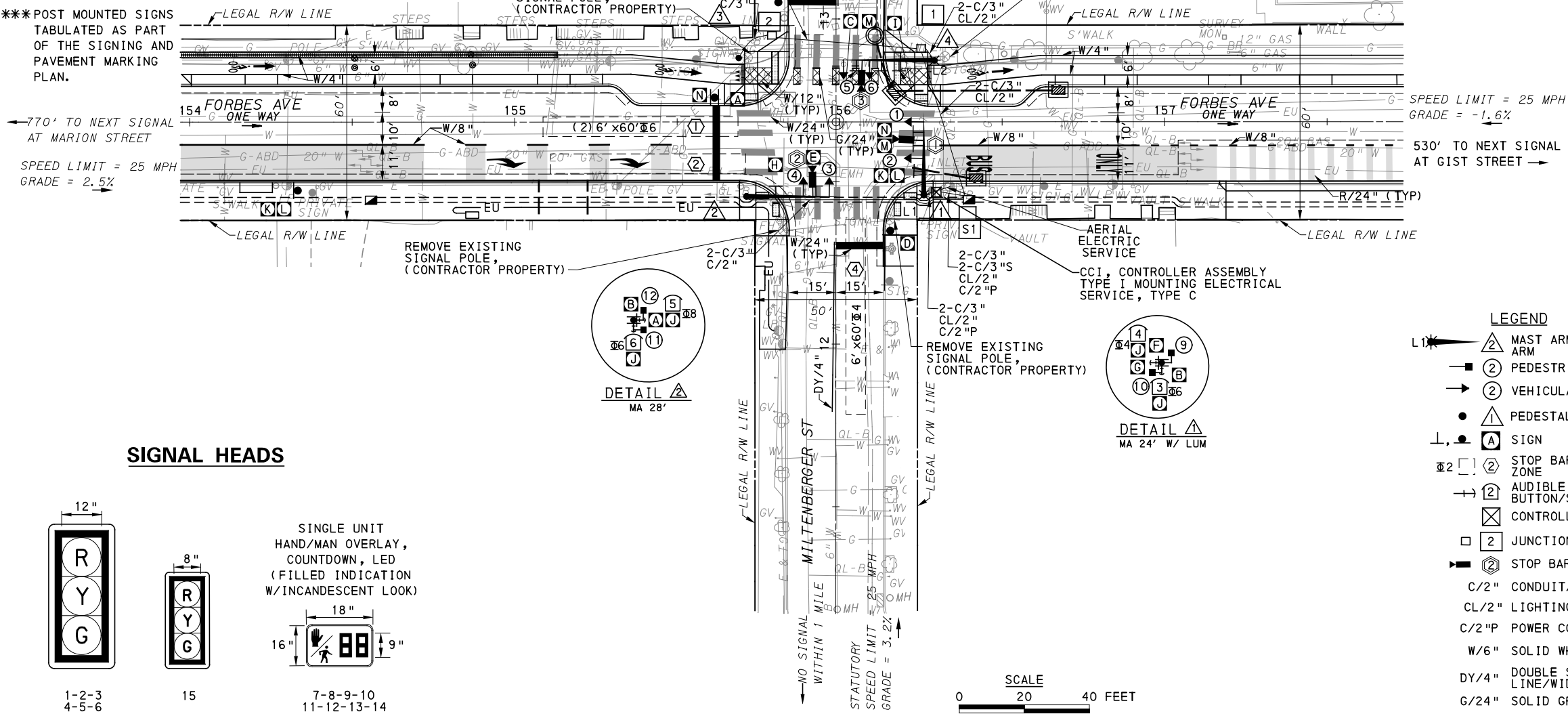
**SIGNS**

SIGN	STANDARD	DESCRIPTION	SIZE	QTY
A	R5-1	DO NOT ENTER	30"x30"	2
B	R6-1	ONE WAY (TWO SIDED, CITY STANDARD)	36"x12"	2
C	R3-2	NO LEFT TURN	30"x30"	1
D	R3-2	NO LEFT TURN	24"x24"	2
E	R3-1	NO RIGHT TURN	30"x30"	1
F	R3-1	NO RIGHT TURN	24"x24"	2
G	D3-4**	100 Uptown 200 Miltenberger St	90"x24"	1
H	D3-4*	1800 Uptown 1700 Forbes Ave	78"x24"	1
I	D3-4*	1700 Uptown 1800 Forbes Ave	78"x24"	1
J	R10-3E(MOD)	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER (MOD)	9"x15"	8
K	R3-11B(MOD)	RIGHT LANE - BUSES ONLY	30"x36"	2
L	SS-1	EXCEPT RIGHT TURNS	30"x18"	2
M	R10-11	NO TURN ON RED	30"x36"	2
N	R10-15AL	TURNING TRAFFIC MUST YIELD TO BIKES AND PEDESTRIANS	30"x30"	2

\*\*WHITE REFLECTORIZED LEGEND AND BORDER ON BLUE REFLECTORIZED BACKGROUND. UTILIZE 4" CLEARVIEW 3W FOR BLOCK/NEIGHBORHOOD AND 8" CLEARVIEW 2W FOR STREET NAME. ACTUAL WIDTH DETERMINED BY LETTER SPACING. COORDINATE BLOCK NUMBERS AND STREET NAME DETAILS WITH CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE.

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\*\*\*POST MOUNTED SIGNS TABULATED AS PART OF THE SIGNING AND PAVEMENT MARKING PLAN.



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2. ALL WALK INTERVALS TO HAVE VERBAL MESSAGE DETAILING WALK DIRECTION.
3. VERBAL MESSAGE TO BE PLAYED DURING WALK INTERVAL WHEN BUTTON IS PRESSED.
4. ALL PEDESTRIAN PUSH BUTTONS TO BE LOCATED AT 42" ABOVE GROUND.
5. ALL PUSH BUTTONS TO BE EQUIPPED WITH VIBROTACTILE ARROW.
6. VIBROTACTILE ARROWS TO VIBRATE DURING WALK INTERVAL.
7. WALK AND DON'T WALK MESSAGE SHALL BE AUDIBLE THROUGH THE PUSH BUTTON SPEAKER.

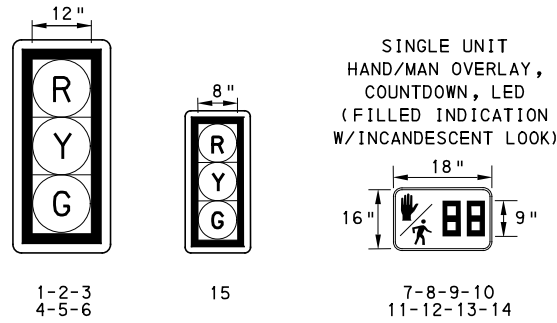
**SIGNAL ASSEMBLY NOTES**

1. ALL VEHICULAR/BICYCLE SIGNALS SHALL BE EQUIPPED WITH L.E.D LENSES, TUNNEL VISORS AND LOUVERED BLACK METAL BACKPLATES WITH 2" REFLECTIVE BORDERS.
2. MIN/MAX HEIGHT TO BOTTOM OF VEHICULAR SIGNALS 17' /18'.
3. MIN HORIZONTAL SPACING FOR VEHICULAR SIGNALS IS 8'.
4. MIN/MAX HEIGHT TO BOTTOM OF PEDESTRIAN SIGNALS 10' /12'.
5. FINAL SIGNAL HEAD PLACEMENT WILL BE DETERMINED BY REPRESENTATIVES OF THE CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE AND THE DISTRICT TRAFFIC UNIT PRIOR TO SIGNAL BEING TURNED ON.
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7. PROVIDE AIRCRAFT STRANDED CABLE FOR MOUNTING SIGNAL AND SIGN BRACKET ASSEMBLIES TO MAST ARMS.
8. PROVIDE BLACK ALUMINUM HOUSINGS FOR ALL SIGNAL HEADS.
9. INSTALL POST MOUNTED SIGNAL HEADS WITH BOTTOMS NO GREATER THAN 15' ABOVE THE SIDEWALK OR PAVEMENT.
10. EXACT LOCATION OF TRAFFIC SIGNAL SUPPORTS SHALL BE DETERMINED BY REPRESENTATIVES OF THE CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE AND THE DISTRICT TRAFFIC UNIT PRIOR TO INSTALLATION.

**PAVEMENT MARKING NOTES**

1. ALL STOP BARS ARE W/24".
2. CROSSWALKS ARE 10' X 24" KEYS WITH 3' TO 5' SPACING.
3. CROSSWALKS ACROSS BICYCLE LANES ARE 6' X 12" KEYS WITH 1' SPACING.

**SIGNAL HEADS**



**LEGEND**

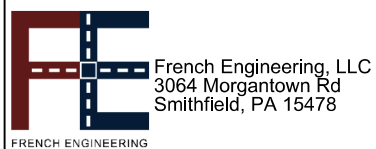
- ① MAST ARM WITH LUMINAIRE ARM
- ② PEDESTRIAN SIGNAL HEAD
- ③ VEHICULAR/BICYCLE SIGNAL HEAD
- ④ PEDESTAL
- ⑤ SIGN
- ⑥ STOP BAR VIDEO DETECTION ZONE
- ⑦ AUDIBLE PEDESTRIAN PUSH BUTTON/SIGN
- ⑧ CONTROLLER ASSEMBLY
- ⑨ JUNCTION BOX
- ⑩ STOP BAR VIDEO DETECTOR
- C/2" CONDUIT/SIZE
- CL/2" LIGHTING CONDUIT/SIZE
- C/2"P POWER CONDUIT/SIZE
- W/6" SOLID WHITE LINE/WIDTH
- DY/4" DOUBLE SOLID YELLOW LINE/WIDTH
- G/24" SOLID GREEN LINE/WIDTH
- R/24" SOLID RED LINE/WIDTH
- ⑪ MAST ARM
- ⑫ SYSTEM JUNCTION BOX
- C/3"S SYSTEM CONDUIT/SIZE

TS-331

COUNTY: ALLEGHENY \_\_\_\_\_  
MUNICIPALITY: CITY OF PITTSBURGH \_\_\_\_\_  
INTERSECTION: FORBES AVENUE AND MILTENBERGER STREET \_\_\_\_\_

APPROVED AND ACCEPTED: \_\_\_\_\_  
CITY TRAFFIC ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_

APPROVED AND ACCEPTED: \_\_\_\_\_  
DISTRICT TRAFFIC ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_



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**(NOT FOR CONSTRUCTION)**

DESIGNED	LJF
DRAWN	WLZ
CHECKED	MSF
IN CHARGE	LJF
DATE	05/01/24
SCALE	AS SHOWN

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT UPTOWN TO OAKLAND**  
**SIGNAL PLANS**  
**FORBES AVENUE & MILTENBERGER STREET**

**Port Authority**  
connecting people to life™

CONTRACT NO. BRT-001  
DWG. NO. SG119 SHT. 1179



**MOVEMENT, PHASING AND SEQUENCE CHART**

SIGNAL	PHASE 6					PHASE 4+8					FLASHING PRIORITY
	1	2	3	4	5	1	2	3	4	5	
1-2	G	G	Y	R		R	R	R	R	R	R
3-4	R	R	R	R		R	G	G	Y	R	R
5-6	R	R	R	R		R	G	G	Y	R	R
7-14	W	FD	DW	DW		DW	DW	DW	DW	DW	OFF
8-9	DW	DW	DW	DW		W	W	FD	DW	DW	OFF
10-11	W	FD	DW	DW		DW	DW	DW	DW	DW	OFF
12-13	DW	DW	DW	DW		W	W	FD	DW	DW	OFF
15	G	G	Y	R		R	R	R	R	R	R
FIXED			3.5	2.5				3.5	2.5		
MINIMUM	10					10					
PASSAGE	3					3					
FREE (MAX)	46					17					
PEDESTRIAN	7	10				3	4	12			
MEMORY			MAX	RECALL				PED	RECALL		

**DETECTOR ZONE INFORMATION**

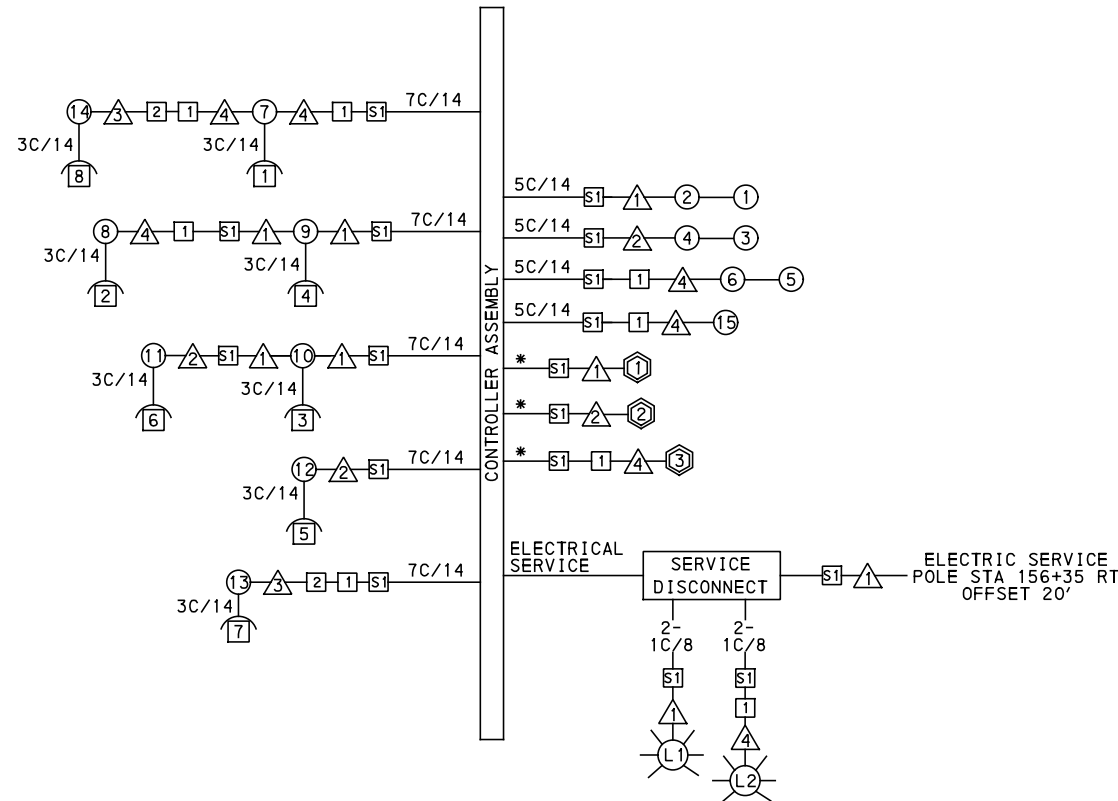
DETECTOR	DETECTION ZONE(S)	MODE	TYPE	ROUTE	PHASE	LOCATION MAST ARM
①	① ② (6' x 60')	PRESENCE	VIDEO (STOP BAR)	FORBES AVENUE	6	△
②	③ (6' x 60')	PRESENCE	VIDEO (STOP BAR)	MILTENBERGER STREET	8	△
③	④ (6' x 60')	PRESENCE	VIDEO (STOP BAR)	MILTENBERGER STREET	4	△

**GENERAL NOTES**

- THE CITY OF PITTSBURGH SHALL INSPECT THE NEW SIGNAL EQUIPMENT PRIOR TO ACTIVATION.
- ALL TRAFFIC SIGNAL MAINTENANCE AND OPERATION RESPONSIBILITIES SHALL BE TURNED OVER TO THE CITY OF PITTSBURGH AFTER THE FOLLOWING CONDITIONS ARE IMPLEMENTED TO THE CITY'S SATISFACTION:
1. PERMIT "AS-BUILT" TRAFFIC SIGNAL DRAWINGS ARE SUBMITTED AND APPROVED.
  2. ALL PUNCH LIST ITEMS ARE COMPLETED BY THE CONTRACTOR.
  3. AFTER THE 30-DAY CONTINUOUS UNINTERRUPTED SIGNAL OPERATION WITHOUT MALFUNCTIONS.

**CONSTRUCTION NOTES**

1. ALL JUNCTION BOXES IN WALK AREAS TO BE CITY OF PITTSBURGH STANDARD CONCRETE JUNCTION BOX, TYPE 1.
2. ALL JUNCTION BOXES IN NON-WALK AREAS TO BE CITY STANDARD JB-2 WITH BOTTOM.
3. THERE SHALL BE NO SIGNAL WIRE OR FIBER CABLE SPLICING.
4. SERVICE WIRE FROM THE POWER SOURCE TO THE CONTROLLER CABINET SHALL BE PLACED IN SECONDARY SEPARATE CONDUIT.
5. STREET LIGHT CABLE IS NOT PERMITTED TO RUN THROUGH THE CONTROLLER CABINET AND SHALL BE PLACED IN SEPARATE CONDUIT.
6. TRAFFIC SIGNAL CABLE SHALL BE PLACED IN DEDICATED CONDUIT.
7. MOUNT DISCONNECT ON POLE NEAREST TO THE CONTROLLER CABINET EXCLUDING TYPE X POLES.
8. REMOVE AND DISPOSE OF ALL EXISTING SIGNAL WIRING NO LONGER IN USE.
9. REMOVE EXISTING SIGNAL EQUIPMENT NO LONGER IN USE AND RETURN TO THE CITY OF PITTSBURGH TRAFFIC CONTROL SHOP. COORDINATE DELIVERY OF EQUIPMENT WITH DELMAS MCELHANY, TRAFFIC CONTROL FOREMAN.



**WIRING DIAGRAM**

- 5C/14 - CABLE (NO. OF CONDUCTORS/SIZE AWG.)
- ① PROPOSED DETECTOR
  - ② PROPOSED AUDIBLE PEDESTRIAN INDICATOR
  - ③ PROPOSED LUMINAIRE
  - ④ PROPOSED SIGNAL HEAD
  - △ PROPOSED SIGNAL SUPPORT
  - PROPOSED JUNCTION BOX
- 3C/14 INCIDENTAL TO ITEM 02895.002
- \* INCIDENTAL TO ITEM 02895.001, AS PER MANUFACTURERS SPECIFICATIONS

**TRANSIT PRIORITY PRE-EMPTION NOTES  
(TO BE INSTALLED BY OTHERS)**

1. COORDINATE TRAFFIC CONTROLLER PROGRAMMING MODIFICATION WITH REPRESENTATIVES OF THE CITY OF PITTSBURGH AND DISTRICT TRAFFIC UNIT.
2. INCLUDE A TRANSIT PRIORITY PHASE THAT WILL EXTEND THE INDICATED PHASE A MAXIMUM OF 10 SECONDS WHEN ACTIVATED BY A PORT AUTHORITY VEHICLE. DO NOT VIOLATE SIDE STREET PEDESTRIAN MINIMUM TIMINGS.
3. MAINTAIN ALL YELLOW CLEARANCES AT ALL TIMES.
4. PROCEED TO THE SUBSEQUENT INTERVAL AS DEFINED IN THE MOVEMENT, SEQUENCE AND TIMING DIAGRAM UPON COMPLETING THE GREEN EXTENSION INTERVAL.
5. ONCE A TRANSIT CALL IS PLACED AND SATISFIED, THE CONTROLLER WILL NOT SATISFY ANOTHER CALL FOR 4 CYCLES.
6. LOCATION OF BUS DETECTORS ARE TO BE FIELD ADJUSTED TO ACHIEVE MAXIMUM OPERATION.

TS-331

COUNTY: ALLEGHENY

MUNICIPALITY: CITY OF PITTSBURGH

INTERSECTION: FORBES AVENUE AND MILTENBERGER STREET

---

APPROVED AND ACCEPTED:

CITY TRAFFIC ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_

APPROVED AND ACCEPTED:

DISTRICT TRAFFIC ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_



NO.	DATE	DESCRIPTION
REVISIONS		

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**(NOT FOR CONSTRUCTION)**

DESIGNED	LJF
DRAWN	WLZ
CHECKED	MSF
IN CHARGE	LJF
DATE	05/01/24
SCALE	AS SHOWN

<b>PORT AUTHORITY OF ALLEGHENY COUNTY</b> PITTSBURGH PENNSYLVANIA	
<b>BUS RAPID TRANSIT UPTOWN TO OAKLAND</b> SIGNAL PLANS	
WIRING, MOVEMENT, PHASING & SEQUENCE DIAGRAMS	
<b>Port Authority</b> <small>connecting people to life</small>	CONTRACT NO. BRT-001
	DWG. NO. SG120      SHT. 1180

TRAFFIC SIGNAL TABULATION

FORBES AVENUE AND MILTENBERGER STREET

MISCELLANEOUS				
ITEM NUMBER	DESCRIPTION	QTY.	LOCATION	REMARKS
01882.002 EACH	TRAFFIC SIGNAL TIMING MODIFICATIONS	2	CC	
02212.009 LF	POLE FOUNDATION DRILLING, LESS THAN 30" DIAMETER	6	△3	
02212.010 LF	POLE FOUNDATION DRILLING, 30" DIAMETER OR GREATER	35	△1 △2 △4	
02889.002 EACH	LED LUMINAIRE CITY STANDARD, BLACK	2	☀ ☀	△1 △4
02890.001 EACH	TRAFFIC SIGNAL CONTROLLER ASSEMBLY, TYPE 2070 LC WITH TYPE 332 BASE MOUNTED CABINET	1	CC	332 CONTROLLER CABINET 8" RISER RE-ESTABLISH INTERCONNECT
02890.003 EACH	ETHERNET SWITCH	1	CC	
02890.005 EACH	GPS TIME CLOCK	1	CC	
02894.001 EACH	VEHICULAR SIGNAL HEAD, THREE 12" SECTIONS	6	①②③ ④⑤⑥	BLACK TUNNEL VISORS BLACK ALUMINUM HOUSINGS BLACK METAL LOUVERED BACKPLATE
02894.005 EACH	LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, TYPE A	8	⑦⑧⑨⑩ ⑪⑫⑬⑭	BLACK TUNNEL VISORS BLACK ALUMINUM HOUSINGS
02894.006 EACH	VEHICULAR SIGNAL HEAD, THREE 8" SECTIONS	1	⑮	BLACK TUNNEL VISORS BLACK ALUMINUM HOUSINGS BLACK METAL LOUVERED BACKPLATE
02895.002 EACH	ACCESSIBLE PEDESTRIAN SIGNALS	8	①②③④ ⑤⑥⑦⑧	

DETECTORS

ITEM NUMBER	DESCRIPTION	SEN. NO.	QTY.	LOCATION
02895.001 EACH	VIDEO DETECTION	①	1	△1
02895.001 EACH	VIDEO DETECTION	②	1	△2
02895.001 EACH	VIDEO DETECTION	③	1	△4

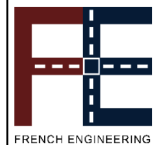
TRAFFIC SIGNAL SUPPORTS \*\*

POLE NO.	ITEM NUMBER	DESCRIPTION	QTY.	ROUTE	STATION	SIDE	OFFSET	MAST ARM												PEDESTAL							
								ARM "A"						ARM "C"						SHAFT	SIGNAL						
								H	K	SIGNAL LOCATION				SIGN LOCATION				W	G		X	Z	H	M	N		
								L	M	N	O	P	R	S	T	U	Y										
△1	02892.204 EACH	TRAFFIC SIGNAL SUPPORT, 24' MAST ARM WITH LUMINAIRE ARM (30' MOUNTING HEIGHT), PAINTED BLACK	1	FORBES AVE	156+26	RT	22'	17'	10'	24'	21'	10'				18'	14'	6'		0'	0°	6'	30'	0°			
△2	02892.604 EACH	TRAFFIC SIGNAL SUPPORT, 28' MAST ARM, PAINTED BLACK	1	FORBES AVE	155+71	RT	23'	17'	10'	28'	24'	16'				20'				8'	270°						
△3	02892.003 EACH	TRAFFIC SIGNAL SUPPORT, 15' TYPE X, PAINTED BLACK	1	FORBES AVE	155+69	LT	20'																	15'		10'	
△4	02892.207 EACH	TRAFFIC SIGNAL SUPPORT, 30' MAST ARM WITH LUMINAIRE ARM (30' MOUNTING HEIGHT), PAINTED BLACK	1	FORBES AVE	156+29	LT	19'	17'	10'	30'	27'	19'				23'	15'			10'	270°	6'	30'	90°			

\*\* REFER TO PENNDOT TC-8800 TRAFFIC STANDARDS-SIGNALS FOR LETTER DESIGNATION



Gulf Tower  
707 Grant Street  
5th Floor  
Pittsburgh, PA 15219



French Engineering, LLC  
3064 Morgantown Rd  
Smithfield, PA 15478

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DESIGNED	LJF
DRAWN	WLZ
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DATE	05/01/24
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PORT AUTHORITY OF ALLEGHENY COUNTY PITTSBURGH PENNSYLVANIA		
BUS RAPID TRANSIT UPTOWN TO OAKLAND SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS		
Port Authority connecting people to life®	CONTRACT NO. BRT-001	
DWG. NO. SG121	SHT. 1181	

TRAFFIC SIGNAL TABULATION

FORBES AVENUE AND MILTENBERGER STREET

TRENCH, CONDUIT, JUNCTION BOX, ELECTRICAL ITEMS

DESCRIPTION	ELECTRICAL SERVICE, TYPE C (NEW)	CITY OF PITTSBURGH STANDARD CONCRETE JUNCTION BOX, TYPE 1	TRENCH AND BACKFILL, TYPE II	TRENCH AND BACKFILL, TYPE IV	2 INCH CONDUIT	3 INCH CONDUIT	AWG 8, UNDERGROUND CABLE, COPPER, 1 CONDUCTOR	SIGNAL CABLE, 14 AWG, 5 CONDUCTOR	SIGNAL CABLE, 14 AWG, 7 CONDUCTOR
ITEM NUMBER	02896	02897	02898	02898	02899	02899	02900	02900	02900
	004	001	002	005	002	003	001	002	003
UNIT	EACH	EACH	LF	LF	LF	LF	LF	LF	LF
LOCATION									
CC TO S1			10		20	40			
S1 TO 1		1	25	24	49	98			
1 TO 2		1	18	29	47	94			
1 TO S1			14		28	28			
2 TO S1			34	*35	69	138			
3 TO 2			14			14			
4 TO 1			6		6	12			
COMPLETE INTERSECTION	1						370	505	790
TOTAL	1	2	121	53	219	424	370	505	790

\* TYPE IV TRENCH TABULATED AS PART OF THE SYSTEMS PLAN.

S1 - TABULATED ON SYSTEMS PLAN

SIGNS

SYMBOL	SERIES	SIZE	AREA EACH (SQ FT)	DESCRIPTION	QUANTITY	02891.001 POST MOUNTED SIGNS, TYPE B		
						SF	SF	SF
A	R5-1	30"x30"	6.3	DO NOT ENTER	2		12.6	
B	R6-1R	36"x12"	3.0	ONE WAY (TWO SIDED, CITY STANDARD)	2		6.0	
C	R3-2	30"x30"	6.3	NO LEFT TURN	1			6.3
D	R3-2	24"x24"	4.0	NO LEFT TURN	2	4.0	4.0	
E	R3-1	30"x30"	6.3	NO RIGHT TURN	1			6.3
F	R3-1	24"x24"	4.0	NO RIGHT TURN	2	4.0	4.0	
G	D3-4**	90"x24"	15.0	100 Uptown 200 Miltenberger St	1			15.0
H	D3-4*	78"x24"	13.0	1800 Uptown 1700 Forbes Ave	1			13.0
I	D3-4*	78"x24"	13.0	1700 Uptown 1800 Forbes Ave	1			13.0
J	R10-3E(MOD)	9"x15"	0.9	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER (MOD)	8		▲	
K	R3-11B(MOD)	30"x36"	7.5	RIGHT LANE - BUSES ONLY	1			7.5
L	SS-1	30"x18"	3.8	EXCEPT RIGHT TURNS	1			3.8
M	R10-11	30"x36"	7.5	NO TURN ON RED ●	2			15.0
N	R10-15AL	30"x30"	6.3	TURNING TRAFFIC MUST YIELD TO BIKE AND PEDESTRIANS	2	6.3		6.3
TOTAL						14.3	26.6	86.2

▲ - INCIDENTAL TO ITEM 02895.002

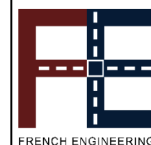
\* WHITE REFLECTORIZED LEGEND AND BORDER ON BLUE REFLECTORIZED BACKGROUND. UTILIZE 4" CLEARVIEW 3W FOR BLOCK/NEIGHBORHOOD AND 8" CLEARVIEW 3W FOR STREET NAME. ACTUAL WIDTH DETERMINED BY LETTER SPACING. COORDINATE BLOCK NUMBERS AND STREET NAME DETAILS WITH CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE.

\*\* WHITE REFLECTORIZED LEGEND AND BORDER ON BLUE REFLECTORIZED BACKGROUND. UTILIZE 4" CLEARVIEW 3W FOR BLOCK/NEIGHBORHOOD AND 8" CLEARVIEW 2W FOR STREET NAME. ACTUAL WIDTH DETERMINED BY LETTER SPACING. COORDINATE BLOCK NUMBERS AND STREET NAME DETAILS WITH CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE.

TS-331



Gulf Tower  
707 Grant Street  
5th Floor  
Pittsburgh, PA 15219



French Engineering, LLC  
3064 Morgantown Rd  
Smithfield, PA 15478

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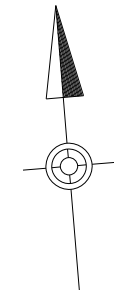
DESIGNED	LJF
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DATE	05/01/24
SCALE	AS SHOWN

PORT AUTHORITY OF ALLEGHENY COUNTY PITTSBURGH PENNSYLVANIA	
BUS RAPID TRANSIT UPTOWN TO OAKLAND SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	
Port Authority connecting people to life	CONTRACT NO. BRT-001
DWG. NO. SG122	SHT. 1182

**SIGNS**

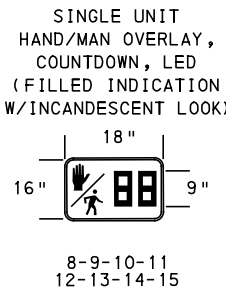
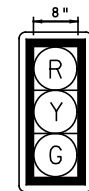
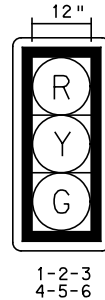
SIGN	STANDARD	DESCRIPTION	SIZE	QTY
A	R10-11	NO TURN ON RED ●	30"x36"	2
D	R10-3E(MOD)	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER	9"x15"	8
E	R10-15AL(MOD)	TURNING TRAFFIC MUST YIELD TO BIKES AND PDS	30"x30"	2
F	R6-1	ONE-WAY (TWO SIDED, CITY STANDARD)	36"x12"	2
H	R3-11B(MOD)**	RIGHT LANE - BUSES ONLY	30"x36"	2
J	R3-2	NO LEFT TURN	30"x30"	1
K	R3-1	NO RIGHT TURN	30"x30"	1
L	SS-1**	EXCEPT RIGHT TURNS	30"x18"	2
N	D3-4*	100 UPTOWN 200 GIST ST	72"x24"	1
P	D3-4*	1800 UPTOWN 1900 FORBES AVE	72"x24"	1
R	D3-4*	1900 UPTOWN 1800 FORBES AVE	72"x24"	1
T	R5-1	DO NOT ENTER	30"x30"	2
U	R3-2	NO LEFT TURN	24"x24"	1
V	R3-1	NO RIGHT TURN	24"x24"	1

\* WHITE REFLECTORIZED LEGEND AND BORDER ON BLUE REFLECTORIZED BACKGROUND. UTILIZE 4" CLEARVIEW 3W FOR BLOCK/NEIGHBORHOOD AND 8" CLEARVIEW 3W FOR STREET NAME. ACTUAL WIDTH DETERMINED BY LETTER SPACING. COORDINATE BLOCK NUMBERS AND STREET NAME DETAILS WITH CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE.  
 \*\* POST MOUNTED SIGNS TABULATED AS PART OF THE SIGNING AND PAVEMENT MARKING PLAN.



**LEGEND**

- L1 MAST ARM WITH LUMINAIRE ARM
- PEDESTRIAN SIGNAL HEAD
- VEHICULAR/BICYCLE SIGNAL HEAD
- L1 PEDESTAL WITH LUMINAIRE ARM
- SIGN
- STOP BAR RADAR DETECTION ZONE
- AUDIBLE PEDESTRIAN PUSH BUTTON/SIGN
- CONTROLLER ASSEMBLY
- JUNCTION BOX
- SYSTEM JUNCTION BOX
- STOP BAR VIDEO DETECTOR
- C/2" CONDUIT/SIZE
- C/2"P POWER CONDUIT/SIZE
- CL/2"P POWER CONDUIT/SIZE
- W/6" SOLID WHITE LINE/WIDTH
- BW/6" BROKEN WHITE LINE/WIDTH
- DY/4" DOUBLE SOLID YELLOW LINE/WIDTH
- G/24" SOLID GREEN LINE/WIDTH
- C/3"S SYSTEM CONDUIT/SIZE



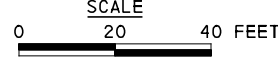
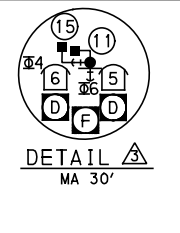
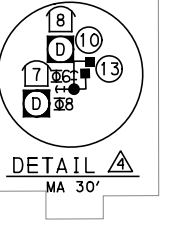
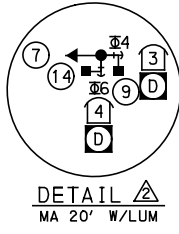
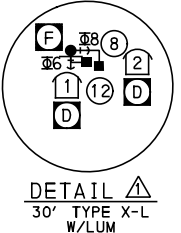
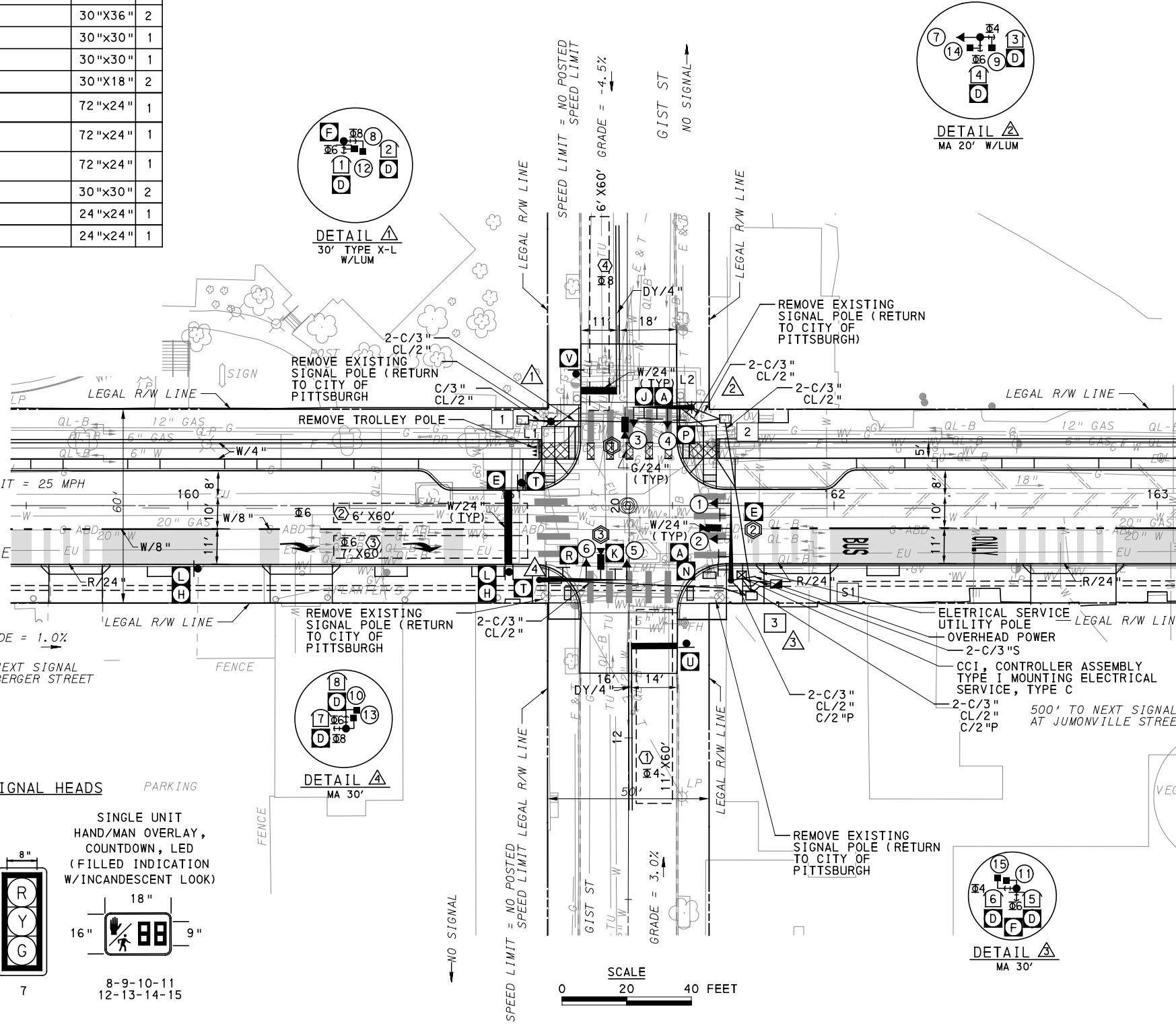
**SIGNAL HEADS**

SINGLE UNIT HAND/MAN OVERLAY, COUNTDOWN, LED (FILLED INDICATION W/INCANDESCENT LOOK)

1-2-3  
4-5-6

7

8-9-10-11  
12-13-14-15



- AUDIBLE PEDESTRIAN SIGNAL NOTES**
1. ALL PUSH BUTTONS SHALL BE EQUIPPED WITH LOCATOR TONES.
  2. ALL WALK INTERVALS TO HAVE VERBAL MESSAGE DETAILING WALK DIRECTION.
  3. VERBAL MESSAGE TO BE PLAYED DURING WALK INTERVAL WHEN BUTTON IS PRESSED.
  4. ALL PEDESTRIAN PUSH BUTTONS TO BE LOCATED AT 42" ABOVE GROUND.
  5. ALL PUSH BUTTONS TO BE EQUIPPED WITH VIBROTACTILE ARROW.
  6. VIBROTACTILE ARROWS TO VIBRATE DURING WALK INTERVAL.
  7. WALK AND DON'T WALK MESSAGE SHALL BE AUDIBLE THROUGH THE PUSH BUTTON SPEAKER.

- SIGNAL ASSEMBLY NOTES**
1. ALL VEHICULAR/BICYCLE SIGNALS SHALL BE EQUIPPED WITH L.E.D LENSES, TUNNEL VISORS AND LOUVERED BLACK METAL BACKPLATES WITH 2" REFLECTIVE BORDERS.
  2. MIN/MAX HEIGHT FOR VEHICULAR SIGNALS 17' / 18'.
  3. MIN HORIZONTAL SPACING FOR VEHICULAR SIGNALS IS 8'.
  4. MIN/MAX HEIGHT FOR PEDESTRIAN MOUNTED SIGNALS 10' / 12'.
  5. FINAL SIGNAL HEAD PLACEMENT WILL BE DETERMINED BY A REPRESENTATIVE OF THE CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE PRIOR TO SIGNAL BEING TURNED ON.
  6. ALL PEDESTRIAN SIGNALS SHALL BE PORTLAND ORANGE FULL "PEDESTRIAN HAND" AND WHITE "WALKING PERSON" SYMBOLS AND HAVE INCANDESCENT LOOK WITH COUNTDOWN TIMER.
  7. PROVIDE AIRCRAFT STRANDED CABLE FOR MOUNTING SIGNAL AND SIGN BRACKET ASSEMBLIES TO MAST ARMS.
  8. PROVIDE BLACK ALUMINUM HOUSINGS FOR ALL SIGNAL HEADS.
  9. INSTALL POST MOUNTED SIGNAL HEADS WITH BOTTOMS NO GREATER THAN 15' ABOVE THE SIDEWALK OR PAVEMENT.
  10. EXACT LOCATION OF TRAFFIC SIGNAL SUPPORTS SHALL BE DETERMINED BY A REPRESENTATIVE OF THE CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE PRIOR TO INSTALLATION.

- PAVEMENT MARKING NOTES**
1. ALL STOP BARS ARE W/24".
  2. CROSSWALKS ARE 10' X 24" KEYS WITH 3' TO 5' SPACING.
  3. CROSSWALKS ACROSS BICYCLE LANES ARE 6' X 12" KEYS WITH 1' SPACING.

TS-713

COUNTY: ALLEGHENY
MUNICIPALITY: CITY OF PITTSBURGH
INTERSECTION: FORBES AVENUE AND GIST STREET
APPROVED AND ACCEPTED:
CITY TRAFFIC ENGINEER _____ DATE _____
APPROVED AND ACCEPTED:
DISTRICT TRAFFIC ENGINEER _____ DATE _____

**AECOM**  
 Gulf Tower  
 707 Grant Street  
 5th Floor  
 Pittsburgh, PA 15219

**DRIVE ENGINEERING**  
 595 Skippack Pk,  
 Suite 400  
 Blue Bell, PA 19422

NO.	DATE	DESCRIPTION
REVISIONS		

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**(NOT FOR CONSTRUCTION)**

DESIGNED	MW
DRAWN	MW
CHECKED	EMC
IN CHARGE	EMC
DATE	05/01/24
SCALE	AS SHOWN

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
 PITTSBURGH PENNSYLVANIA  
**BUS RAPID TRANSIT UPTOWN TO OAKLAND**  
 SIGNAL PLANS  
 FORBES AVENUE & GIST STREET

**Port Authority** connecting people to life™

CONTRACT NO. BRT-001  
 DWG. NO. SG123 SHT. 1183

**MOVEMENT, PHASING AND SEQUENCE CHART**

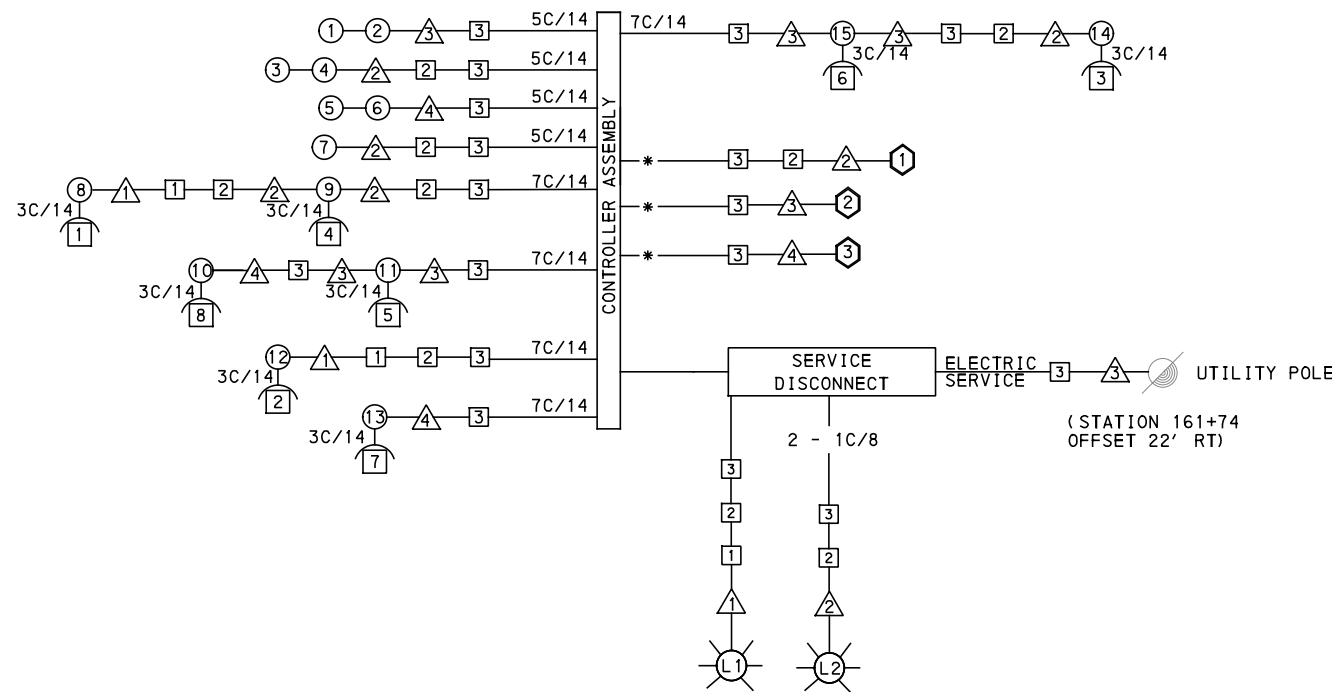
SIGNAL	INTERVAL	PHASE 6					PHASE 4+8					OFF	
		1	2	3	4	5	1	2	3	4	5		
	1-2-7	G	G	Y	R		R	R	R	R	R	R	
	3-4-5-6	R	R	R	R		R	G	G	Y	R	R	
	8-9-10-11	W	FD	DW	DW		DW	DW	DW	DW	DW	DW	OFF
	12-13-14-15	DW	DW	DW	DW		W	W	FD	DW	DW	DW	OFF
FIXED				3.5	2.5					4.0	2.0		
MINIMUM		15								7			
PASSAGE		3								3			
FREE (MAX)		60								25			
PEDESTRIAN		7	10				3	4	12				
MEMORY		PED RECALL					PED RECALL						

**DETECTOR ZONE INFORMATION**

DETECTOR	DETECTION ZONE(S)	MODE	TYPE	ROUTE	PHASE	LOCATION
						MAST ARM
①	① (11' x 60')	PRESENCE	VIDEO (STOP BAR)	GIST ST.	4	②
②	② (6' x 60')	PRESENCE	VIDEO (STOP BAR)	FORBES AVE.	6	③
③	③ (7' x 60')	PRESENCE	VIDEO (STOP BAR)	FORBES AVE.	6	③
④	④ (6' x 60')	PRESENCE	VIDEO (STOP BAR)	GIST ST.	8	④

**TRANSIT PRIORITY PRE-EMPTION NOTES  
(TO BE INSTALLED BY OTHERS)**

- COORDINATE TRAFFIC CONTROLLER PROGRAMMING MODIFICATION WITH REPRESENTATIVES OF THE CITY OF PITTSBURGH AND DISTRICT TRAFFIC UNIT.
- INCLUDE A TRANSIT PRIORITY PHASE THAT WILL EXTEND THE INDICATED PHASE A MAXIMUM OF 10 SECONDS WHEN ACTIVATED BY A PORT AUTHORITY VEHICLE. DO NOT VIOLATE SIDE STREET PEDESTRIAN MINIMUM TIMINGS.
- MAINTAIN ALL YELLOW CLEARANCES AT ALL TIMES.
- PROCEED TO THE SUBSEQUENT INTERVAL AS DEFINED IN THE MOVEMENT, SEQUENCE AND TIMING DIAGRAM UPON COMPLETING THE GREEN EXTENSION INTERVAL.
- ONCE A TRANSIT CALL IS PLACED AND SATISFIED, THE CONTROLLER WILL NOT SATISFY ANOTHER CALL FOR 4 CYCLES.
- LOCATION OF BUS DETECTORS ARE TO BE FIELD ADJUSTED TO ACHIEVE MAXIMUM OPERATION.



**WIRING DIAGRAM**

5C/14 - CABLE(NO. OF CONDUCTORS/SIZE AWG.)

- SIGNAL HEAD
- △ SIGNAL SUPPORT
- JUNCTION BOX
- ⊞ LUMINAIRE

\* INCIDENTAL TO ITEM 02895.001, AS PER MANUFACTURERS SPECIFICATIONS  
3C/14 INCIDENTAL TO ITEM 02895.002

**GENERAL NOTES**

THE CITY OF PITTSBURGH SHALL INSPECT THE NEW SIGNAL EQUIPMENT PRIOR TO ACTIVATION.  
ALL TRAFFIC SIGNAL MAINTENANCE AND OPERATION RESPONSIBILITIES SHALL BE TURNED OVER TO THE CITY OF PITTSBURGH AFTER THE FOLLOWING CONDITIONS ARE IMPLEMENTED TO THE CITY'S SATISFACTION:

- PERMIT "AS-BUILT" TRAFFIC SIGNAL DRAWINGS ARE SUBMITTED AND APPROVED.
- ALL PUNCH LIST ITEMS ARE COMPLETED BY THE CONTRACTOR.
- AFTER THE 30-DAY CONTINUOUS UNINTERRUPTED SIGNAL OPERATION WITHOUT MALFUNCTIONS.

**CONSTRUCTION NOTES**

- ALL JUNCTION BOXES IN WALK AREAS TO BE CITY OF PITTSBURGH STANDARD CONCRETE JUNCTION BOX, TYPE 1.
- ALL JUNCTION BOXES IN NON-WALK AREAS TO BE CITY STANDARD JB-2 WITH BOTTOM.
- THERE SHALL BE NO SIGNAL WIRE OR FIBER CABLE SPLICING.
- SERVICE WIRE FROM THE POWER SOURCE TO THE CONTROLLER CABINET SHALL BE PLACED IN SECONDARY SEPARATE CONDUIT.
- STREET LIGHT CABLE IS NOT PERMITTED TO RUN THROUGH THE CONTROLLER CABINET AND SHALL BE PLACED IN SEPARATE CONDUIT.
- TRAFFIC SIGNAL CABLE SHALL BE PLACED IN DEDICATED CONDUIT.
- MOUNT DISCONNECT ON POLE NEAREST TO THE CONTROLLER CABINET EXCLUDING TYPE X POLES.
- REMOVE AND DISPOSE OF ALL EXISTING SIGNAL WIRING NO LONGER IN USE.
- REMOVE EXISTING SIGNAL EQUIPMENT NO LONGER IN USE AND RETURN TO THE CITY OF PITTSBURGH TRAFFIC CONTROL SHOP. COORDINATE DELIVERY OF EQUIPMENT WITH DELMAS MCELHANY, TRAFFIC CONTROL FOREMAN.
- CONTRACTOR IS TO MAINTAIN VEHICULAR SIGNAL HEAD VISIBILITY AT ALL TIMES DURING CONSTRUCTION.

TS-713

COUNTY: ALLEGHENY  
MUNICIPALITY: CITY OF PITTSBURGH  
INTERSECTION: FORBES AVENUE AND GIST STREET  
APPROVED AND ACCEPTED:  
CITY TRAFFIC ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_  
APPROVED AND ACCEPTED:  
DISTRICT TRAFFIC ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_



NO.	DATE	DESCRIPTION
REVISIONS		

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**(NOT FOR CONSTRUCTION)**

DESIGNED	MW
DRAWN	MW
CHECKED	EMC
IN CHARGE	EMC
DATE	05/01/24
SCALE	AS SHOWN

PORT AUTHORITY OF ALLEGHENY COUNTY PITTSBURGH PENNSYLVANIA	
BUS RAPID TRANSIT UPTOWN TO OAKLAND SIGNAL PLANS WIRING, MOVEMENT, PHASING & SEQUENCE DIAGRAMS	
Port Authority connecting people to life	CONTRACT NO. BRT-001
DWG. NO. SG124	SHT. 1184



TRAFFIC SIGNAL TABULATION

FORBES AVENUE AND GIST STREET

MISCELLANEOUS				
ITEM NUMBER	DESCRIPTION	QTY.	LOCATION	REMARKS
01882.002 EACH	TRAFFIC SIGNAL TIMING MODIFICATIONS	2	CC	
02890.001 EACH	TRAFFIC SIGNAL CONTROLLER ASSEMBLY, TYPE 2070 LC, WITH TYPE 332 BASE MOUNTED CABINET	1	CC	332 CONTROLLER CABINET 8" RISER
02890.003 EACH	ETHERNET SWITCH	1	CC	
02890.005 EACH	GPS TIME CLOCK	1	CC	
02894.001 EACH	VEHICULAR SIGNAL HEAD, THREE 12" SECTIONS	6	①②③ ④⑤⑥	BLACK TUNNEL VISORS BLACK ALUMINUM HOUSINGS BLACK METAL LOUVERED BACKPLATE
02894.005 EACH	LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, TYPE A	8	⑧⑨⑩⑪ ⑫⑬⑭⑮	BLACK TUNNEL VISORS BLACK ALUMINUM HOUSINGS
02894.006 EACH	VEHICULAR SIGNAL HEAD, THREE 8" SECTIONS	1	⑦	BLACK TUNNEL VISORS BLACK ALUMINUM HOUSINGS
02895.002 EACH	ACCESSIBLE PEDESTRIAN SIGNALS	8	①②③④ ⑤⑥⑦⑧	
02889.002 EACH	LED LUMINAIRE CITY STANDARD, BLACK	2	☉☉	△ & △
02212.009 EACH	POLE FOUNDATION DRILLING, LESS THAN 30" DIAMETER	9	△	
02212.010 EACH	POLE FOUNDATION DRILLING, 30" DIAMETER OR GREATER	34	△△△	

DETECTORS				
ITEM NUMBER	DESCRIPTION	SEN. NO.	QTY.	LOCATION
02895.001 EACH	VIDEO DETECTION	①②③	3	△△△

TRAFFIC SIGNAL SUPPORTS \*\*

POLE NO.	ITEM NUMBER	DESCRIPTION	QTY.	ROUTE	STATION	SIDE	OFFSET	MAST ARM												PEDESTAL							
								ARM "A"										ARM "C"		SHAFT	SIGNAL						
								H	K	SIGNAL LOCATION					SIGN LOCATION						W	G	X	Z	H	M	N
										M	N	O	P	R	S	T	U	Y									
△1	02892.005 EACH	TRAFFIC SIGNAL SUPPORT, 30' TYPE X-L WITH LUMINAIRE ARM, PAINTED BLACK	1	FORBES AVE.	161+12	LT	26'															6'	30'	90°	30'		10'
△2	02892.202 EACH	TRAFFIC SIGNAL SUPPORT, 20' MAST ARM WITH LUMINAIRE ARM, 30' MOUNTING, PAINTED BLACK	1	FORBES AVE.	161+55	LT	30'	17'	10'	20'	17'	7'			14'	10'			2'	270°	6'	30'	0°				
△3	02892.611 EACH	TRAFFIC SIGNAL SUPPORT, 30' MAST ARM, PAINTED BLACK	1	FORBES AVE.	161+68	RT	24'	17'	10'	30'	23'	12'			20'	8'			3'	0°							
△4	02892.611 EACH	TRAFFIC SIGNAL SUPPORT, 30' MAST ARM, PAINTED BLACK	1	FORBES AVE.	161+09	RT	22'	17'	10'	30'	26'	14'			23'				7'	270°							

\*\* REFER TO PENNDOT TC-8800 TRAFFIC STANDARDS - SIGNALS FOR LETTER DESIGNATION



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5th Floor  
Pittsburgh, PA 15219



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Blue Bell, PA 19422

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PORT AUTHORITY OF ALLEGHENY COUNTY  
PITTSBURGH PENNSYLVANIA

BUS RAPID TRANSIT UPTOWN TO OAKLAND  
SIGNAL PLANS  
TRAFFIC SIGNAL TABULATIONS



CONTRACT NO. BRT-001

DWG. NO. SG125 SHT. 1185

PLOTTED: 3/21/2024 7:39:52 PM

OPERATOR: "michael.mcgarry" FILE PATH: c:\pwworking\aecocom.com\d0207710\BRT\_04\_SIG33\_SHT04.dgn

TRENCH, CONDUIT, JUNCTION BOX, ELECTRICAL ITEMS

DESCRIPTION	2 INCH CONDUIT	3 INCH CONDUIT	TRENCH AND BACKFILL, TYPE I	TRENCH AND BACKFILL, TYPE II	TRENCH AND BACKFILL, TYPE IV	AWG 8, UNDERGROUND CABLE, COPPER, 1 CONDUCTOR	SIGNAL CABLE, 14 AWG, 5 CONDUCTOR	SIGNAL CABLE, 14 AWG, 7 CONDUCTOR	ELECTRICAL SERVICE TYPE C (NEW)	CITY OF PITTSBURGH STANDARD CONCRETE JUNCTION BOX, TYPE 1
ITEM NUMBER	02899	02899	02898	02898	02898	02900	02900	02900	02896	02897
UNIT	LF	LF	LF	LF	LF	LF	LF	LF	EACH	EACH
LOCATION										
CC TO [3]	10	10	5							1
[3] TO [2]	53	106	29		24					1
[2] TO [1]	60	120	30		30					1
[1] TO [1]	7	7	7							
[2] TO [2]	10	20	10							
[3] TO [3]	14	14	14							
[4] TO [3]	30	60	30		35					
CC TO [S1]		18	9							
ELECTRICAL SERVICE (STA 161+74, OFFSET 22' RT) TO [3]										
COMPLETE INTERSECTION						345	556	894	1	
TOTAL	220	355	134		89	345	556	894	1	3

[S1] - TABULATED ON SYSTEMS PLAN

TRAFFIC SIGNAL TABULATION

FORBES AVENUE AND GIST STREET

SIGNS

SYMBOL	SERIES	SIZE	AREA EACH (SQ FT)	DESCRIPTION	QUANTITY	02891.001 POST MOUNTED SIGNS, TYPE B			02891.003 POST MOUNTED SIGNS, TYPE F			02891.007 STRUCTURE MOUNTED FLAT SHEET ALUMINUM SIGNS WITH STIFFENERS			
						SF	SF	SF	SF	SF	SF	SF	SF		
[A]	R10-11	30"x36"	7.5	NO TURN ON RED ●	2										15
[D]	R10-3E(MOD)	9"x15"	.9	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER	8										▲
[E]	R10-15AL	30"x30"	6.3	TURNING TRAFFIC MUST YIELD TO BIKES AND PEDS	2				6.3						6.3
[H]	R10-11B(MOD)	30"x36"	7.5	RIGHT LANE - BUSES ONLY	1	7.5									
[J]	R3-2	30"x30"	6.3	NO LEFT TURN	1										6.3
[K]	R3-1	30"x30"	6.3	NO RIGHT TURN	1										6.3
[L]	SS-1	30"x18"	3.8	EXCEPT RIGHT TURN	1				3.8						
[N]	D3-4*	72"x24"	12	100 UPTOWN 200 GIST ST	1										12
[P]	D3-4*	72"x24"	12	1800 UPTOWN 1900 FORBES AVE	1										12
[R]	D3-4*	72"x24"	12	1900 UPTOWN 1800 FORBES AVE	1										12
[T]	R5-1	30"x30"	6.3	DO NOT ENTER	2				12.6						
[U]	R3-2	24"x24"	4	NO LEFT TURN	1	4									
[V]	R3-1	24"x24"	4	NO RIGHT TURN	1	4									
TOTAL						15.5	22.7	69.9							

▲ - INCIDENTAL TO ITEM #02895.002

\* WHITE REFLECTORIZED LEGEND AND BORDER ON BLUE REFLECTORIZED BACKGROUND. UTILIZE 4" CLEARVIEW 3W FOR BLOCK/NEIGHBORHOOD AND 8" CLEARVIEW 3W FOR STREET NAME. ACTUAL WIDTH DETERMINED BY LETTER SPACING. COORDINATE BLOCK NUMBERS AND STREET NAME DETAILS WITH CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE.



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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT UPTOWN TO OAKLAND**  
SIGNAL PLANS  
TRAFFIC SIGNAL TABULATIONS

**Port Authority** connecting people to life™

CONTRACT NO. BRT-001  
DWG. NO. SG126 SHT. 1186

**SIGNS**

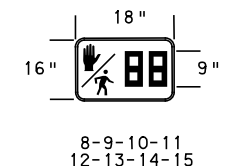
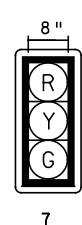
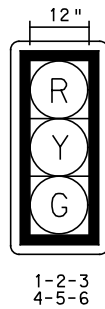
SIGN	STANDARD	DESCRIPTION	SIZE	QTY
A	R3-2	NO LEFT TURN	30"x30"	1
B	R10-11	NO TURN ON RED ●	30"x36"	3
D	R10-3E(MOD)	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER	9"x15"	8
F	R6-1	ONE-WAY (TWO SIDED, CITY STANDARD)	36"x12"	1
G	R6-1	ONE-WAY (TWO SIDED, CITY STANDARD)	36"x12"	2
H	SS-1**	EXCEPT RIGHT TURNS	30"x18"	2
J	R3-2	NO LEFT TURN	30"x30"	4
K	R3-1	NO RIGHT TURN	30"x30"	2
L	R3-11B(MOD)**	RIGHT LANE - BUSES ONLY	30"x36"	2
M	R5-1	DO NOT ENTER	30"x30"	4
P	D3-4*	100 UPTOWN 200 JUMONVILLE ST	90"x24"	1
R	D3-4*	1900 UPTOWN 2000 FORBES AVE	72"x24"	1
T	D3-4*	2000 UPTOWN 1900 FORBES AVE	72"x24"	1

\* WHITE REFLECTOR LEGEND AND BORDER ON BLUE REFLECTORIZED BACKGROUND. UTILIZE 4" CLEARVIEW 3W FOR BLOCK/NEIGHBORHOOD AND 8" CLEARVIEW 3W FOR STREET NAME. ACTUAL WIDTH DETERMINED BY LETTER SPACING. COORDINATE BLOCK NUMBERS AND STREET NAME DETAILS WITH CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE.

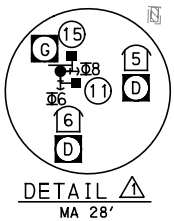
\*\* POST MOUNTED SIGNS TABULATED AS PART OF THE SIGNING AND PAVEMENT MARKING PLAN.

**LEGEND**

- ▲ MAST ARM WITH LUMINAIRE ARM
- ② PEDESTRIAN SIGNAL HEAD
- ➔ VEHICULAR/BICYCLE SIGNAL HEAD
- PEDESTAL
- ▲ SIGN
- ⊠ STOP BAR RADAR DETECTION ZONE
- ➔ AUDIBLE PEDESTRIAN PUSH BUTTON/SIGN
- ⊠ CONTROLLER ASSEMBLY
- JUNCTION BOX
- ⊠ SYSTEM JUNCTION BOX
- ➔ STOP BAR VIDEO DETECTOR
- C/2" CONDUIT/SIZE
- C/2"P POWER CONDUIT/SIZE
- CL/2"P POWER CONDUIT/SIZE
- W/6" SOLID WHITE LINE/WIDTH
- BW/6" BROKEN WHITE LINE/WIDTH
- DY/4" DOUBLE SOLID YELLOW LINE/WIDTH
- G/24" SOLID GREEN LINE/WIDTH
- C/3"S SYSTEM CONDUIT/SIZE

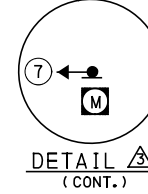
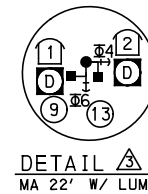
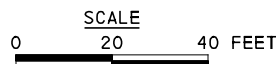


**SIGNAL HEADS**



CC1, CONTROLLER ASSEMBLY  
TYPE I MOUNTING ELECTRICAL SERVICE, TYPE C  
ELECTRICAL SERVICE UTILITY POLE

NO SIGNAL  
SPEED LIMIT = NO POSTED SPEED LIMIT  
GRADE = -1.3%



**AUDIBLE PEDESTRIAN SIGNAL NOTES**

- ALL PUSH BUTTONS SHALL BE EQUIPPED WITH LOCATOR TONES.
- ALL WALK INTERVALS TO HAVE VERBAL MESSAGE DETAILED WALK DIRECTION.
- VERBAL MESSAGE TO BE PLAYED DURING WALK INTERVAL WHEN BUTTON IS PRESSED.
- ALL PEDESTRIAN PUSH BUTTONS TO BE LOCATED AT 42" ABOVE GROUND.
- ALL PUSH BUTTONS TO BE EQUIPPED WITH VIBROTACTILE ARROW.
- VIBROTACTILE ARROWS TO VIBRATE DURING WALK INTERVAL.
- WALK AND DON'T WALK MESSAGE SHALL BE AUDIBLE THROUGH THE PUSH BUTTON SPEAKER.

**SIGNAL ASSEMBLY NOTES**

- ALL VEHICULAR/BICYCLE SIGNALS SHALL BE EQUIPPED WITH L.E.D LENSES, TUNNEL VISORS AND LOUVERED BLACK METAL BACKPLATES WITH 2" REFLECTIVE BORDERS.
- MIN/MAX HEIGHT FOR VEHICULAR SIGNALS 17'/18'.
- MIN HORIZONTAL SPACING FOR VEHICULAR SIGNALS IS 8'.
- MIN/MAX HEIGHT FOR PEDESTRIAN MOUNTED SIGNALS 10'/12'.
- FINAL SIGNAL HEAD PLACEMENT WILL BE DETERMINED BY A REPRESENTATIVE OF THE CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE PRIOR TO SIGNAL BEING TURNED ON.
- ALL PEDESTRIAN SIGNALS SHALL BE PORTLAND ORANGE FULL "PEDESTRIAN HAND" AND WHITE "WALKING PERSON" SYMBOLS AND HAVE INCANDESCENT LOOK WITH COUNTDOWN TIMER.
- PROVIDE AIRCRAFT STRANDED CABLE FOR MOUNTING SIGNAL AND SIGN BRACKET ASSEMBLIES TO MAST ARMS.
- PROVIDE BLACK ALUMINUM HOUSINGS FOR ALL SIGNAL HEADS.
- INSTALL POST MOUNTED SIGNAL HEADS WITH BOTTOMS NO GREATER THAN 15' ABOVE THE SIDEWALK OR PAVEMENT.
- EXACT LOCATION OF TRAFFIC SIGNAL SUPPORTS SHALL BE DETERMINED BY A REPRESENTATIVE OF THE CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE PRIOR TO INSTALLATION.

**PAVEMENT MARKING NOTES**

- ALL STOP BARS ARE W/24".
- CROSSWALKS ARE 10' X 24" KEYS WITH 3' TO 5' SPACING.
- CROSSWALKS ACROSS BICYCLE LANES ARE 6' X 12" KEYS WITH 1' SPACING.

TS-550

COUNTY: ALLEGHENY  
MUNICIPALITY: CITY OF PITTSBURGH  
INTERSECTION: FORBES AVENUE  
AND JUMONVILLE STREET

APPROVED AND ACCEPTED:  
CITY TRAFFIC ENGINEER DATE  
APPROVED AND ACCEPTED:  
DISTRICT TRAFFIC ENGINEER DATE

**AECOM**  
Gulf Tower  
707 Grant Street  
5th Floor  
Pittsburgh, PA 15219

**DRIVE ENGINEERING**  
595 Skippack Pk,  
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NO.	DATE	DESCRIPTION
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<b>PORT AUTHORITY OF ALLEGHENY COUNTY</b> PITTSBURGH PENNSYLVANIA	
BUS RAPID TRANSIT UPTOWN TO OAKLAND SIGNAL PLANS FORBES AVENUE & JUMONVILLE STREET	
<b>Port Authority</b> connecting people to life™	CONTRACT NO. BRT-001
DWG. NO. SG127	SHT. 1187

**MOVEMENT, PHASING AND SEQUENCE CHART**

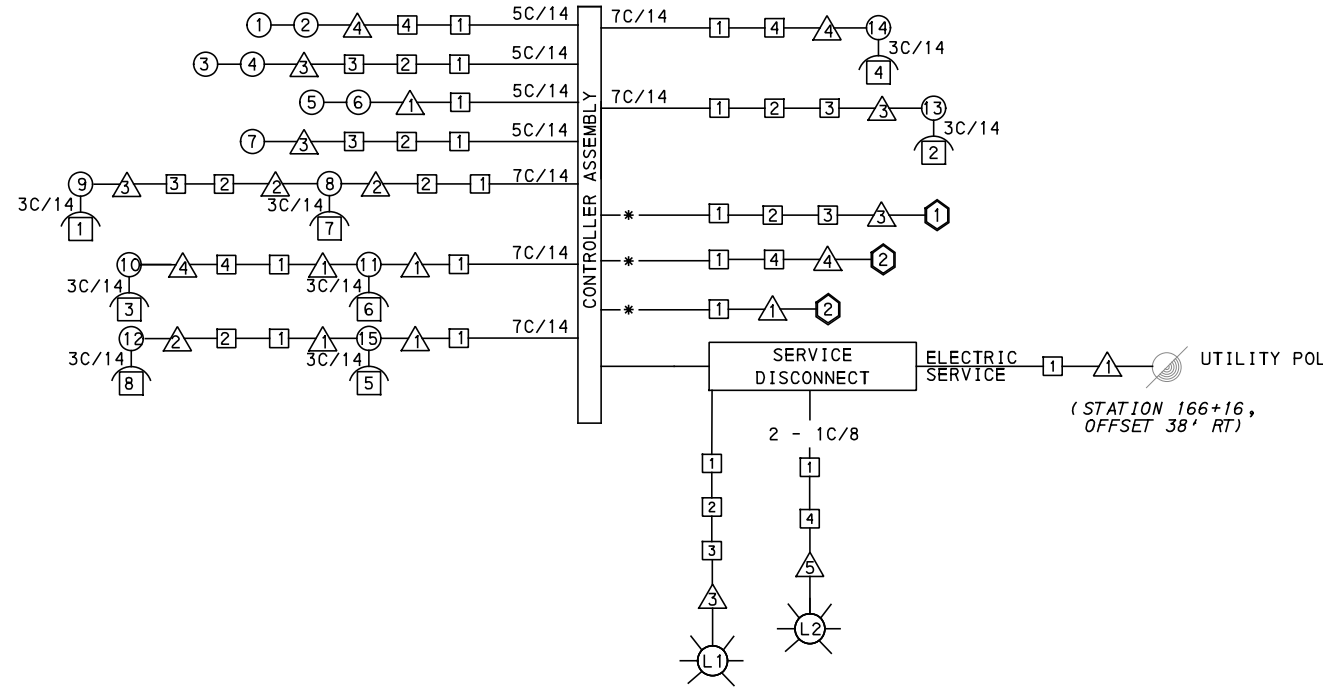
SIGNAL	INTERVAL	PHASE 6				PHASE 4+8				
		1	2	3	4	1	2	3	4	5
	1-2-7	G	G	Y	R					
	3-4-5-6	R	R	R	R					
	8-9-10-11	W	FD	DW	DW					
	12-13-14-15	DW	DW	DW	DW					
FIXED			3.5	2.5					4	2
MINIMUM		10						10		
PASSAGE		3						3		
FREE (MAX)		44						19		
PEDESTRIAN		7	11			3	4	10		
MEMORY		PED RECALL		PED RECALL						

**DETECTOR ZONE INFORMATION**

DETECTOR	DETECTION ZONE(S)	MODE	TYPE	ROUTE	PHASE	LOCATION MAST ARM
①	① (11' x 60')	PRESENCE	VIDEO (STOP BAR)	JUMONVILLE ST.	4	③
②	② (6' x 60')	PRESENCE	VIDEO (STOP BAR)	FORBES AVE.	6	④
③	③ (7' x 60')	PRESENCE	VIDEO (STOP BAR)	FORBES AVE.	6	④
④	④ (7' x 60')	PRESENCE	VIDEO (STOP BAR)	JUMONVILLE ST.	8	①
⑤	⑤ (8' x 60')	PRESENCE	VIDEO (STOP BAR)	JUMONVILLE ST.	8	①

**TRANSIT PRIORITY PRE-EMPTION NOTES (TO BE INSTALLED BY OTHERS)**

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- LOCATION OF BUS DETECTORS ARE TO BE FIELD ADJUSTED TO ACHIEVE MAXIMUM OPERATION.



**WIRING DIAGRAM**

5C/14 - CABLE(NO. OF CONDUCTORS/SIZE AWG.)

- SIGNAL HEAD
- △ SIGNAL SUPPORT
- AUDIBLE PEDESTRIAN INDICATOR
- JUNCTION BOX
- ⬡ RADAR DETECTOR
- ⊙ LUMINAIRE

3C/14 INCIDENTAL TO ITEM 02895.002  
 \* INCIDENTAL TO ITEM 02895.001, AS PER MANUFACTURERS SPECIFICATIONS  
 3C/14 INCIDENTAL TO ITEM 02895.002

**GENERAL NOTES**

- THE CITY OF PITTSBURGH SHALL INSPECT THE NEW SIGNAL EQUIPMENT PRIOR TO ACTIVATION.
- ALL TRAFFIC SIGNAL MAINTENANCE AND OPERATION RESPONSIBILITIES SHALL BE TURNED OVER TO THE CITY OF PITTSBURGH AFTER THE FOLLOWING CONDITIONS ARE IMPLEMENTED TO THE CITY'S SATISFACTION:
- PERMIT "AS-BUILT" TRAFFIC SIGNAL DRAWINGS ARE SUBMITTED AND APPROVED.
  - ALL PUNCH LIST ITEMS ARE COMPLETED BY THE CONTRACTOR.
  - AFTER THE 30-DAY CONTINUOUS UNINTERRUPTED SIGNAL OPERATION WITHOUT MALFUNCTIONS.

**CONSTRUCTION NOTES**

- ALL JUNCTION BOXES IN WALK AREAS TO BE CITY OF PITTSBURGH STANDARD CONCRETE JUNCTION BOX, TYPE 1.
- ALL JUNCTION BOXES IN NON-WALK AREAS TO BE CITY STANDARD JB-2 WITH BOTTOM.
- THERE SHALL BE NO SIGNAL WIRE OR FIBER CABLE SPLICING.
- SERVICE WIRE FROM THE POWER SOURCE TO THE CONTROLLER CABINET SHALL BE PLACED IN SECONDARY SEPARATE CONDUIT.
- STREET LIGHT CABLE IS NOT PERMITTED TO RUN THROUGH THE CONTROLLER CABINET AND SHALL BE PLACED IN SEPARATE CONDUIT.
- TRAFFIC SIGNAL CABLE SHALL BE PLACED IN DEDICATED CONDUIT.
- MOUNT DISCONNECT ON POLE NEAREST TO THE CONTROLLER CABINET EXCLUDING TYPE X POLES.
- REMOVE AND DISPOSE OF ALL EXISTING SIGNAL WIRING NO LONGER IN USE.
- REMOVE EXISTING SIGNAL EQUIPMENT NO LONGER IN USE AND RETURN TO THE CITY OF PITTSBURGH TRAFFIC CONTROL SHOP. COORDINATE DELIVERY OF EQUIPMENT WITH DELMAS MCELHANY, TRAFFIC CONTROL FOREMAN.
- CONTRACTOR IS TO MAINTAIN VEHICULAR SIGNAL HEAD VISIBILITY AT ALL TIMES DURING CONSTRUCTION.

TS-550

COUNTY: ALLEGHENY  
 MUNICIPALITY: CITY OF PITTSBURGH  
 INTERSECTION: FORBES AVENUE AND JUMONVILLE STREET

APPROVED AND ACCEPTED:  
 CITY TRAFFIC ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_  
 APPROVED AND ACCEPTED:  
 DISTRICT TRAFFIC ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_



NO.	DATE	DESCRIPTION
REVISIONS		

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**(NOT FOR CONSTRUCTION)**

DESIGNED	MW
DRAWN	MW
CHECKED	EMC
IN CHARGE	EMC
DATE	05/01/24
SCALE	AS SHOWN

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
 PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT UPTOWN TO OAKLAND SIGNAL PLANS**  
 WIRING, MOVEMENT, PHASING & SEQUENCE DIAGRAMS

**Port Authority** connecting people to life™

CONTRACT NO. BRT-001  
 DWG. NO. SG128 SHT. 1188

PLOTTED: 3/21/2024 7:40:41 PM

OPERATOR: "michael.mcgarry" FILE PATH: c:\pwworking\aecocom\ds16\_fnd\michael.mcgarry\aecocom\d0207710\BRT\_04\_SIG34\_SHT03.dgn

TRAFFIC SIGNAL TABULATION

FORBES AVENUE AND JUMONVILLE STREET

MISCELLANEOUS				
ITEM NUMBER	DESCRIPTION	QTY.	LOCATION	REMARKS
01882.002	TRAFFIC SIGNAL TIMING MODIFICATIONS	2	CC	
02890.001	TRAFFIC SIGNAL CONTROLLER ASSEMBLY, TYPE 2070 LC, WITH TYPE 332 BASE MOUNTED CABINET	1	CC	332 CONTROLLER CABINET 8" RISER
02890.003	ETHERNET SWITCH	1	CC	
02890.005	GPS TIME CLOCK	1	CC	
02894.001	VEHICULAR SIGNAL HEAD, THREE 12" SECTIONS	6	①②③ ④⑤⑥	BLACK TUNNEL VISORS BLACK ALUMINUM HOUSINGS BLACK METAL LOUVERED BACKPLATE
02894.005	LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, TYPE A	8	⑧⑨⑩⑪ ⑫⑬⑭⑮	BLACK TUNNEL VISORS BLACK ALUMINUM HOUSINGS
02894.006	VEHICULAR SIGNAL HEAD, THREE 8" SECTIONS	1	⑦	BLACK TUNNEL VISORS BLACK ALUMINUM HOUSINGS
02895.002	ACCESSIBLE PEDESTRIAN SIGNALS	8	①②③④ ⑤⑥⑦⑧	
02889.002	LED LUMINAIRE CITY STANDARD, BLACK	2	☉☉	△3 & △5
02212.009	POLE FOUNDATION DRILLING, LESS THAN 30" DIAMETER	6	△2	
02212.010	POLE FOUNDATION DRILLING, 30" DIAMETER OR GREATER	36	△1△3△4	

DETECTORS				
ITEM NUMBER	DESCRIPTION	SEN. NO.	QTY.	LOCATION
02895.001	VIDEO DETECTION	①②③	3	△1△3△4

TRAFFIC SIGNAL SUPPORTS \*\*

POLE NO.	ITEM NUMBER	DESCRIPTION	QTY.	ROUTE	STATION	SIDE	OFFSET	MAST ARM												PEDESTAL				
								ARM "A"						ARM "C"						SHAFT	SIGNAL			
								H	K	SIGNAL LOCATION				SIGN LOCATION				W	G		X	Z	H	M
										M	N	O	P	R	S	T	U	Y						
△1	02892.604 EACH	TRAFFIC SIGNAL SUPPORT, 28' MAST ARM, PAINTED BLACK	1	FORBES AVE.	166+04	RT	23'	17'	10'	28'	28'	20'			23'	17'			8'	270°				
△2	02892.003 EACH	TRAFFIC SIGNAL SUPPORT, 15' TYPE X, PAINTED BLACK	1	FORBES AVE.	166+07	LT	26'															15'	10'	
△3	02892.203 EACH	TRAFFIC SIGNAL SUPPORT, 22' MAST ARM WITH LUMINAIRE ARM, 30' MOUNTING, PAINTED BLACK	1	FORBES AVE.	166+48	LT	31'	17'	10'	22'	15'	5'			19'	10'			2'	270°	6'	30'	0°	
△4	02892.209 EACH	TRAFFIC SIGNAL SUPPORT, 34' MAST ARM WITH LUMINAIRE ARM, 30' MOUNTING, PAINTED BLACK	1	FORBES AVE.	166+54	RT	33'	17'	10'	34'	32'	21'			28'	17'			12'	0°	6'	30'	0°	

\*\* REFER TO PENNDOT TC-8800 TRAFFIC STANDARDS - SIGNALS FOR LETTER DESIGNATION



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PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT UPTOWN TO OAKLAND**  
SIGNAL PLANS  
TRAFFIC SIGNAL TABULATIONS

**Port Authority** connecting people to life®

CONTRACT NO. BRT-001  
DWG. NO. SG129 SHT. 1189



TRAFFIC SIGNAL TABULATION

FORBES AVENUE AND JUMONVILLE STREET

TRENCH, CONDUIT, JUNCTION BOX, ELECTRICAL ITEMS

DESCRIPTION	ELECTRICAL SERVICE TYPE C (EXISTING)	CITY OF PITTSBURGH STANDARD CONCRETE JUNCTION BOX, TYPE I	TRENCH AND BACKFILL, TYPE I	TRENCH AND BACKFILL, TYPE IV	2 INCH CONDUIT	3 INCH CONDUIT	AWG 8, UNDERGROUND CABLE, COPPER, 1 CONDUCTOR	SIGNAL CABLE, 14 AWG, 5 CONDUCTOR	SIGNAL CABLE, 14 AWG, 7 CONDUCTOR
ITEM NUMBER	02896	02897	02898	02898	02899	02899	02900	02900	02900
UNIT	EACH	EACH	LF	LF	LF	LF	LF	LF	LF
LOCATION									
CC TO [1]		1	6		12	24			
[1] TO [4]		1	18	*	53	106			
[1] TO [2]		1	16	24	40	80			
[2] TO [3]		1	32	32	64	128			
[1] TO [1]			5		10	10			
[2] TO [2]			18			18			
[3] TO [3]			29		29	58			
[4] TO [4]			13		13	26			
[S1] TO [1]			5			10			
ELECTRICAL SERVICE (STA 166+16, OFFSET 38' RT) TO [1]									
COMPLETE INTERSECTION	1						371	732	1010
TOTAL	1	4	142	56	221	460	371	732	1010

\* - TYPE IV TRENCH TABULATED AS PART OF THE SYSTEMS PLAN

[S1] - TABULATED ON SYSTEMS PLAN

SIGNS

SYMBOL	SERIES	SIZE	AREA EACH (SQ. FT)	DESCRIPTION	QUANTITY	02891.001 POST MOUNTED SIGNS, TYPE B		
						SF	SF	SF
[B]	R10-11	30"x36"	7.5	NO TURN ON RED ●	3			22.5
[D]	R10-3E(MOD)	9"x15"	.9	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER	8			▲
[G]	R6-1	36"x12"	3	ONE-WAY (TWO SIDED, CITY STANDARD)	2			6
[H]	SS-1	30"x18"	3.8	EXCEPT RIGHT TURNS	1		3.8	
[J]	R3-2	30"x30"	6.3	NO LEFT TURN	4		12.6	12.6
[K]	R3-1	30"x30"	6.3	NO RIGHT TURN	2		6.3	6.3
[L]	R3-11B(MOD)	30"x36"	7.5	RIGHT LANE - BUSES ONLY	1	7.5		
[M]	R5-1	30"x30"	6.3	DO NOT ENTER	4	18.9	6.3	
[P]	D3-4*	72"x24"	12	100 UPTOWN 200 JUMONVILLE ST	1			12
[R]	D3-4*	72"x24"	12	1900 UPTOWN 2000 FORBES AVE	1			12
[T]	D3-4*	72"x24"	12	2000 UPTOWN 1900 FORBES AVE	1			12
TOTAL						26.4	29	83.4

▲ - INCIDENTAL TO ITEM #02895.002

\* WHITE REFLECTORIZED LEGEND AND BORDER ON BLUE REFLECTORIZED BACKGROUND. UTILIZE 4" CLEARVIEW 3W FOR BLOCK/NEIGHBORHOOD AND 8" CLEARVIEW 3W FOR STREET NAME. ACTUAL WIDTH DETERMINED BY LETTER SPACING. COORDINATE BLOCK NUMBERS AND STREET NAME DETAILS WITH CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE.



Gulf Tower  
707 Grant Street  
5th Floor  
Pittsburgh, PA 15219



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Blue Bell, PA 19422

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<b>PORT AUTHORITY OF ALLEGHENY COUNTY</b> PITTSBURGH PENNSYLVANIA	
BUS RAPID TRANSIT UPTOWN TO OAKLAND SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	
<b>Port Authority</b> <small>connecting people to life</small>	CONTRACT NO. BRT-001
	DWG. NO. SG130 SHT. 1190

**SIGNS**

SIGN	STANDARD	DESCRIPTION	SIZE	QTY
A	R3-2	NO LEFT TURN	30"x30"	1
B	R10-11	NO TURN ON RED	30"x36"	2
C	R3-1	NO RIGHT TURN	30"x30"	1
D	R10-3E(MOD)	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER	9"x15"	8
E	R15-8(MOD)**	LOOK BOTH WAYS FOR BIKES	24"x24"	1
F	D3-4*	2100 UPTOWN 2200 FORBES AVE	72"x24"	1
G	D3-4*	000 UPTOWN MOULTRIE ST	72"x24"	1
H	R3-2	NO LEFT TURN	24"x24"	2
J	R3-1	NO RIGHT TURN	24"x24"	1
K	SS-1 **	EXCEPT RIGHT TURNS	30"x18"	2
L	R3-11B(MOD)**	RIGHT LANE - BUSES ONLY	30"x36"	2
M	R-10-15A(MOD)	TURNING TRAFFIC MUST YIELD TO BIKES AND PEDS	30"x30"	2
N	D3-4*	2200 UPTOWN 2100 FORBES AVE	72"x24"	1
R	R5-1	DO NOT ENTER	30"x30"	2

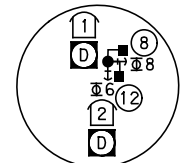
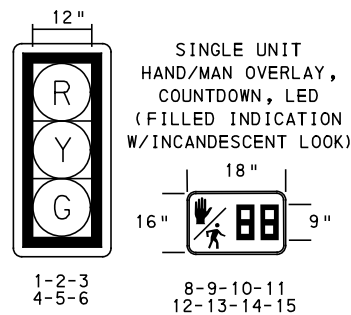
\*WHITE REFLECTORIZED LEGEND AND BORDER ON BLUE REFLECTORIZED BACKGROUND. UTILIZE 4" CLEARVIEW 3W FOR BLOCK/NEIGHBORHOOD AND 8" CLEARVIEW 3W FOR STREET NAME. ACTUAL WIDTH DETERMINED BY LETTER SPACING. COORDINATE BLOCK NUMBERS AND STREET NAME DETAILS WITH CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE.

\*\*POST MOUNTED SIGNS TABULATED AS PART OF THE SIGNING AND PAVEMENT MARKING PLAN

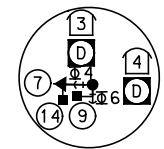
**LEGEND**

- L1 \* MAST ARM WITH LUMINAIRE ARM
- PEDESTRIAN SIGNAL HEAD
- VEHICULAR/BICYCLE SIGNAL HEAD
- L1 \* PEDESTAL WITH LUMINAIRE ARM
- SIGN
- STOP BAR RADAR DETECTION ZONE
- AUDIBLE PEDESTRIAN PUSH BUTTON/SIGN
- CONTROLLER ASSEMBLY
- JUNCTION BOX
- C/2" CONDUIT/SIZE
- C/2"P POWER CONDUIT/SIZE
- CL/2" LIGHTING CONDUIT/SIZE
- W/6" SOLID WHITE LINE/WIDTH
- BW/6" BROKEN WHITE LINE/WIDTH
- DY/4" DOUBLE SOLID YELLOW LINE/WIDTH
- G/24" SOLID GREEN LINE/WIDTH
- SYSTEM JUNCTION BOX
- C/3"S SYSTEM CONDUIT/SIZE
- PROPOSED STOP BAR VIDEO DETECTOR

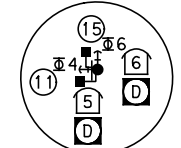
**SIGNAL HEADS**



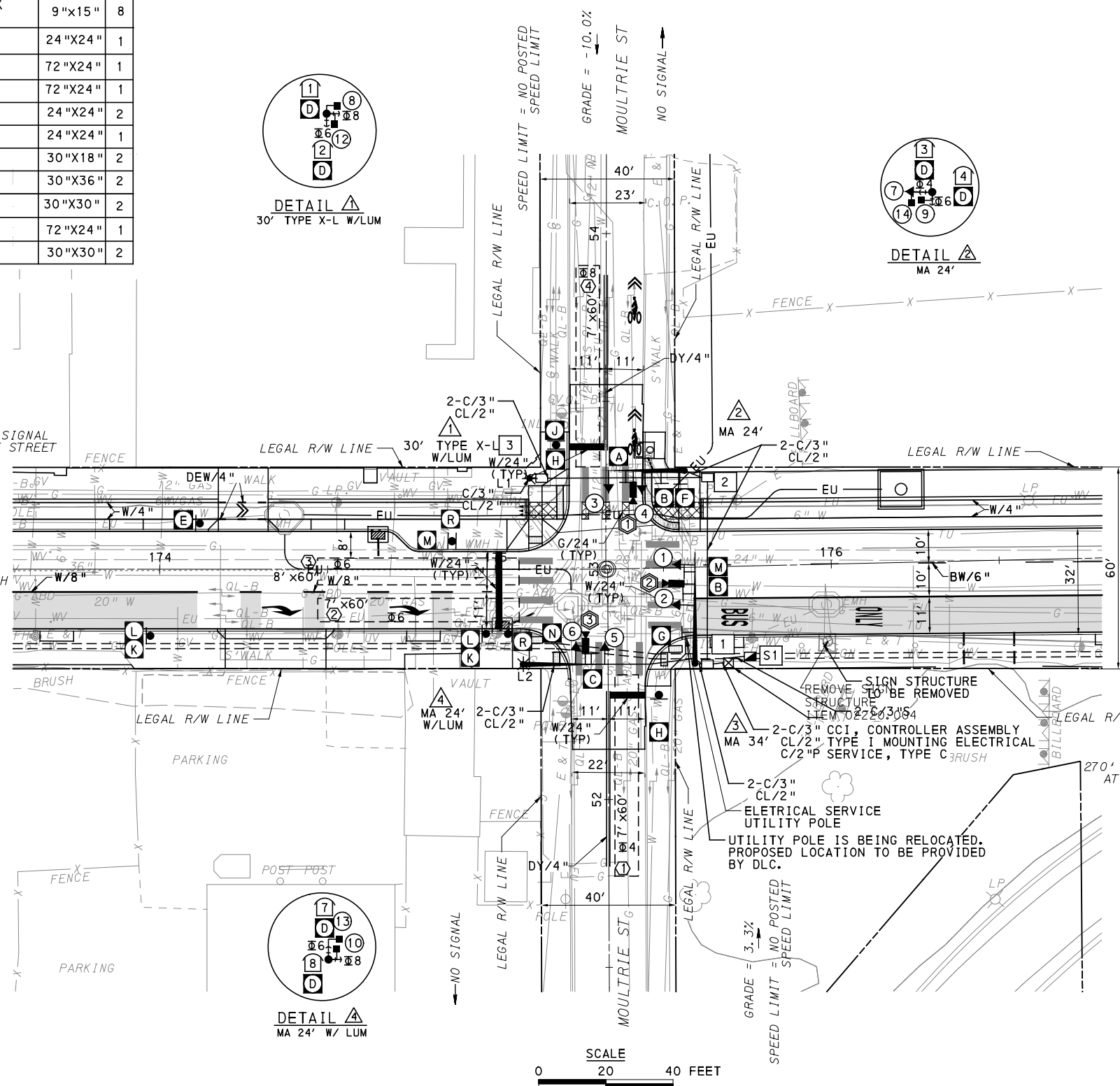
DETAIL A  
30' TYPE X-L W/LUM



DETAIL B  
MA 24'



DETAIL C  
MA 34'



**AUDIBLE PEDESTRIAN SIGNAL NOTES**

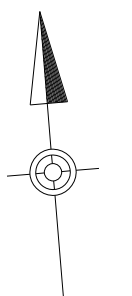
1. ALL PUSH BUTTONS SHALL BE EQUIPPED WITH LOCATOR TONES.
2. ALL WALK INTERVALS TO HAVE VERBAL MESSAGE DETAILED WALK DIRECTION.
3. VERBAL MESSAGE TO BE PLAYED DURING WALK INTERVAL WHEN BUTTON IS PRESSED.
4. ALL PEDESTRIAN PUSH BUTTONS TO BE LOCATED AT 42" ABOVE GROUND.
5. ALL PUSH BUTTONS TO BE EQUIPPED WITH VIBROTACTILE ARROW.
6. VIBROTACTILE ARROWS TO VIBRATE DURING WALK INTERVAL.
7. WALK AND DON'T WALK MESSAGE SHALL BE AUDIBLE THROUGH THE PUSH BUTTON SPEAKER.

**SIGNAL ASSEMBLY NOTES**

1. ALL VEHICULAR/BICYCLE SIGNALS SHALL BE EQUIPPED WITH L.E.D LENSES, TUNNEL VISORS AND LOUVERED BLACK METAL BACKPLATES WITH 2" REFLECTIVE BORDERS.
2. MIN/MAX HEIGHT FOR VEHICULAR SIGNALS 17'/18'.
3. MIN HORIZONTAL SPACING FOR VEHICULAR SIGNALS IS 8'.
4. MIN/MAX HEIGHT FOR PEDESTRIAN MOUNTED SIGNALS 10'/12'.
5. FINAL SIGNAL HEAD PLACEMENT WILL BE DETERMINED BY A REPRESENTATIVE OF THE CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE PRIOR TO SIGNAL BEING TURNED ON.
6. ALL PEDESTRIAN SIGNALS SHALL BE PORTLAND ORANGE FULL "PEDESTRIAN HAND" AND WHITE "WALKING PERSON" SYMBOLS AND HAVE INCANDESCENT LOOK WITH COUNTDOWN TIMER.
7. PROVIDE AIRCRAFT STRANDED CABLE FOR MOUNTING SIGNAL AND SIGN BRACKET ASSEMBLIES TO MAST ARMS.
8. PROVIDE BLACK ALUMINUM HOUSINGS FOR ALL SIGNAL HEADS.
9. INSTALL POST MOUNTED SIGNAL HEADS WITH BOTTOMS NO GREATER THAN 15' ABOVE THE SIDEWALK OR PAVEMENT.
10. EXACT LOCATION OF TRAFFIC SIGNAL SUPPORTS SHALL BE DETERMINED BY A REPRESENTATIVE OF THE CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE PRIOR TO INSTALLATION.

**PAVEMENT MARKING NOTES**

1. ALL STOP BARS ARE W/24".
2. CROSSWALKS ARE 10' X 24" KEYS WITH 3' TO 5' SPACING.
3. CROSSWALKS ACROSS BICYCLE LANES ARE 6' X 12" KEYS WITH 1' SPACING.



COUNTY: ALLEGHENY	
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**AECOM**  
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707 Grant Street  
5th Floor  
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**MOVEMENT, PHASING AND SEQUENCE CHART**

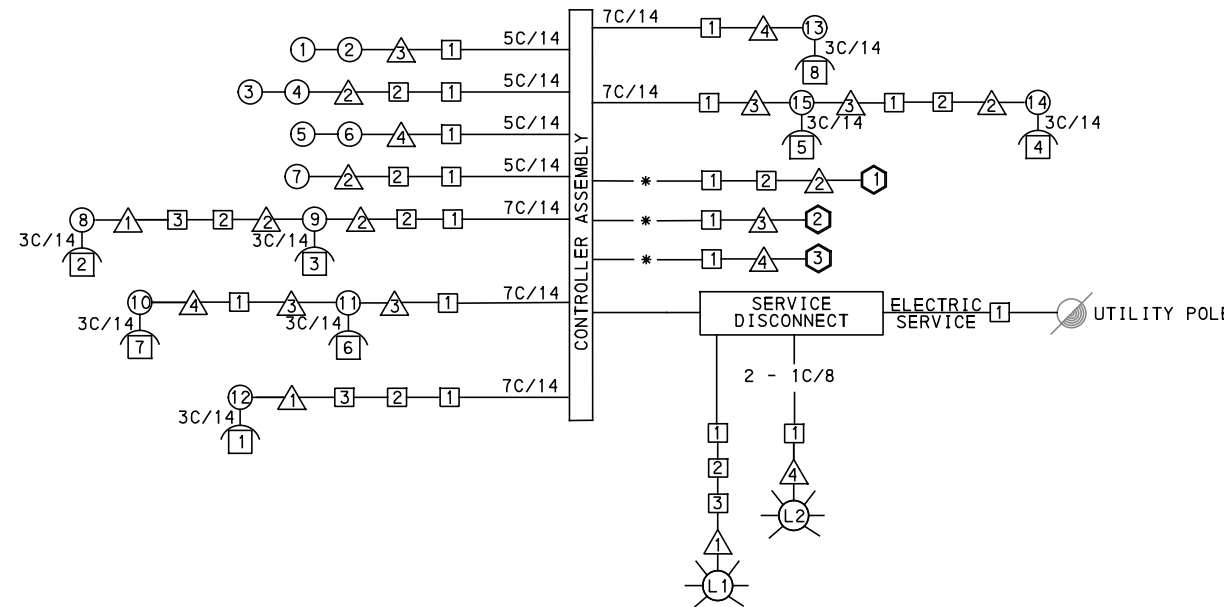
SIGNAL	PHASE 6					PHASE 4+8				
	1	2	3	4	5	1	2	3	4	5
1-2	G	G	Y	R		R	R	R	R	R
3-4-5-6	R	R	R	R		R	G	Y	R	R
7	G	G	Y	R		R	R	R	R	R
8-9-10-11	W	FD	DW	DW		DW	DW	DW	DW	OFF
12-13-14-15	DW	DW	DW	DW		W	W	FD	DW	OFF
FIXED			4.0	2.0				4.5	2.5	
MINIMUM	15					7				
PASSAGE	3					3				
FREE (MAX)	60					25				
PEDESTRIAN	7	14				3	4	10		
MEMORY		PED RECALL					PED RECALL			

**DETECTOR ZONE INFORMATION**

DETECTOR	DETECTION ZONE(S)	MODE	TYPE	ROUTE	PHASE	LOCATION MAST ARM
①	① (7' x 60')	PRESENCE	VIDEO (STOP BAR)	MOULTRIE ST.	4	②
②	② (7' x 60')	PRESENCE	VIDEO (STOP BAR)	FORBES AVE.	6	③
③	③ (8' x 60')	PRESENCE	VIDEO (STOP BAR)	FORBES AVE.	6	③
④	④ (7' x 60')	PRESENCE	VIDEO (STOP BAR)	MOULTRIE ST.	8	④

**TRANSIT PRIORITY PRE-EMPTION NOTES  
 (TO BE INSTALLED BY OTHERS)**

- COORDINATE TRAFFIC CONTROLLER PROGRAMMING MODIFICATION WITH REPRESENTATIVES OF THE CITY OF PITTSBURGH AND DISTRICT TRAFFIC UNIT.
- INCLUDE A TRANSIT PRIORITY PHASE THAT WILL EXTEND THE INDICATED PHASE A MAXIMUM OF 10 SECONDS WHEN ACTIVATED BY A PORT AUTHORITY VEHICLE. DO NOT VIOLATE SIDE STREET PEDESTRIAN MINIMUM TIMINGS.
- MAINTAIN ALL YELLOW CLEARANCES AT ALL TIMES.
- PROCEED TO THE SUBSEQUENT INTERVAL AS DEFINED IN THE MOVEMENT, SEQUENCE AND TIMING DIAGRAM UPON COMPLETING THE GREEN EXTENSION INTERVAL.
- ONCE A TRANSIT CALL IS PLACED AND SATISFIED, THE CONTROLLER WILL NOT SATISFY ANOTHER CALL FOR 4 CYCLES.
- LOCATION OF BUS DETECTORS ARE TO BE FIELD ADJUSTED TO ACHIEVE MAXIMUM OPERATION.



**WIRING DIAGRAM**

5C/14 - CABLE (NO. OF CONDUCTORS/SIZE AWG.)

- SIGNAL HEAD      △ SIGNAL SUPPORT
- ⌂ AUDIBLE PEDESTRIAN INDICATOR      □ JUNCTION BOX
- ⬡ RADAR DETECTOR      Ⓛ LUMINAIRE

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- THERE SHALL BE NO SIGNAL WIRE OR FIBER CABLE SPLICING.
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Port Authority connecting people to life	CONTRACT NO. BRT-001
DWG. NO. SG132	SHT. 1192



PLOTTED: 3/21/2024 7:41:38 PM

OPERATOR: "michael.mcgarry" FILE PATH: c:\pwworking\aecocom\ds16\_md\michael.mcgarry\aecocom\d0207710\BRT\_04\_SIG35\_SHT04.dgn

TRENCH, CONDUIT, JUNCTION BOX, ELECTRICAL ITEMS

DESCRIPTION	2 INCH CONDUIT	3 INCH CONDUIT	TRENCH AND BACKFILL, TYPE I	TRENCH AND BACKFILL, TYPE IV	AWG 8, UNDERGROUND CABLE, COPPER, 1 CONDUCTOR	SIGNAL CABLE, 14 AWG, 5 CONDUCTOR	SIGNAL CABLE, 14 AWG, 7 CONDUCTOR	ELECTRICAL SERVICE TYPE C (NEW)	CITY OF PITTSBURGH STANDARD CONCRETE JUNCTION BOX, TYPE 1
ITEM NUMBER	02899	02899	02898	02898	02900	02900	02900	02896	02897
UNIT	002	003	001	005	001	002	003	004	001
LOCATION	LF	LF	LF	LF	LF	LF	LF	EACH	EACH
CC TO 1	12	12	6						1
1 TO 2	55	96	24	31					1
2 TO 3	46	92	24	22					1
▲ TO 3	2	2	2						
▲ TO 2	7	14	7						
▲ TO 1	2	4	2						
▲ TO 1	54	108	30	24					
S1 TO CC		10	5						
ELECTRICAL SERVICE (STA 175+56, OFFSET 20.2' RT) TO 1	12		12						
COMPLETE INTERSECTION					309	416	877	1	
TOTAL	190	338	112	77	309	416	877	1	3

TRAFFIC SIGNAL TABULATION

FORBES AVENUE AND MOULTRIE STREET

SIGNS

SYMBOL	SERIES	SIZE	AREA EACH (SQ FT)	DESCRIPTION	QUANTITY	02891.001 POST MOUNTED SIGNS, TYPE B			02891.003 POST MOUNTED SIGNS, TYPE F			02891.007 STRUCTURE MOUNTED FLAT SHEET ALUMINUM SIGNS WITH STIFFENERS			
						SF			SF			SF			
A	R3-2	30"x30"	6.3	NO LEFT TURN	1										6.3
B	R10-11	30"x36"	7.5	NO TURN ON RED ●	2										15
C	R3-1	30"x30"	6.3	NO RIGHT TURN	1										6.3
▲ D	R10-3E(MOD)	9"x15"	.9	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER	8										▲
F	D3-4*	72"x24"	12	2100 UPTOWN FORBES AVE	1										12
G	D3-4*	72"x24"	12	000 UPTOWN MOULTRIE ST	1										12
H	R3-2	24"x24"	4	NO LEFT TURN	2				8						
J	R3-1	24"x24"	4	NO RIGHT TURN	1	4									
K	R3-7R	30"x30"	7.5	RIGHT LANE - BUSES ONLY	1	7.5									
L	SS-1	30"x18"	3.8	EXCEPT RIGHT TURN	1				3.8						
M	R10-15AL(MOD)	30"x30"	6.3	TURNING TRAFFIC MUST YIELD TO BIKES AND PEDS	2	6.3									6.3
N	D3-4*	72"x24"	12	2200 UPTOWN FORBES AVE	1										12
R	R5-1	30"x30"	6.3	DO NOT ENTER	2	6.3			6.3						
TOTAL						24.1			18.1						69.9

▲ - INCIDENTAL TO ITEM #02895.002

\* WHITE REFLECTORIZED LEGEND AND BORDER ON BLUE REFLECTORIZED BACKGROUND. UTILIZE 4" CLEARVIEW 3W FOR BLOCK/NEIGHBORHOOD AND 8" CLEARVIEW 3W FOR STREET NAME. ACTUAL WIDTH DETERMINED BY LETTER SPACING. COORDINATE BLOCK NUMBERS AND STREET NAME DETAILS WITH CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE.



Gulf Tower  
707 Grant Street  
5th Floor  
Pittsburgh, PA 15219



595 Skippack Pk,  
Suite 400  
Blue Bell, PA 19422

NO.	DATE	DESCRIPTION
REVISIONS		

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(NOT FOR CONSTRUCTION)

DESIGNED	MW
DRAWN	MW
CHECKED	EMC
IN CHARGE	EMC
DATE	05/01/24
SCALE	AS SHOWN

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT UPTOWN TO OAKLAND**  
SIGNAL PLANS  
TRAFFIC SIGNAL TABULATIONS

**Port Authority** connecting people to life™

CONTRACT NO. BRT-001  
DWG. NO. SG134 SHT. 1194



**SIGNS**

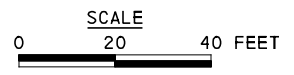
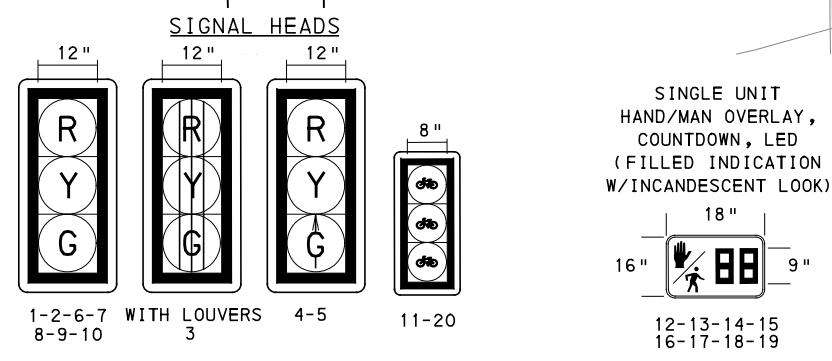
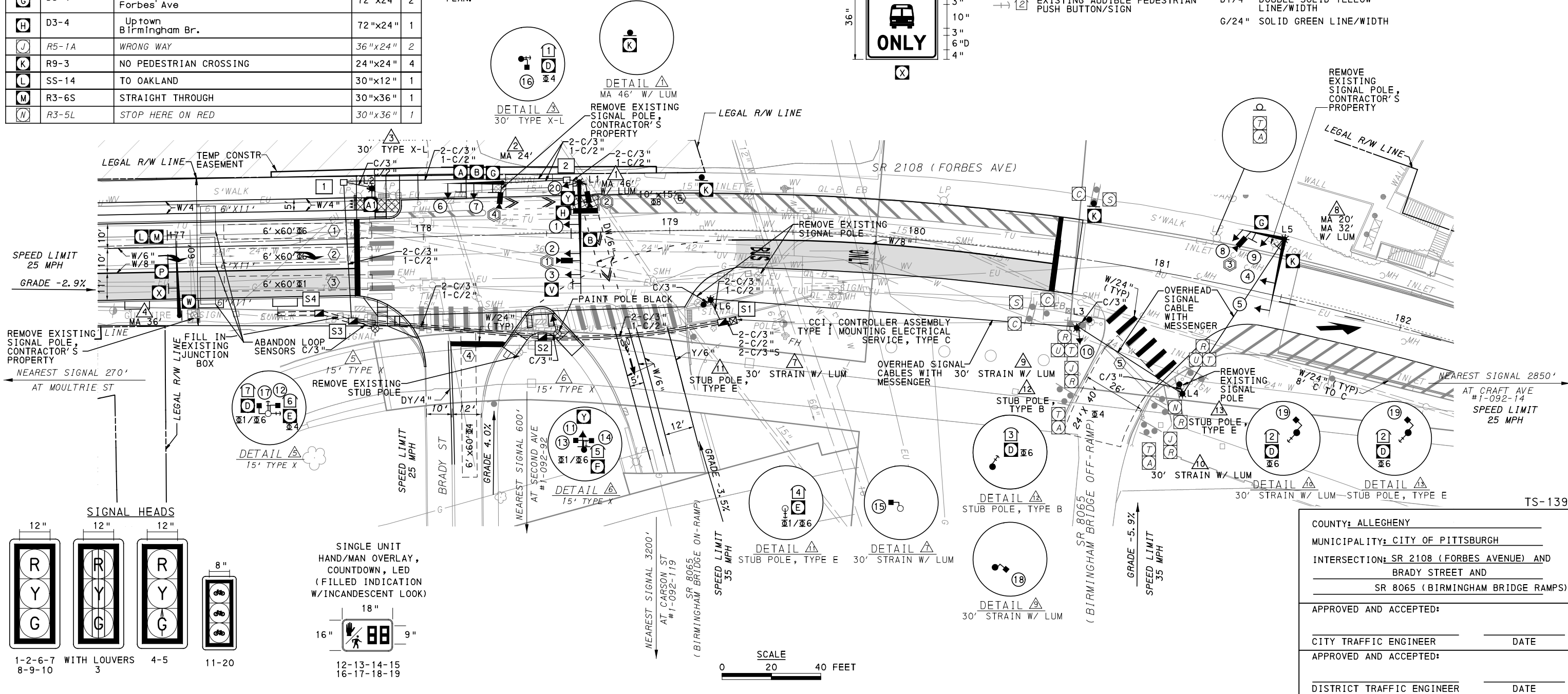
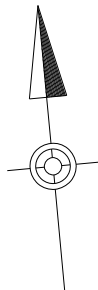
SIGN	STANDARD	DESCRIPTION	SIZE	QTY
A	R3-2	NO LEFT TURN	30"x30"	1
A1	R3-2	NO LEFT TURN	24"x24"	1
A	R3-2	NO LEFT TURN	30"x30"	3
B	R10-11	NO TURN ON RED	30"x36"	2
C	R3-1	NO RIGHT TURN	30"x30"	3
D	R10-3EL	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER	9"x15"	4
E	R10-3ER	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER	9"x15"	2
F	R10-3E(MOD)	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER	9"x15"	1
G	D3-4	2300 Uptown 2400 Forbes Ave	72"x24"	2
H	D3-4	Uptown Birmingham Br.	72"x24"	1
J	R5-1A	WRONG WAY	36"x24"	2
K	R9-3	NO PEDESTRIAN CROSSING	24"x24"	4
L	SS-14	TO OAKLAND	30"x12"	1
M	R3-6S	STRAIGHT THROUGH	30"x36"	1
N	R3-5L	STOP HERE ON RED	30"x36"	1

SIGN	STANDARD	DESCRIPTION	SIZE	QTY
P	SS-15	DUAL RIGHT	42"x36"	1
R	R5-1	DO NOT ENTER	36"x36"	5
S	R5-1	DO NOT ENTER	24"x24"	2
T	R6-1R	HORIZONTAL RIGHT ONE-WAY	36"x12"	5
U	R6-1L	HORIZONTAL LEFT ONE-WAY	36"x12"	2
V	SPECIAL	BUS LANE SIGNAL	30"x30"	1
W	W12-2**	LOW CLEARANCE	36"x36"	1
X	R3-5Bα	BUS ONLY	30"x36"	1
Y	R10-10B	BICYCLE SIGNAL	18"x24"	2

\*\* POST MOUNTED SIGNS TABULATED AS PART OF THE SIGNING AND PAVEMENT MARKING PLAN.

**LEGEND**

- △ EXISTING MAST ARM
- △ EXISTING MAST ARM WITH LUMINAIRE ARM
- EXISTING PEDESTRIAN SIGNAL HEAD
- PROPOSED PEDESTRIAN SIGNAL HEAD
- EXISTING VEHICULAR/BICYCLE SIGNAL HEAD
- PROPOSED VEHICULAR/BICYCLE SIGNAL HEAD
- EXISTING PEDESTAL
- PROPOSED SIGN
- ⊕ EXISTING SIGN
- ⊕ PROPOSED SIGN
- ⊕ EXISTING AUDIBLE PEDESTRIAN PUSH BUTTON/SIGN
- ⊕ PROPOSED AUDIBLE PEDESTRIAN PUSH BUTTON/SIGN
- ⊕ EXISTING CONTROLLER ASSEMBLY
- ⊕ EXISTING JUNCTION BOX
- ⊕ EXISTING STOP BAR RADAR DETECTOR
- ⊕ PROPOSED STOP BAR VIDEO DETECTOR
- C/2" CONDUIT/SIZE
- CL/2" LIGHTING CONDUIT/SIZE
- C/2"P POWER CONDUIT/SIZE
- W/6" SOLID WHITE LINE/WIDTH
- BW/6" BROKEN WHITE LINE/WIDTH
- DY/4" DOUBLE SOLID YELLOW LINE/WIDTH
- G/24" SOLID GREEN LINE/WIDTH



COUNTY: ALLEGHENY
MUNICIPALITY: CITY OF PITTSBURGH
INTERSECTION: SR 2108 (FORBES AVENUE) AND BRADY STREET AND SR 8065 (BIRMINGHAM BRIDGE RAMPS)
APPROVED AND ACCEPTED: _____ DATE _____
CITY TRAFFIC ENGINEER _____ DATE _____
APPROVED AND ACCEPTED: _____ DATE _____
DISTRICT TRAFFIC ENGINEER _____ DATE _____

**AECOM**  
 Gulf Tower  
 707 Grant Street  
 5th Floor  
 Pittsburgh, PA 15219

NO.	DATE	DESCRIPTION

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DESIGNED	DWP
DRAWN	NED
CHECKED	AJR
IN CHARGE	JKM
DATE	05/01/24
SCALE	AS SHOWN

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
 PITTSBURGH, PENNSYLVANIA

**BUS RAPID TRANSIT UPTOWN TO OAKLAND**  
 SIGNAL PLANS  
 FORBES AVENUE & BIRMINGHAM BRIDGE ON-OFF RAMP

**Port Authority**  
 connecting people to life™

CONTRACT NO. BRT-001
DWG. NO. SG135
SHT. 1195

**MOVEMENT, PHASING AND SEQUENCE CHART**

SIGNAL	INTERVAL	PHASE 1 (BUS PHASE)				PHASE 6				PHASE 8 (BICYCLE PHASE)				PHASE 4				FLASHING
		1	2	3		1	2	3	4	1	2	3		1	2	3	4	
1-2		R	R	R		G	G	Y	R	R	R	R		R	R	R	R	R
3		G	Y	R		R	R	R	R	R	R	R		R	R	R	R	R
4-5		G	G	G		G	G	Y	R	R	R	R		R	R	R	R	R
6-7		R	R	R		R	R	R	R	R	R	R		G	G	Y	R	R
8-9-10		R	R	R		R	R	R	R	R	R	R		G	G	Y	R	R
11-20		R	R	R		R	R	R	R	G	Y	R		R	R	R	R	OFF
12-13-14-15		W	W	W		W	FD	DW	DW	DW	DW	DW		DW	DW	DW	DW	OFF
16-17		DW	DW	DW		DW	DW	DW	DW	DW	DW	DW		W	FD	DW	DW	OFF
18-19		W	W	W		W	FD	DW	DW	DW	DW	DW		DW	DW	DW	DW	OFF
FIXED		X	3	2		X	3	2	5	X	3	2		X	4	4		
MINIMUM		5								5				5				
PASSAGE														4				
FREE (MAX)		10				90				5				22				
PEDESTRIAN		*	*			7	33							7	15			
MEMORY		NON LOCKING				MAX RECALL				NON LOCKING				PED RECALL				

\* PEDESTRIAN PHASE STARTS HERE ONLY WHEN PHASE 1 IS CALLED AND WILL TERMINATE IN PHASE 6.

**AUDIBLE PEDESTRIAN SIGNAL NOTES**

1. ALL PUSH BUTTONS SHALL BE EQUIPPED WITH LOCATOR TONES.
2. ALL WALK INTERVALS TO HAVE VERBAL MESSAGE DETAILING WALK DIRECTION.
3. VERBAL MESSAGE TO BE PLAYED DURING WALK INTERVAL WHEN BUTTON IS PRESSED.
4. ALL PEDESTRIAN PUSH BUTTONS TO BE LOCATED AT 42" ABOVE GROUND.
5. ALL PUSH BUTTONS TO BE EQUIPPED WITH VIBROTACTILE ARROW.
6. VIBROTACTILE ARROWS TO VIBRATE DURING WALK INTERVAL.
7. WALK AND DON'T WALK MESSAGE SHALL BE AUDIBLE THROUGH THE PUSH BUTTON SPEAKER.

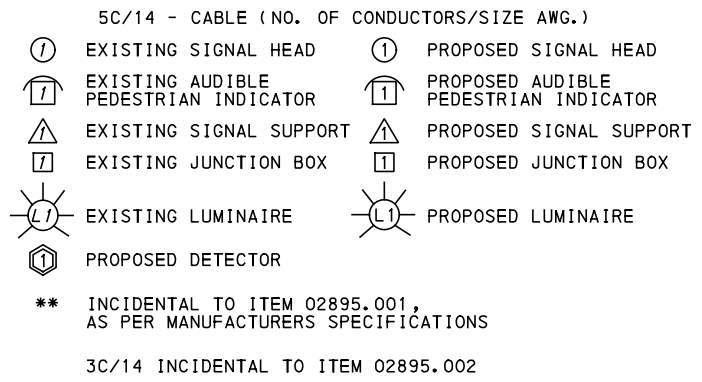
**PAVEMENT MARKING NOTES**

1. ALL STOP BARS ARE W/24".
2. CROSSWALKS ARE 10' X 24" KEYS WITH 3' TO 5' SPACING.
3. CROSSWALKS ACROSS BICYCLE LANES ARE 6' X 12" KEYS WITH 1' SPACING.

**TRANSIT PRIORITY PRE-EMPTION NOTES (TO BE INSTALLED BY OTHERS)**

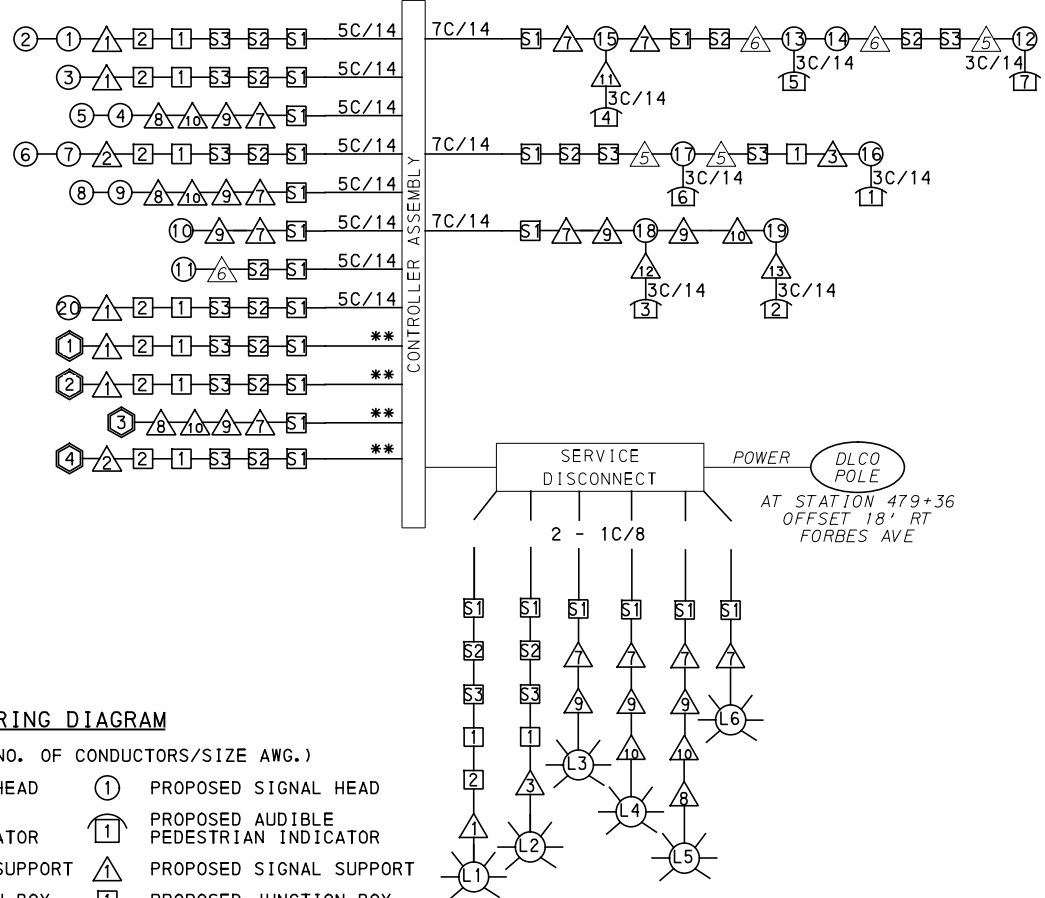
1. COORDINATE TRAFFIC CONTROLLER PROGRAMMING MODIFICATION WITH REPRESENTATIVES OF THE CITY OF PITTSBURGH AND DISTRICT TRAFFIC UNIT.
2. INCLUDE A TRANSIT PRIORITY PHASE THAT WILL EXTEND THE INDICATED PHASE A MAXIMUM OF 10 SECONDS WHEN ACTIVATED BY A PORT AUTHORITY VEHICLE. DO NOT VIOLATE SIDE STREET PEDESTRIAN MINIMUM TIMINGS.
3. MAINTAIN ALL YELLOW CLEARANCES AT ALL TIMES.
4. PROCEED TO THE SUBSEQUENT INTERVAL AS DEFINED IN THE MOVEMENT, SEQUENCE AND TIMING DIAGRAM UPON COMPLETING THE GREEN EXTENSION INTERVAL.
5. ONCE A TRANSIT CALL IS PLACED AND SATISFIED, THE CONTROLLER WILL NOT SATISFY ANOTHER CALL FOR 4 CYCLES.
6. LOCATION OF BUS DETECTORS ARE TO BE FIELD ADJUSTED TO ACHIEVE MAXIMUM OPERATION.

**WIRING DIAGRAM**



**SIGNAL ASSEMBLY NOTES**

1. ALL VEHICULAR/BICYCLE SIGNALS SHALL BE EQUIPPED WITH L.E.D LENSES, TUNNEL VISORS AND LOUVERED BLACK METAL BACKPLATES WITH 2" REFLECTIVE BORDERS.
2. MIN/MAX HEIGHT TO BOTTOM OF VEHICULAR SIGNALS 17' /18'.
3. MIN HORIZONTAL SPACING FOR VEHICULAR SIGNALS IS 8'.
4. MIN/MAX HEIGHT TO BOTTOM OF PEDESTRIAN SIGNALS 10' /12'.
5. FINAL SIGNAL HEAD PLACEMENT WILL BE DETERMINED BY REPRESENTATIVES OF THE CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE AND THE DISTRICT TRAFFIC UNIT PRIOR TO SIGNAL BEING TURNED ON.
6. ALL PEDESTRIAN SIGNALS SHALL BE PORTLAND ORANGE FULL "PEDESTRIAN HAND" AND WHITE "WALKING PERSON" SYMBOLS AND HAVE INCANDESCENT LOOK WITH COUNTDOWN TIMER.
7. PROVIDE AIRCRAFT STRANDED CABLE FOR MOUNTING SIGNAL AND SIGN BRACKET ASSEMBLIES TO MAST ARMS.
8. PROVIDE BLACK ALUMINUM HOUSINGS FOR ALL SIGNAL HEADS.
9. INSTALL POST MOUNTED SIGNAL HEADS WITH BOTTOMS NO GREATER THAN 15' ABOVE THE SIDEWALK OR PAVEMENT.
10. EXACT LOCATION OF TRAFFIC SIGNAL SUPPORTS SHALL BE DETERMINED BY REPRESENTATIVES OF THE CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE AND THE DISTRICT TRAFFIC UNIT PRIOR TO INSTALLATION.



**GENERAL NOTES**

- THE CITY OF PITTSBURGH SHALL INSPECT THE NEW SIGNAL EQUIPMENT PRIOR TO ACTIVATION.
- ALL TRAFFIC SIGNAL MAINTENANCE AND OPERATION RESPONSIBILITIES SHALL BE TURNED OVER TO THE CITY OF PITTSBURGH AFTER THE FOLLOWING CONDITIONS ARE IMPLEMENTED TO THE CITY'S SATISFACTION:
1. PERMIT "AS-BUILT" TRAFFIC SIGNAL DRAWINGS ARE SUBMITTED AND APPROVED.
  2. ALL PUNCH LIST ITEMS ARE COMPLETED BY THE CONTRACTOR.
  3. AFTER THE 30-DAY CONTINUOUS UNINTERRUPTED SIGNAL OPERATION WITHOUT MALFUNCTIONS.

**CONSTRUCTION NOTES**

1. ALL JUNCTION BOXES IN WALK AREAS TO BE CITY OF PITTSBURGH STANDARD CONCRETE JUNCTION BOX, TYPE 1.
2. ALL JUNCTION BOXES IN NON-WALK AREAS TO BE CITY STANDARD JB-2 WITH BOTTOM.
3. THERE SHALL BE NO SIGNAL WIRE OR FIBER CABLE SPLICING.
4. SERVICE WIRE FROM THE POWER SOURCE TO THE CONTROLLER CABINET SHALL BE PLACED IN SECONDARY SEPARATE CONDUIT.
5. STREET LIGHT CABLE IS NOT PERMITTED TO RUN THROUGH THE CONTROLLER CABINET AND SHALL BE PLACED IN SEPARATE CONDUIT.
6. TRAFFIC SIGNAL CABLE SHALL BE PLACED IN DEDICATED CONDUIT.
7. MOUNT DISCONNECT ON POLE NEAREST TO THE CONTROLLER CABINET EXCLUDING TYPE X POLES.
8. REMOVE AND DISPOSE OF ALL EXISTING SIGNAL WIRING NO LONGER IN USE.
9. REMOVE EXISTING SIGNAL EQUIPMENT NO LONGER IN USE AND RETURN TO THE CITY OF PITTSBURGH TRAFFIC CONTROL SHOP. COORDINATE DELIVERY OF EQUIPMENT WITH DELMAS MCELHANY, TRAFFIC CONTROL FOREMAN.

COUNTY: ALLEGHENY

MUNICIPALITY: CITY OF PITTSBURGH

INTERSECTION: SR 2108 (FORBES AVENUE) AND BRADY STREET AND SR 8065 (BIRMINGHAM BRIDGE RAMPS)

APPROVED AND ACCEPTED:

CITY TRAFFIC ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_

APPROVED AND ACCEPTED:

DISTRICT TRAFFIC ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_



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DRAWN	NED
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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT UPTOWN TO OAKLAND**  
SIGNAL PLANS  
WIRING, MOVEMENT, PHASING & SEQUENCE DIAGRAMS

**Port Authority** connecting people to life

CONTRACT NO. BRT-001

DWG. NO. SG136 SHT. 1196

ITEM NUMBER	MISCELLANEOUS			
UNIT	DESCRIPTION	QTY.	LOCATION	REMARKS
01882.002 EACH	TRAFFIC SIGNAL TIMING MODIFICATIONS	2	CC	
02212.009 LF	POLE FOUNDATION DRILLING, LESS THAN 30" DIAMETER	17		△3 △1 △2 △3
02212.010 LF	POLE FOUNDATION DRILLING, GREATER THAN 30" DIAMETER	91		△1 △2 △4 △7 △8 △9 △10
02889.002 EACH	LED LUMINAIRE CITY STANDARD, BLACK	6		△1 △3 △9 △10 △8 △7
02890.001 EACH	TRAFFIC SIGNAL CONTROLLER ASSEMBLY, TYPE 2070 LC, WITH TYPE 332 BASE MOUNTED CABINET	1	CC	
02890.003 EACH	ETHERNET SWITCH	1	CC	
02890.005 EACH	GPS TIME CLOCK	1	CC	

ITEM NUMBER	MISCELLANEOUS (CONT.)			
UNIT	DESCRIPTION	QTY.	LOCATION	REMARKS
02894.001 EACH	VEHICULAR SIGNAL HEAD, THREE 12" SECTIONS	9	①②④⑤ ⑥⑦⑧⑨⑩	BLACK TUNNEL VISORS BLACK ALUMINUM HOUSINGS BLACK METAL LOUVERED BACKPLATE
02894.001 EACH	VEHICULAR SIGNAL HEAD, THREE 12" SECTIONS	1	③	BLACK TUNNEL VISORS BLACK ALUMINUM HOUSINGS BLACK METAL LOUVERED BACKPLATE SIGNAL LOUVERS (9)
02894.004 EACH	BICYCLE SIGNAL HEAD, THREE 8" SECTIONS	2	① ②⑩	BLACK TUNNEL VISORS BLACK ALUMINUM HOUSINGS BLACK METAL LOUVERED BACKPLATE
02894.005 EACH	LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, TYPE A	8	⑫⑬⑭⑮ ⑯⑰⑱⑲	BLACK TUNNEL VISORS BLACK ALUMINUM HOUSINGS
02895.002 EACH	ACCESSIBLE PEDESTRIAN SIGNALS	7	①②③④ ⑤⑥⑦	
02899.007 EACH	INSTALL CONDUIT CONNECTION TO EXISTING TRAFFIC SIGNAL SUPPORT	3		

**TRAFFIC SIGNAL TABULATION**

SR 2108 (FORBES AVENUE) AND BRADY STREET AND SR 8065 (BIRMINGHAM BRIDGE RAMPS)

**TRAFFIC SIGNAL SUPPORTS \*\***

POLE NO.	ITEM NUMBER	DESCRIPTION	QTY.	ROUTE	STATION	SIDE	OFFSET	MAST ARM																PEDESTAL				
								H	K	ARM "A"										ARM "C"			SHAFT	SIGNAL				
										L	SIGNAL LOCATION					SIGN LOCATION					W	G		X	Z	H	M	N
											M	N	O	P	R	S	T	U	Y									
△1	02892.214 EACH	TRAFFIC SIGNAL SUPPORT, 46' MAST ARM WITH LUMINAIRE ARM (30' MOUNTING HEIGHT), PAINTED BLACK	1	FORBES AVE	178+63	L	21'	17'	10'	46'	38'	29'	17'	--	41'	21'	2'	--	10'	0°	6'	30'	0°	--	--	--		
△2	02892.603 EACH	TRAFFIC SIGNAL SUPPORT, 24' MAST ARM, PAINTED BLACK	1	FORBES AVE	178+33	L	21'	17'	--	24'	22'	12'	--	--	17'	8'	--	--	4'	270°	--	--	--	--	--	--	--	
△3	02892.005 EACH	TRAFFIC SIGNAL SUPPORT, 30' TYPE X-L WITH LUMINAIRE ARM, PAINTED BLACK	1	FORBES AVE	177+80	L	20'	--	--	--	--	--	--	--	--	--	--	--	--	--	6'	30'	0°	30'	--	10'		
△4	02892.605 EACH	TRAFFIC SIGNAL SUPPORT, 36' MAST ARM, PAINTED BLACK	1	FORBES AVE	177+00	R	29'	17'	--	36'	--	--	--	--	33'	23'	11'	--	--	1°	--	--	--	--	--	--		
△5		TRAFFIC SIGNAL SUPPORT, 15' TYPE X	1	FORBES AVE	177+80	R	37'	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	15'	--	10'		
△6		TRAFFIC SIGNAL SUPPORT, 15' TYPE X	1	FORBES AVE	178+53	R	41'	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	15'	12'	10'		
△7	02892.012 EACH	TRAFFIC SIGNAL SUPPORT, STRAIN POLE WITH LUMINAIRE ARM (30' MOUNTING HEIGHT), 4,000 LBS DESIGN TENSION, PAINTED BLACK	1	FORBES AVE	179+17	R	28'	--	--	--	--	--	--	--	--	--	--	--	--	--	6'	30'	0°	30'	--	10'		
△8	02892.302 EACH	TRAFFIC SIGNAL SUPPORT, 20' MAST ARM AND 32' MAST ARM WITH LUMINAIRE ARM (30' MOUNTING HEIGHT), PAINTED BLACK	1	FORBES AVE	181+47	L	23'	17'	--	20'	17'	6'	--	--	12'	--	--	--	--	270°	6'	30'	0°	30'	--	10'		
△9	02892.012 EACH	TRAFFIC SIGNAL SUPPORT, STRAIN POLE WITH LUMINAIRE ARM (30' MOUNTING HEIGHT), 4,000 LBS DESIGN TENSION, PAINTED BLACK	1	FORBES AVE	180+68	R	28'	--	--	--	--	--	--	--	--	--	--	--	--	--	6'	30'	0°	30'	--	10'		
△10	02892.012 EACH	TRAFFIC SIGNAL SUPPORT, STRAIN POLE WITH LUMINAIRE ARM (30' MOUNTING HEIGHT), 4,000 LBS DESIGN TENSION, PAINTED BLACK	1	FORBES AVE	181+28	R	47'	--	--	--	--	--	--	--	--	--	--	--	--	--	6'	30'	0°	30'	--	10'		
△11	02892.021 EACH	PEDESTRIAN STUB POLE, TYPE E, PAINTED BLACK	1	FORBES AVE	179+15	L	31'	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5'	--	--		
△12	02892.020 EACH	PEDESTRIAN STUB POLE, TYPE B, PAINTED BLACK	1	FORBES AVE	180+73	R	24'	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5'	--	--		
△13	02892.021 EACH	PEDESTRIAN STUB POLE, TYPE E, PAINTED BLACK	1	FORBES AVE	181+19	R	45'	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5'	--	--		

\*\* REFER TO TRAFFIC STANDARDS TC-8800 SERIES FOR LETTER DESIGNATION

**DETECTORS**

ITEM NUMBER	DESCRIPTION	SEN. NO.	QTY.	LOCATION
02895.001 EACH	VIDEO DETECTION	①	1	△1
02895.001 EACH	VIDEO DETECTION	②	1	△1
02895.001 EACH	VIDEO DETECTION	③	1	△8
02895.001 EACH	VIDEO DETECTION	④	1	△2

**AECOM**  
Gulf Tower  
707 Grant Street  
5th Floor  
Pittsburgh, PA 15219

NO.	DATE	DESCRIPTION
REVISIONS		

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**(NOT FOR CONSTRUCTION)**

DESIGNED	DWP
DRAWN	NED
CHECKED	AJR
IN CHARGE	JKM
DATE	05/01/24
SCALE	AS SHOWN

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT UPTOWN TO OAKLAND SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS**

**Port Authority** connecting people to life®

CONTRACT NO. BRT-001  
DWG. NO. SG137 SHT. 1197



TRAFFIC SIGNAL TABULATION

SR 2108 (FORBES AVENUE) AND BRADY STREET AND SR 8065 (BIRMINGHAM BRIDGE RAMPS)

TRENCH, CONDUIT, JUNCTION BOX, ELECTRICAL ITEMS

DESCRIPTION	ELECTRICAL SERVICE TYPE C (NEW)	CITY OF PITTSBURGH STANDARD CONCRETE JUNCTION BOX, TYPE I	TRENCH AND BACKFILL, TYPE I	TRENCH AND BACKFILL, TYPE II	TRENCH AND BACKFILL, TYPE IV	2 INCH CONDUIT	3 INCH CONDUIT	AWG 8, UNDERGROUND CABLE, COPPER, 1 CONDUCTOR	SIGNAL CABLE, 14 AWG, 5 CONDUCTOR	SIGNAL CABLE, 14 AWG, 7 CONDUCTOR
ITEM NUMBER	02896	02897	02898	02898	02898	02899	02899	02900	02900	02900
UNIT	EACH	EACH	LF	LF	LF	LF	LF	LF	LF	LF
LOCATION										
CC TO	S1	1		3		6	12			
S1 TO	A			8		8	16			
S1 TO	S2	1	29		42	71	142			
S2 TO	A		4				4			
S2 TO	S3	1	35		40	75	150			
S3 TO	A		7				7			
S3 TO	I	1	24		30	54	112			
I TO	A		10			10	10			
I TO	2	1	49	39		88	176			
2 TO	A			25		25	50			
2 TO	A			4		4	8			
COMPLETE INTERSECTION	1							2160	2290	890
TOTAL	1	5	158	79	112	341	687	2160	2290	890

S1, S2, S3 - TABULATED ON THE SYSTEMS PLAN.

SIGNS

SYMBOL	SERIES	SIZE	AREA EACH (SQ FT)	DESCRIPTION	QUANTITY	02891.001 POST MOUNTED SIGNS, TYPE B			02891.003 POST MOUNTED SIGNS, TYPE F			02891.007 STRUCTURE MOUNTED FLAT SHEET ALUMINUM SIGN WITH STIFFENERS			
						SF	SF	SF	SF	SF	SF	SF			
A	R3-2	30"X30"	6.3	NO LEFT TURN	1										6.3
A1	R3-2	24"X24"	4.0	NO LEFT TURN	1						4.0				
B	R10-11	30"X36"	7.5	NO TURN ON RED ●	2										15.0
D	R10-3EL	9"X15"	0.9	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER ←	4										
E	R10-3ER	9"X15"	0.9	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER →	2										
F	R10-3E(MOD)	9"X15"	0.9	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER ↔	1										
G	D3-4	72"X24"	12.0	2300 Uptown 2400 Forbes Ave	1										12.0
H	D3-4	72"X24"	12.0	Uptown Birmingham Br.	1										12.0
K	R9-3	24"X24"	4.0	NO PEDESTRIAN CROSSING	4	4.0					12.0				
L	SS-14	30"X12"	2.5	TO OAKLAND	1										2.5
M	R3-6S	30"X36"	7.5	STRAIGHT THROUGH	1										7.5
P	SS-15	42"X36"	10.5	DUAL RIGHT	1										10.5
V	SPECIAL	30"X30"	6.3	BUS LANE SIGNAL	1										6.3
X	R3-5Ba	30"X36"	7.5	BUS ONLY	1										7.5
Y	R10-10B	18"X24"	3.0	BICYCLE SIGNAL	2										6.0
TOTAL						4.0					22.0				79.6

▲ - INCIDENTAL TO ITEM 02895.002

\* WHITE REFLECTORIZED LEGEND AND BORDER ON BLUE REFLECTORIZED BACKGROUND. UTILIZE 4" CLEARVIEW 3W FOR BLOCK/NEIGHBORHOOD AND 8" CLEARVIEW 3W FOR STREET NAME. ACTUAL WIDTH DETERMINED BY LETTER SPACING. COORDINATE BLOCK NUMBERS AND STREET NAME DETAILS WITH CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE.



Gulf Tower  
707 Grant Street  
5th Floor  
Pittsburgh, PA 15219

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(NOT FOR CONSTRUCTION)

DESIGNED	DWP
DRAWN	NED
CHECKED	AJR
IN CHARGE	JKM
DATE	05/01/24
SCALE	AS SHOWN

<b>PORT AUTHORITY OF ALLEGHENY COUNTY</b> PITTSBURGH PENNSYLVANIA	
BUS RAPID TRANSIT UPTOWN TO OAKLAND SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	
<b>Port Authority</b> <small>connecting people to life</small>	CONTRACT NO. BRT-001
	DWG. NO. SG138
	SHT. 1198

PLOTTED: 3/21/2024 7:42:57 PM

OPERATOR: "michael.mcgarry" FILE PATH: c:\pwworking\aecocom.ds16\_nad\michael.mcgarry\aecocom.com\d020710\BRT\_01\_SIG38\_SHT01.dgn

**SIGNS**

SIGN	STANDARD	DESCRIPTION	SIZE	QTY
A	R3-2	NO LEFT TURN	30"x30"	2
B	R3-1	NO RIGHT TURN	30"x30"	2
C	R10-6AL	STOP HERE ON RED (LEFT)	24"x30"	2
D	R10-11	NO TURN ON RED	30"x36"	2
E	R6-1R	HORIZONTAL RIGHT ONE-WAY	36"x12"	2
F	R6-1L	HORIZONTAL LEFT ONE-WAY	36"x12"	3
G	R6-2R	VERTICAL RIGHT ONE-WAY	30"x36"	1
H	R6-2L	VERTICAL LEFT ONE-WAY	30"x36"	1
J	R3-8A(L-S)	LANE USE CONTROL	30"x30"	1
K	R10-3EL	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER	9"x15"	4
L	R10-3ER	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER	9"x15"	4
M	D3-4	100 OAKLAND 200 HALKET ST	60"x24"	1
N	D3-4	3300 OAKLAND 3400 FORBES AVE	66"x24"	1
O	D3-4	3400 OAKLAND 3300 FORBES AVE	66"x24"	1
P	R3-11B(MOD) *	RIGHT LANE - BUSES ONLY	30"x36"	3
Q	SS-1 *	EXCEPT RIGHT TURNS	30"x18"	3
R	R3-7L *	LEFT LANE MUST TURN LEFT	30"x30"	1

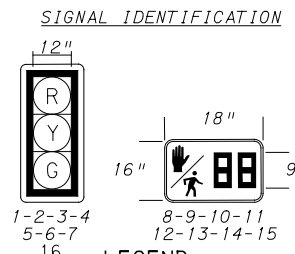
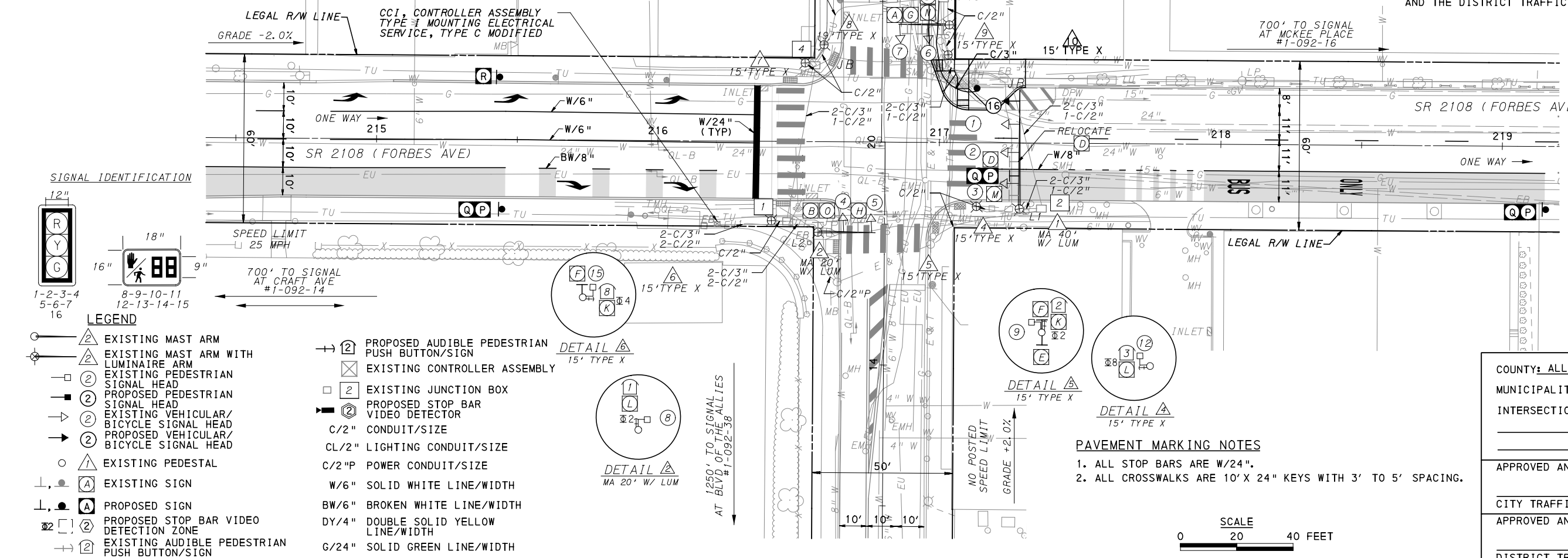
\* POST MOUNTED SIGNS TABULATED AS PART OF THE SIGNING AND PAVEMENT MARKING PLAN.

**AUDIBLE PEDESTRIAN SIGNAL NOTES**

1. ALL PUSH BUTTONS SHALL BE EQUIPPED WITH LOCATOR TONES.
2. ALL WALK INTERVALS TO HAVE VERBAL MESSAGE DETAILED WALK DIRECTION.
3. VERBAL MESSAGE TO BE PLAYED DURING WALK INTERVAL WHEN BUTTON IS PRESSED.
4. ALL PEDESTRIAN PUSH BUTTONS TO BE LOCATED AT 42" ABOVE GROUND.
5. ALL PUSH BUTTONS TO BE EQUIPPED WITH VIBROTACTILE ARROW.
6. VIBROTACTILE ARROWS TO VIBRATE DURING WALK INTERVAL.
7. WALK AND DON'T WALK MESSAGE SHALL BE AUDIBLE THROUGH THE PUSH BUTTON SPEAKER.

**SIGNAL ASSEMBLY NOTES**

1. ALL VEHICULAR/BICYCLE SIGNALS SHALL BE EQUIPPED WITH L.E.D LENSES, TUNNEL VISORS AND LOUVERED BLACK METAL BACKPLATES WITH 2" REFLECTIVE BORDERS.
2. MIN/MAX HEIGHT TO BOTTOM OF VEHICULAR SIGNALS 17' / 18'.
3. MIN HORIZONTAL SPACING FOR VEHICULAR SIGNALS IS 8'.
4. MIN/MAX HEIGHT TO BOTTOM OF PEDESTRIAN SIGNALS 10' / 12'.
5. FINAL SIGNAL HEAD PLACEMENT WILL BE DETERMINED BY REPRESENTATIVES OF THE CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE AND THE DISTRICT TRAFFIC UNIT PRIOR TO SIGNAL BEING TURNED ON.
6. ALL PEDESTRIAN SIGNALS SHALL BE PORTLAND ORANGE FULL "PEDESTRIAN HAND" AND WHITE "WALKING PERSON" SYMBOLS AND HAVE INCANDESCENT LOOK WITH COUNTDOWN TIMER.
7. PROVIDE AIRCRAFT STRANDED CABLE FOR MOUNTING SIGNAL AND SIGN BRACKET ASSEMBLIES TO MAST ARMS.
8. PROVIDE BLACK ALUMINUM HOUSINGS FOR ALL SIGNAL HEADS.
9. INSTALL POST MOUNTED SIGNAL HEADS WITH BOTTOMS NO GREATER THAN 15' ABOVE THE SIDEWALK OR PAVEMENT.
10. EXACT LOCATION OF TRAFFIC SIGNAL SUPPORTS SHALL BE DETERMINED BY REPRESENTATIVES OF THE CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE AND THE DISTRICT TRAFFIC UNIT PRIOR TO INSTALLATION.

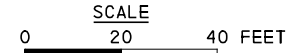


**LEGEND**

- EXISTING MAST ARM
- EXISTING MAST ARM WITH LUMINAIRE ARM
- EXISTING PEDESTRIAN SIGNAL HEAD
- PROPOSED PEDESTRIAN SIGNAL HEAD
- EXISTING VEHICULAR/BICYCLE SIGNAL HEAD
- PROPOSED VEHICULAR/BICYCLE SIGNAL HEAD
- EXISTING PEDESTAL
- EXISTING SIGN
- PROPOSED SIGN
- PROPOSED STOP BAR VIDEO DETECTION ZONE
- EXISTING AUDIBLE PEDESTRIAN PUSH BUTTON/SIGN
- PROPOSED AUDIBLE PEDESTRIAN PUSH BUTTON/SIGN
- EXISTING CONTROLLER ASSEMBLY
- EXISTING JUNCTION BOX
- PROPOSED STOP BAR VIDEO DETECTOR
- C/2" CONDUIT/SIZE
- CL/2" LIGHTING CONDUIT/SIZE
- C/2" P POWER CONDUIT/SIZE
- W/6" SOLID WHITE LINE/WIDTH
- BW/6" BROKEN WHITE LINE/WIDTH
- DY/4" DOUBLE SOLID YELLOW LINE/WIDTH
- G/24" SOLID GREEN LINE/WIDTH

**PAVEMENT MARKING NOTES**

1. ALL STOP BARS ARE W/24".
2. ALL CROSSWALKS ARE 10' X 24" KEYS WITH 3' TO 5' SPACING.



COUNTY: ALLEGHENY	
MUNICIPALITY: CITY OF PITTSBURGH	
INTERSECTION: SR 2108 (FORBES AVENUE) AND HALKET STREET	
APPROVED AND ACCEPTED:	
CITY TRAFFIC ENGINEER	DATE
APPROVED AND ACCEPTED:	
DISTRICT TRAFFIC ENGINEER	DATE



NO.	DATE	DESCRIPTION
REVISIONS		

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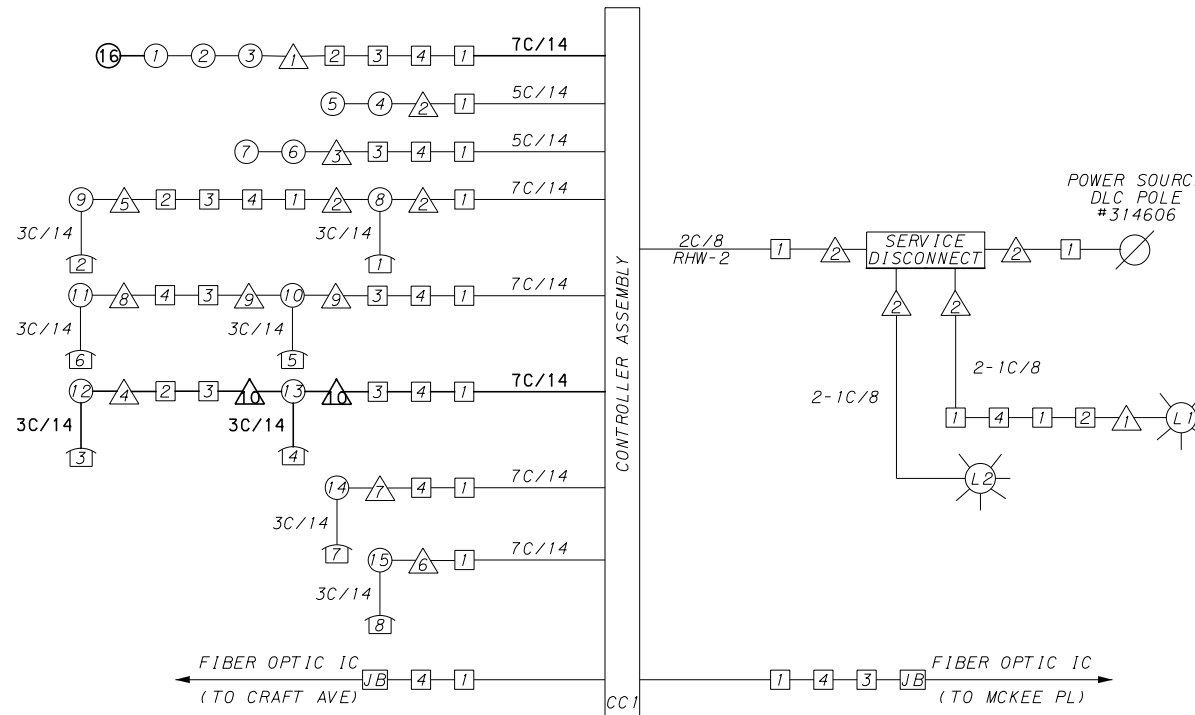
DESIGNED	DWP
DRAWN	NED
CHECKED	AJR
IN CHARGE	JKM
DATE	05/01/24
SCALE	AS SHOWN

<b>PORT AUTHORITY OF ALLEGHENY COUNTY</b> PITTSBURGH PENNSYLVANIA	
BUS RAPID TRANSIT UPTOWN TO OAKLAND SIGNAL PLANS FORBES AVENUE & HALKET STREET	
<b>Port Authority</b> connecting people to life	CONTRACT NO. BRT-001
DWG. NO. SG139	SHT. 1199



**MOVEMENT, PHASING AND SEQUENCE CHART**

SIGNAL	INTERVAL	PHASE 2					PHASE 4+8					FLASHING
		1	2	3	4	5	1	2	3	4	5	
1-2-3-16		R	G	G	Y	R	R	R	R	R	R	
4-5		R	R	R	R	R	R	G	G	Y	R	
6-7		R	R	R	R	R	R	G	G	Y	R	
8-9-10-11		W	W	FD	DW	DW	DW	DW	DW	DW	DW	OFF
12-13-14-15		DW	DW	DW	DW	DW	W	W	FD	DW	DW	OFF
FIXED				3.5	2.5				3.5	2.5		
MINIMUM			15					7				
PASSAGE			3.0					3.0				
FREE (MAX)												
PEDESTRIAN		3	4	15				3	4	15		
MEMORY		PED RECALL					PED RECALL					



**WIRING DIAGRAM**

- 5C/14 - CABLE (NO. OF CONDUCTORS/SIZE AWG.)
- (1) EXISTING SIGNAL HEAD      (1) PROPOSED SIGNAL HEAD
  - (1) EXISTING AUDIBLE PEDESTRIAN INDICATOR      (1) PROPOSED AUDIBLE PEDESTRIAN INDICATOR
  - (1) EXISTING SIGNAL SUPPORT      (1) PROPOSED SIGNAL SUPPORT
  - (1) EXISTING JUNCTION BOX      (1) PROPOSED JUNCTION BOX
  - (L1) EXISTING LUMINAIRE      (L1) PROPOSED LUMINAIRE
  - (D) PROPOSED DETECTOR

3C/14 INCIDENTAL TO ITEM 02894.022  
 \*\* INCIDENTAL TO ITEM 02895.001, AS PER MANUFACTURERS SPECIFICATIONS

**GENERAL NOTES**

THE CITY OF PITTSBURGH SHALL INSPECT THE NEW SIGNAL EQUIPMENT PRIOR TO ACTIVATION.

ALL TRAFFIC SIGNAL MAINTENANCE AND OPERATION RESPONSIBILITIES SHALL BE TURNED OVER TO THE CITY OF PITTSBURGH AFTER THE FOLLOWING CONDITIONS ARE IMPLEMENTED TO THE CITY'S SATISFACTION:

1. PERMIT "AS-BUILT" TRAFFIC SIGNAL DRAWINGS ARE SUBMITTED AND APPROVED.
2. ALL PUNCH LIST ITEMS ARE COMPLETED BY THE CONTRACTOR.
3. AFTER THE 30-DAY CONTINUOUS UNINTERRUPTED SIGNAL OPERATION WITHOUT MALFUNCTIONS.

**CONSTRUCTION NOTES**

1. ALL JUNCTION BOXES IN WALK AREAS TO BE CITY OF PITTSBURGH STANDARD CONCRETE JUNCTION BOX, TYPE 1.
2. ALL JUNCTION BOXES IN NON-WALK AREAS TO BE CITY STANDARD JB-2 WITH BOTTOM.
3. THERE SHALL BE NO SIGNAL WIRE OR FIBER CABLE SPLICING.
4. SERVICE WIRE FROM THE POWER SOURCE TO THE CONTROLLER CABINET SHALL BE PLACED IN SECONDARY SEPARATE CONDUIT.
5. STREET LIGHT CABLE IS NOT PERMITTED TO RUN THROUGH THE CONTROLLER CABINET AND SHALL BE PLACED IN SEPARATE CONDUIT.
6. TRAFFIC SIGNAL CABLE SHALL BE PLACED IN DEDICATED CONDUIT.
7. MOUNT DISCONNECT ON POLE NEAREST TO THE CONTROLLER CABINET EXCLUDING TYPE X POLES.
8. REMOVE AND DISPOSE OF ALL EXISTING SIGNAL WIRING NO LONGER IN USE.
9. REMOVE EXISTING SIGNAL EQUIPMENT NO LONGER IN USE AND RETURN TO THE CITY OF PITTSBURGH TRAFFIC CONTROL SHOP. COORDINATE DELIVERY OF EQUIPMENT WITH DELMAS MCELHANY, TRAFFIC CONTROL FOREMAN.

TS-325

COUNTY: ALLEGHENY  
 MUNICIPALITY: CITY OF PITTSBURGH  
 INTERSECTION: SR 2108 (FORBES AVENUE) AND HALKET STREET

APPROVED AND ACCEPTED:  
 CITY TRAFFIC ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_  
 APPROVED AND ACCEPTED:  
 DISTRICT TRAFFIC ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_



Gulf Tower  
 707 Grant Street  
 5th Floor  
 Pittsburgh, PA 15219

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**(NOT FOR CONSTRUCTION)**

DESIGNED	DWP
DRAWN	NED
CHECKED	AJR
IN CHARGE	JKM
DATE	05/01/24
SCALE	AS SHOWN

PORT AUTHORITY OF ALLEGHENY COUNTY PITTSBURGH PENNSYLVANIA		
BUS RAPID TRANSIT UPTOWN TO OAKLAND SIGNAL PLANS WIRING, MOVEMENT, PHASING & SEQUENCE DIAGRAMS		
Port Authority connecting people to life	CONTRACT NO. BRT-001	
	DWG. NO. SG140	SHT. 1200

TRENCH, CONDUIT, JUNCTION BOX, ELECTRICAL ITEMS

TRAFFIC SIGNAL TABULATION

SR 2108 (FORBES AVENUE) AND HALKET STREET

MISCELLANEOUS				
ITEM NUMBER	DESCRIPTION	QTY.	LOCATION	REMARKS
01882.002	TRAFFIC SIGNAL TIMING MODIFICATIONS	2	CC	
02212.009	POLE FOUNDATION DRILLING, LESS THAN 30" DIAMETER	6	△	
02894.001	VEHICULAR SIGNAL HEAD, THREE 12" SECTIONS	1	Ⓞ	BLACK TUNNEL VISORS BLACK ALUMINUM HOUSING BLACK METAL LOUVERED BACKPLATE
02894.022	RESET PEDESTRIAN SIGNAL HEAD	1	Ⓢ	
02895.004	RESET ACCESSIBLE PEDESTRIAN SIGNAL	1	Ⓢ	INCLUDES Ⓢ AND 3C/14
02897.011	CONNECT TO EXISTING JUNCTION BOX	1	Ⓢ	


DESCRIPTION	TRENCH AND BACKFILL, TYPE 11	3 INCH CONDUIT	SIGNAL CABLE, 14 AWG, 7 CONDUCTOR
	ITEM NUMBER	02898	02899
	002	003	003
UNIT	LF	LF	LF
LOCATION	Ⓢ TO △		
	41	41	
COMPLETE INTERSECTION			410
TOTAL	41	41	410

SYMBOL	SERIES	SIZE	AREA EACH (SQ FT)	DESCRIPTION	QUANTITY	SIGN	
						02891.007 STRUCTURE MOUNTED FLAT SHEET ALUMINUM SIGNS WITH STIFFENERS	02891.021 RESET STRUCTURE MOUNTED FLAT SHEET ALUMINUM SIGN WITH STIFFENERS
Ⓢ	R10-11	30"x36"		NO TURN ON RED ●	1		1
Ⓢ	R3-11B(MOD)	30"x36"	7.5	RIGHT LANE MUST TURN RIGHT	1	7.5	
Ⓢ	SS-1	30"x18"	3.8	EXCEPT BUSES	1	3.8	
				TOTAL		11.3	1

TRAFFIC SIGNAL SUPPORTS \*\*

POLE NO.	ITEM NUMBER	DESCRIPTION	QTY.	ROUTE	STATION	SIDE	OFFSET	MAST ARM																PEDESTAL		
								ARM "A"												ARM "C"				SHAFT	SIGNAL	
								H	K	L	SIGNAL LOCATION				SIGN LOCATION				W	G	X	Z	H		M	N
											M	N	O	P	R	S	T	U						Y		
1		TRAFFIC SIGNAL SUPPORT, 40' MAST ARM WITH LUMINAIRE ARM, (30' MOUNTING HEIGHT) PAINTED BLACK	1	FORBES AVE	217+29	R	23'	17'	--	40'	37'	29'	19'	8'	15'	10'	--	--	3'	0°	6'	30'	0°	--	--	--
2		TRAFFIC SIGNAL SUPPORT, 20' MAST ARM WITH LUMINAIRE ARM, (30' MOUNTING HEIGHT) PAINTED BLACK	1	FORBES AVE	216+57	R	32'	17'	10'	20'	19'	9'	--	--	14'	5'	0'	--	3'	0°	6'	30'	45°	--	--	--
3		TRAFFIC SIGNAL SUPPORT, 16' MAST ARM, PAINTED BLACK	1	FORBES AVE	217+03	L	42'	17'	10'	16'	15'	4'	--	--	12'	5'	0'	--	2'	0°	--	--	--	--	--	--
4		TRAFFIC SIGNAL SUPPORT, 15' TYPE X	1	FORBES AVE	217+14	R	23'	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	15'	--	10'	
5		TRAFFIC SIGNAL SUPPORT, 15' TYPE X	1	FORBES AVE	216+98	R	33'	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	15'	--	10'	
6		TRAFFIC SIGNAL SUPPORT, 15' TYPE X	1	FORBES AVE	216+40	R	28'	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	15'	--	10'	
7		TRAFFIC SIGNAL SUPPORT, 15' TYPE X	1	FORBES AVE	216+52	L	27'	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	15'	--	10'	
8		TRAFFIC SIGNAL SUPPORT, 19' TYPE X	1	FORBES AVE	216+59	L	34'	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	19'	--	10'	
9		TRAFFIC SIGNAL SUPPORT, 15' TYPE X	1	FORBES AVE	217+04	L	30'	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	15'	--	10'	
△	02892.003	TRAFFIC SIGNAL SUPPORT, 15' TYPE X, PAINTED BLACK	1	FORBES AVE	217+13	L	19'	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	15'	--	10'	

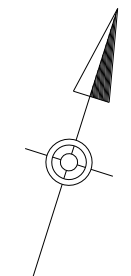
\*\* REFER TO PENNDOT TC-8800 TRAFFIC STANDARDS - SIGNALS FOR LETTER DESIGNATION

 Gulf Tower 707 Grant Street 5th Floor Pittsburgh, PA 15219	NO. DATE DESCRIPTION REVISIONS	THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE FEDERAL TRANSIT ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, FOR THE PORT AUTHORITY OF ALLEGHENY COUNTY, PENNSYLVANIA.	(NOT FOR CONSTRUCTION)	DESIGNED <u>DWP</u>	<b>PORT AUTHORITY OF ALLEGHENY COUNTY</b> PITTSBURGH PENNSYLVANIA BUS RAPID TRANSIT UPTOWN TO OAKLAND SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	
				DRAWN <u>NED</u>		Port Authority connecting people to life
				CHECKED <u>AJR</u>	DWG. NO. <u>SG141</u>	SHT. <u>1201</u>
				IN CHARGE <u>JKM</u>		
				DATE <u>05/01/24</u>		
				SCALE <u>AS SHOWN</u>		

SIGNS

SIGN	STANDARD	DESCRIPTION	SIZE	QTY	SIGN	STANDARD	DESCRIPTION	SIZE	QTY
A	R3-2	NO LEFT TURN	30"x30"	2	P	R1-1	STOP	30"x30"	1
B	R10-11	NO TURN ON RED	30"x36"	3	R	R3-5R	RIGHT TURN	30"x30"	2
C	R3-1	NO RIGHT TURN	30"x30"	1	S	R3-101P (MOD)	EXCEPT BIKES	24"x18"	1
D	R10-3EL	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER	9"x15"	2	T	SPECIAL	BUS LANE SIGNAL	30"x30"	1
E	R10-3ER	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER	9"x15"	2	U	R10-10R	RIGHT TURN SIGNAL	30"x36"	2
F	D3-4*	OAKLAND 400 SCHENLEY DR EXT.	90"x24"	1	V	R10-15L (MOD)	TURNING TRAFFIC MUST YIELD TO BIKES (LEFT)	30"x30"	1
G	R5-1	DO NOT ENTER	30"x30"	2	Y	R10-15R (MOD)	TURNING TRAFFIC MUST YIELD TO BIKES (RIGHT)	30"x30"	1
H	R6-1R	HORIZONTAL RIGHT ONE WAY	36"x12"	1	Z	D3-4*	4300 OAKLAND 4300 FORBES AVE	66"x24"	1
J	R6-1L	HORIZONTAL LEFT ONE WAY	36"x12"	2	AA	R10-15AL (MOD)	TURNING TRAFFIC MUST YIELD TO BIKES AND PEDS	30"x30"	1
K	R10-6AL	STOP HERE ON RED	24"x30"	2	BB	R10-10B	BICYCLE SIGNAL	18"x24"	1
L	R9-3	NO PEDESTRIAN CROSSING	18"x18"	2					
M	R9-3BL	USE CROSSWALK LEFT PLAQUE	18"x24"	1					
N	R9-3BR	USE CROSSWALK RIGHT PLAQUE	18"x24"	1					

\*WHITE REFLECTORIZED LEGEND AND BORDER ON BLUE REFLECTORIZED BACKGROUND. UTILIZE 4" CLEARVIEW 3W FOR BLOCK/NEIGHBORHOOD AND 8" CLEARVIEW 3W FOR STREET NAME. ACTUAL WIDTH DETERMINED BY LETTER SPACING. COORDINATE BLOCK NUMBERS AND STREET NAME DETAILS WITH CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE.  
 \*\* POST MOUNTED SIGNS TABULATED AS PART OF THE SIGNING AND PAVEMENT MARKING PLAN.



AUDIBLE PEDESTRIAN SIGNAL NOTES

1. ALL PUSH BUTTONS SHALL BE EQUIPPED WITH LOCATOR TONES.
2. ALL WALK INTERVALS TO HAVE VERBAL MESSAGE DETAILED WALK DIRECTION.
3. VERBAL MESSAGE TO BE PLAYED DURING WALK INTERVAL WHEN BUTTON IS PRESSED.
4. ALL PEDESTRIAN PUSH BUTTONS TO BE LOCATED AT 42" ABOVE GROUND.
5. ALL PUSH BUTTONS TO BE EQUIPPED WITH VIBROTACTILE ARROW.
6. VIBROTACTILE ARROWS TO VIBRATE DURING WALK INTERVAL.
7. WALK AND DON'T WALK MESSAGE SHALL BE AUDIBLE THROUGH THE PUSH BUTTON SPEAKER.

SIGNAL ASSEMBLY NOTES

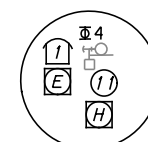
1. ALL VEHICULAR/BICYCLE SIGNALS SHALL BE EQUIPPED WITH L.E.D LENSES, TUNNEL VISORS AND LOUVERED BLACK METAL BACKPLATES WITH 2" REFLECTIVE BORDERS.
2. MIN/MAX HEIGHT TO BOTTOM OF VEHICULAR SIGNALS 17' / 18'.
3. MIN HORIZONTAL SPACING FOR VEHICULAR SIGNALS IS 8'.
4. MIN/MAX HEIGHT TO BOTTOM OF PEDESTRIAN SIGNALS 10' / 12'.
5. FINAL SIGNAL HEAD PLACEMENT WILL BE DETERMINED BY REPRESENTATIVES OF THE CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE AND THE DISTRICT TRAFFIC UNIT PRIOR TO SIGNAL BEING TURNED ON.
6. ALL PEDESTRIAN SIGNALS SHALL BE PORTLAND ORANGE FULL "PEDESTRIAN HAND" AND WHITE "WALKING PERSON" SYMBOLS AND HAVE INCANDESCENT LOOK WITH COUNTDOWN TIMER.
7. PROVIDE AIRCRAFT STRANDED CABLE FOR MOUNTING SIGNAL AND SIGN BRACKET ASSEMBLIES TO MAST ARMS.
8. PROVIDE BLACK ALUMINUM HOUSINGS FOR ALL SIGNAL HEADS.
9. INSTALL POST MOUNTED SIGNAL HEADS WITH BOTTOMS NO GREATER THAN 15' ABOVE THE SIDEWALK OR PAVEMENT.
10. EXACT LOCATION OF TRAFFIC SIGNAL SUPPORTS SHALL BE DETERMINED BY REPRESENTATIVES OF THE CITY OF PITTSBURGH DEPARTMENT OF MOBILITY AND INFRASTRUCTURE AND THE DISTRICT TRAFFIC UNIT PRIOR TO INSTALLATION.

PAVEMENT MARKING NOTES

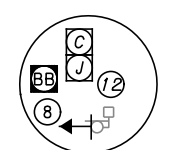
1. ALL STOP BARS ARE W/24".
2. CROSSWALKS ARE 10' X 24" KEYS WITH 3' TO 5' SPACING.
3. CROSSWALKS ACROSS BICYCLE LANES ARE 6' X 12" KEYS WITH 1' SPACING.

LEGEND

- EXISTING MAST ARM WITH LUMINAIRE
- EXISTING PEDESTAL
- EXISTING PEDESTRIAN SIGNAL HEAD
- EXISTING VEHICULAR/BICYCLE SIGNAL HEAD
- EXISTING VEHICULAR/BICYCLE SIGNAL HEAD
- EXISTING SIGN
- PROPOSED SIGN
- PROPOSED STOP BAR RADAR DETECTION ZONE
- EXISTING AUDIBLE PEDESTRIAN PUSH BUTTON/SIGN
- EXISTING CONTROLLER ASSEMBLY
- EXISTING JUNCTION BOX
- PROPOSED STOP BAR RADAR DETECTOR
- C/2" EXISTING CONDUIT/SIZE
- EXISTING LIGHTING CONDUIT/SIZE
- C/3"P EXISTING POWER CONDUIT/SIZE
- W/6" SOLID WHITE LINE/WIDTH
- BW/6" BROKEN WHITE LINE/WIDTH
- DY/4" DOUBLE SOLID YELLOW LINE/WIDTH
- G/24" SOLID GREEN LINE/WIDTH
- DEW/4" DOTTED WHITE PAVEMENT MARKING/WIDTH



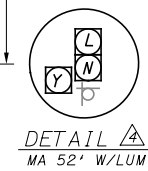
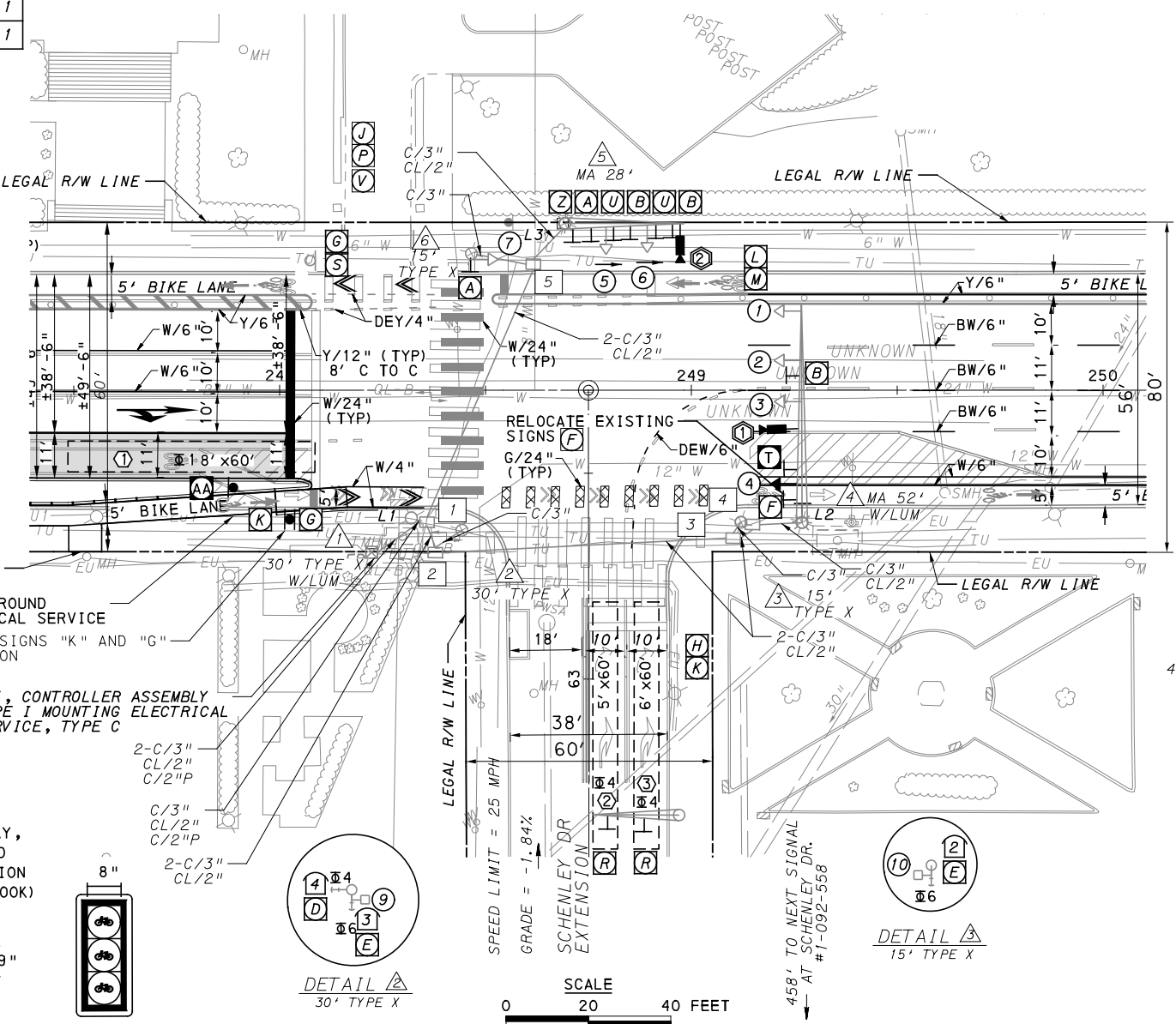
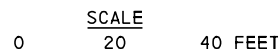
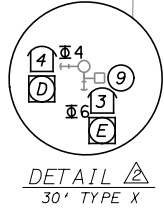
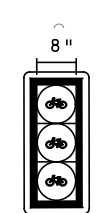
SPEED LIMIT = 25 MPH  
 GRADE = 2.0%  
 SR 2108 (FORBES AVE)  
 405' TO NEXT SIGNAL AT BIGELOW BLVD. #1-092-21



UNDERGROUND ELECTRICAL SERVICE  
 RESET SIGNS "K" AND "G" AS SHOWN  
 CCI, CONTROLLER ASSEMBLY TYPE I MOUNTING ELECTRICAL SERVICE, TYPE C



SINGLE UNIT HAND/MAN OVERLAY, COUNTDOWN, LED (FILLED INDICATION W/INCANDESCENT LOOK)  
 18"  
 16" 9"



400' TO NEXT SIGNAL AT BELLEFIELD AVE

TS-336

COUNTY: ALLEGHENY
MUNICIPALITY: CITY OF PITTSBURGH
INTERSECTION: SR 2108 (FORBES AVENUE) SCHENLEY DRIVE EXTENSION
APPROVED AND ACCEPTED:
CITY TRAFFIC ENGINEER _____ DATE _____
APPROVED AND ACCEPTED:
DISTRICT TRAFFIC ENGINEER _____ DATE _____

**AECOM**  
 Gulf Tower  
 707 Grant Street  
 5th Floor  
 Pittsburgh, PA 15219

**DRIVE ENGINEERING**  
 595 Skippack Pk,  
 Suite 400  
 Blue Bell, PA 19422

NO.	DATE	DESCRIPTION
REVISIONS		

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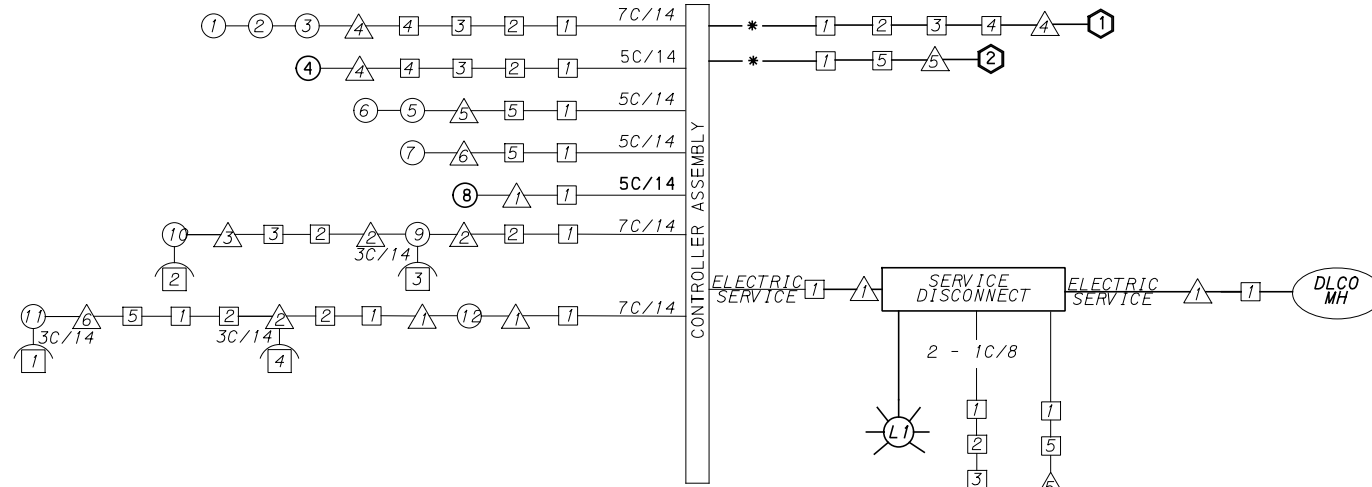
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DESIGNED	MW
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IN CHARGE	EMC
DATE	05/01/24
SCALE	AS SHOWN

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
 PITTSBURGH PENNSYLVANIA  
**BUS RAPID TRANSIT UPTOWN TO OAKLAND**  
 SIGNAL PLANS  
 FORBES AVENUE & SCHENLEY DRIVE EXTENSION  
**Port Authority** connecting people to life  
 CONTRACT NO. BRT-001  
 DWG. NO. SG142 SHT. 1202

**MOVEMENT, PHASING AND SEQUENCE CHART**

SIGNAL	INTERVAL	PHASE 1 (BUS PHASE)			PHASE 6				PHASE 4					FLASHING LUMINAIRE
		1	2	3	1	2	3	4	1	2	3	4	5	
1-2-3		R	R	R					R	R	R	R	R	R
4		G	Y	R					R	R	R	R	R	R
5-6		R	R	R					R	R	R	R	R	R
7		G	G	G					R	R	R	R	R	R
8-9		W	W	W					DW	DW	DW	DW	DW	OFF
10-11		DW	DW	DW					W	W	FD	DW	DW	OFF
FIXED		X	3	2					X	3	3			
MINIMUM		5										13		
PASSAGE													3	
FREE (MAX)		5												
PEDESTRIAN									7	16			3	7
MEMORY		NON-LOCKING			PED RECALL				PED RECALL					



**WIRING DIAGRAM**  
 5C/14 - CABLE(NO. OF CONDUCTORS/SIZE AWG.)  
 ○ SIGNAL HEAD      △ SIGNAL SUPPORT  
 □ AUDIBLE PEDESTRIAN INDICATOR      □ JUNCTION BOX  
 ○ RADAR DETECTOR      ⊙ LUMINAIRE  
 \* INCIDENTAL TO ITEM 02895.001, AS PER MANUFACTURERS SPECIFICATIONS

**DETECTOR ZONE INFORMATION**

DETECTOR	DETECTION ZONE(S)	MODE	TYPE	ROUTE	PHASE	LOCATION MAST ARM
①	① (8' x 60')	PRESENCE	VIDEO (STOP BAR)	FORBES AVE.	1	△
②	② (5' x 60')	PRESENCE	VIDEO (STOP BAR)	SCHENLEY DR EXT.	4	△
③	③ (6' x 60')	PRESENCE	VIDEO (STOP BAR)	SCHENLEY DR EXT.	4	△

**TRANSIT PRIORITY PRE-EMPTION NOTES (TO BE INSTALLED BY OTHERS)**

- COORDINATE TRAFFIC CONTROLLER PROGRAMMING MODIFICATION WITH REPRESENTATIVES OF THE CITY OF PITTSBURGH AND DISTRICT TRAFFIC UNIT.
- INCLUDE A TRANSIT PRIORITY PHASE THAT WILL EXTEND THE INDICATED PHASE A MAXIMUM OF 10 SECONDS WHEN ACTIVATED BY A PORT AUTHORITY VEHICLE. DO NOT VIOLATE SIDE STREET PEDESTRIAN MINIMUM TIMINGS.
- MAINTAIN ALL YELLOW CLEARANCES AT ALL TIMES.
- PROCEED TO THE SUBSEQUENT INTERVAL AS DEFINED IN THE MOVEMENT, SEQUENCE AND TIMING DIAGRAM UPON COMPLETING THE GREEN EXTENSION INTERVAL.
- ONCE A TRANSIT CALL IS PLACED AND SATISFIED, THE CONTROLLER WILL NOT SATISFY ANOTHER CALL FOR 4 CYCLES.
- LOCATION OF BUS DETECTORS ARE TO BE FIELD ADJUSTED TO ACHIEVE MAXIMUM OPERATION.

**GENERAL NOTES**

THE CITY OF PITTSBURGH SHALL INSPECT THE NEW SIGNAL EQUIPMENT PRIOR TO ACTIVATION.  
 ALL TRAFFIC SIGNAL MAINTENANCE AND OPERATION RESPONSIBILITIES SHALL BE TURNED OVER TO THE CITY OF PITTSBURGH AFTER THE FOLLOWING CONDITIONS ARE IMPLEMENTED TO THE CITY'S SATISFACTION:

- PERMIT "AS-BUILT" TRAFFIC SIGNAL DRAWINGS ARE SUBMITTED AND APPROVED.
- ALL PUNCH LIST ITEMS ARE COMPLETED BY THE CONTRACTOR.
- AFTER THE 30-DAY CONTINUOUS UNINTERRUPTED SIGNAL OPERATION WITHOUT MALFUNCTIONS.

**CONSTRUCTION NOTES**

- ALL JUNCTION BOXES IN WALK AREAS TO BE CITY OF PITTSBURGH STANDARD CONCRETE JUNCTION BOX, TYPE 1.
- ALL JUNCTION BOXES IN NON-WALK AREAS TO BE CITY STANDARD JB-2 WITH BOTTOM.
- THERE SHALL BE NO SIGNAL WIRE OR FIBER CABLE SPLICING.
- SERVICE WIRE FROM THE POWER SOURCE TO THE CONTROLLER CABINET SHALL BE PLACED IN SECONDARY SEPARATE CONDUIT.
- STREET LIGHT CABLE IS NOT PERMITTED TO RUN THROUGH THE CONTROLLER CABINET AND SHALL BE PLACED IN SEPARATE CONDUIT.
- TRAFFIC SIGNAL CABLE SHALL BE PLACED IN DEDICATED CONDUIT.
- MOUNT DISCONNECT ON POLE NEAREST TO THE CONTROLLER CABINET EXCLUDING TYPE X POLES.
- REMOVE AND DISPOSE OF ALL EXISTING SIGNAL WIRING NO LONGER IN USE.
- REMOVE EXISTING SIGNAL EQUIPMENT NO LONGER IN USE AND RETURN TO THE CITY OF PITTSBURGH TRAFFIC CONTROL SHOP. COORDINATE DELIVERY OF EQUIPMENT WITH DELMAS MCELHANY, TRAFFIC CONTROL FOREMAN.

TS-336

COUNTY: ALLEGHENY  
 MUNICIPALITY: CITY OF PITTSBURGH  
 INTERSECTION: SR 2108 (FORBES AVENUE)  
 SCHENLEY DRIVE EXTENSION

APPROVED AND ACCEPTED:  
 CITY TRAFFIC ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_  
 APPROVED AND ACCEPTED:  
 DISTRICT TRAFFIC ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_



NO.	DATE	DESCRIPTION
REVISIONS		

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**(NOT FOR CONSTRUCTION)**

DESIGNED	MW
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CHECKED	EMC
IN CHARGE	EMC
DATE	05/01/24
SCALE	AS SHOWN

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
 PITTSBURGH PENNSYLVANIA  
**BUS RAPID TRANSIT UPTOWN TO OAKLAND**  
 SIGNAL PLANS  
 WIRING, MOVEMENT, PHASING & SEQUENCE DIAGRAMS

**Port Authority** connecting people to life  
 CONTRACT NO. BRT-001  
 DWG. NO. SG143 SHT. 1203





**TRAFFIC SIGNAL TABULATION**

SR 2108 (FORBES AVENUE) AND  
 SCHENLEY DRIVE EXTENSION

TRENCH, CONDUIT, JUNCTION BOX, ELECTRICAL ITEMS

DESCRIPTION	SIGNAL CABLE, 14 AWG, 5 CONDUCTOR
ITEM NUMBER	02900
	002
UNIT	LF
LOCATION	
COMPLETE INTERSECTION	263
TOTAL	263

SIGNS

SYMBOL	SERIES	SIZE	AREA EACH (SQ FT)	DESCRIPTION	QUANTITY	02891.007 STRUCTURE MOUNTED FLAT SHEET ALUMINUM SIGNS WITH STIFFENERS
T	SPECIAL	30"x30"	6.3	BUS LANE SIGNAL	1	6.3
TOTAL						6.3



Gulf Tower  
 707 Grant Street  
 5th Floor  
 Pittsburgh, PA 15219



595 Skippack Pk,  
 Suite 400  
 Blue Bell, PA 19422

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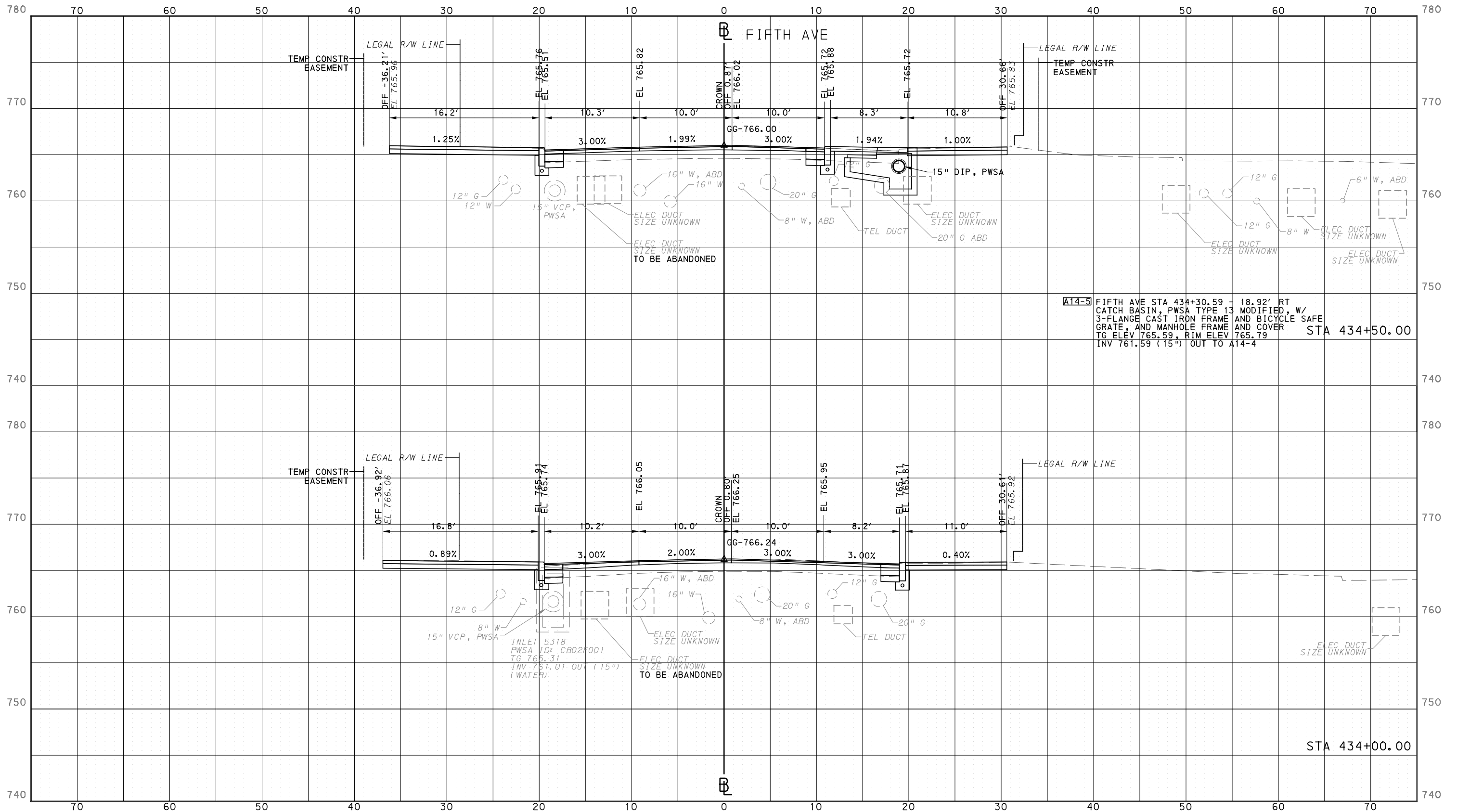
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<b>PORT AUTHORITY OF ALLEGHENY COUNTY</b> PITTSBURGH PENNSYLVANIA	
BUS RAPID TRANSIT UPTOWN TO OAKLAND SIGNAL PLANS TRAFFIC SIGNAL TABULATIONS	
<b>Port Authority</b> <small>connecting people to life</small>	CONTRACT NO. BRT-001
DWG. NO. SG145	SHT. 1205

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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS



**A14-5** FIFTH AVE STA 434+30.59 - 18.92' RT CATCH BASIN, PWSA TYPE 13 MODIFIED, W/ 3-FLANGE CAST IRON FRAME AND BICYCLE SAFE GRATE, AND MANHOLE FRAME AND COVER STA 434+50.00  
TG ELEV 765.59, RIM ELEV 765.79  
INV 761.59 (15") OUT TO A14-4



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IN CHARGE	LAR
DATE	05/01/24
SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT**  
CROSS SECTIONS  
FIFTH AVE - STA 434+00.00 TO STA 434+50.00

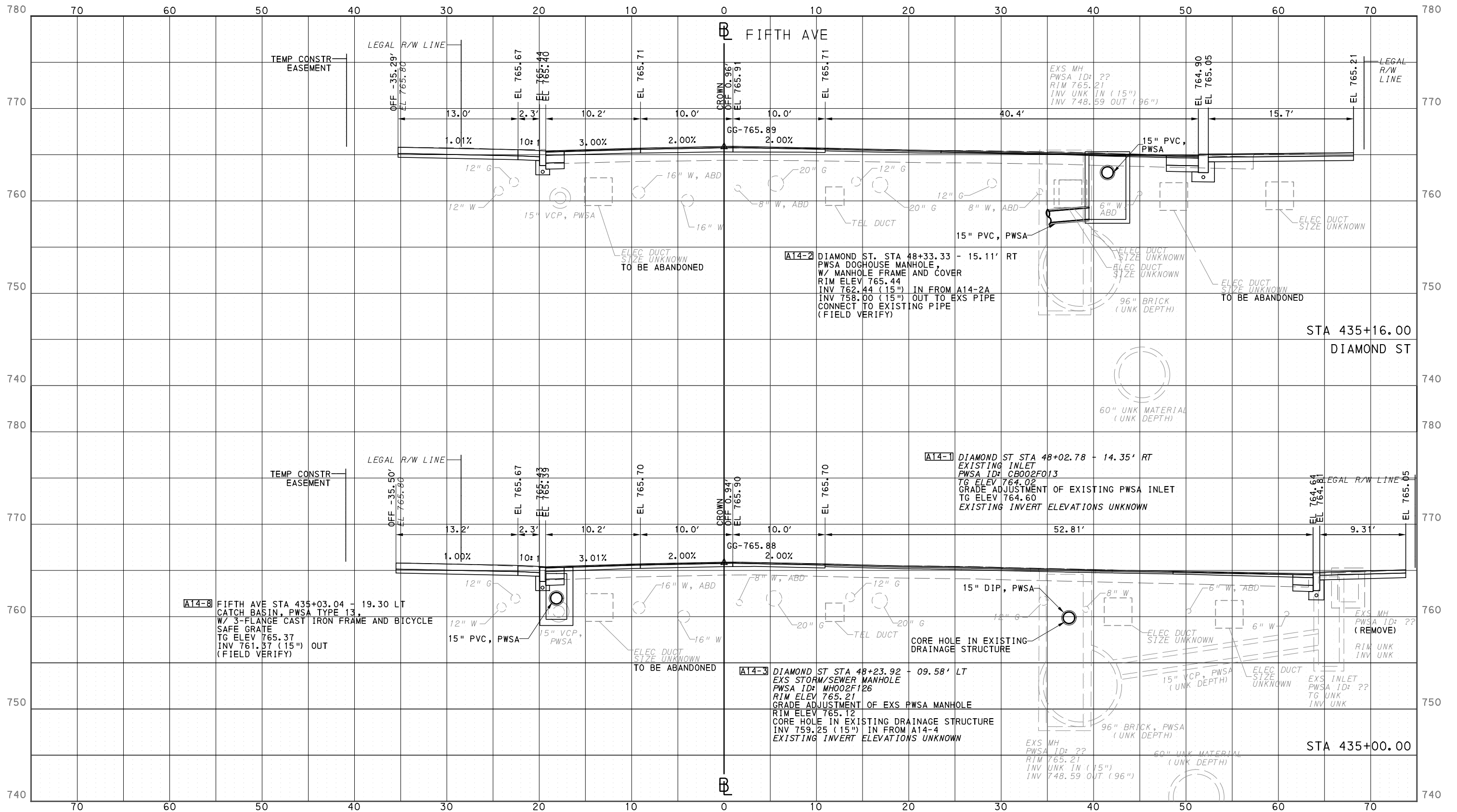
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DWG. NO. XS1 SHT. 1206

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DATE	05/01/24
SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT**  
CROSS SECTIONS  
FIFTH AVE - STA 435+00 TO STA 435+16.00

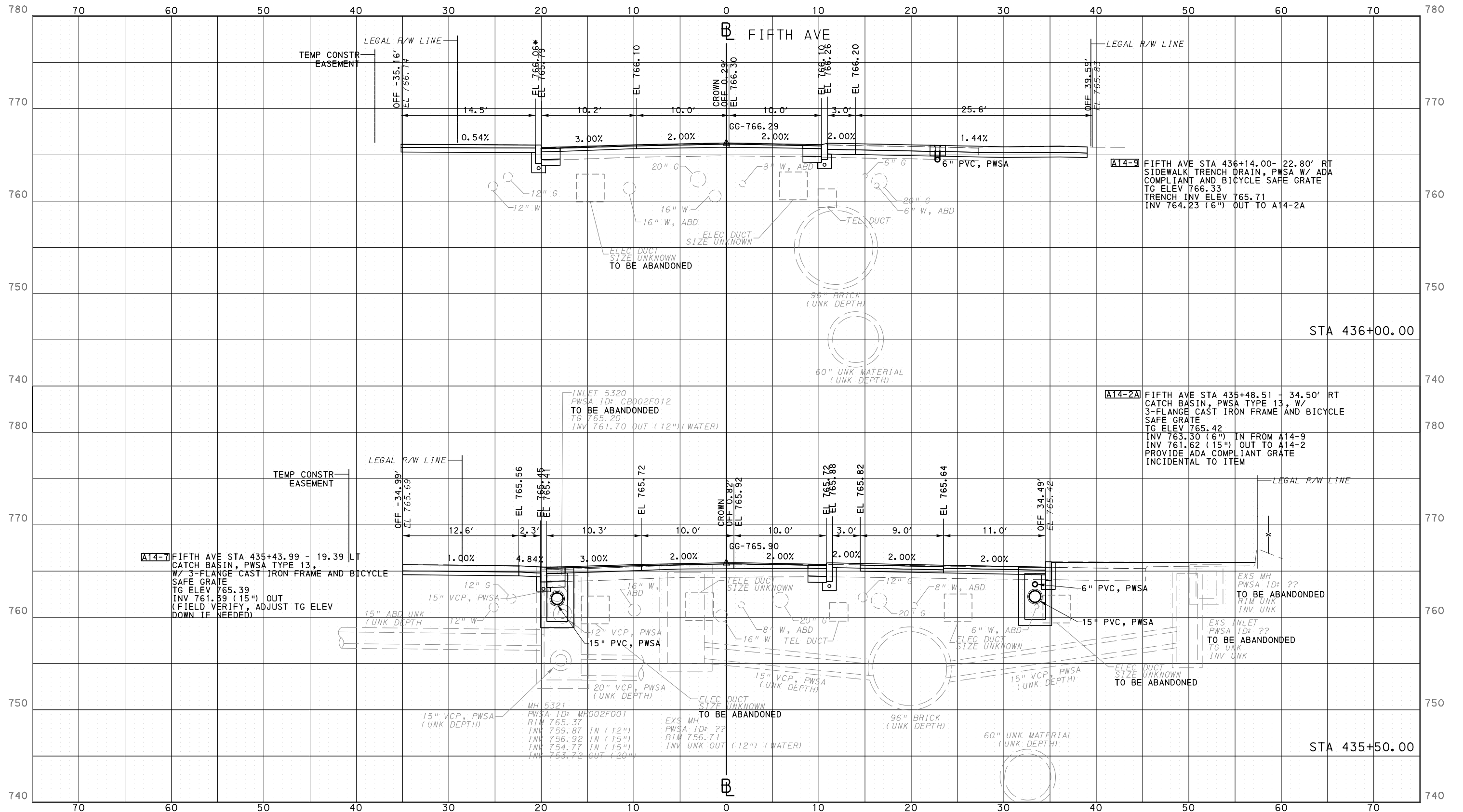
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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS



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5th Floor  
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DESIGNED	DRS
DRAWN	DRS
CHECKED	BFS
IN CHARGE	LAR
DATE	05/01/24
SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT**  
CROSS SECTIONS  
FIFTH AVE - STA 435+50.00 TO STA 436+00.00

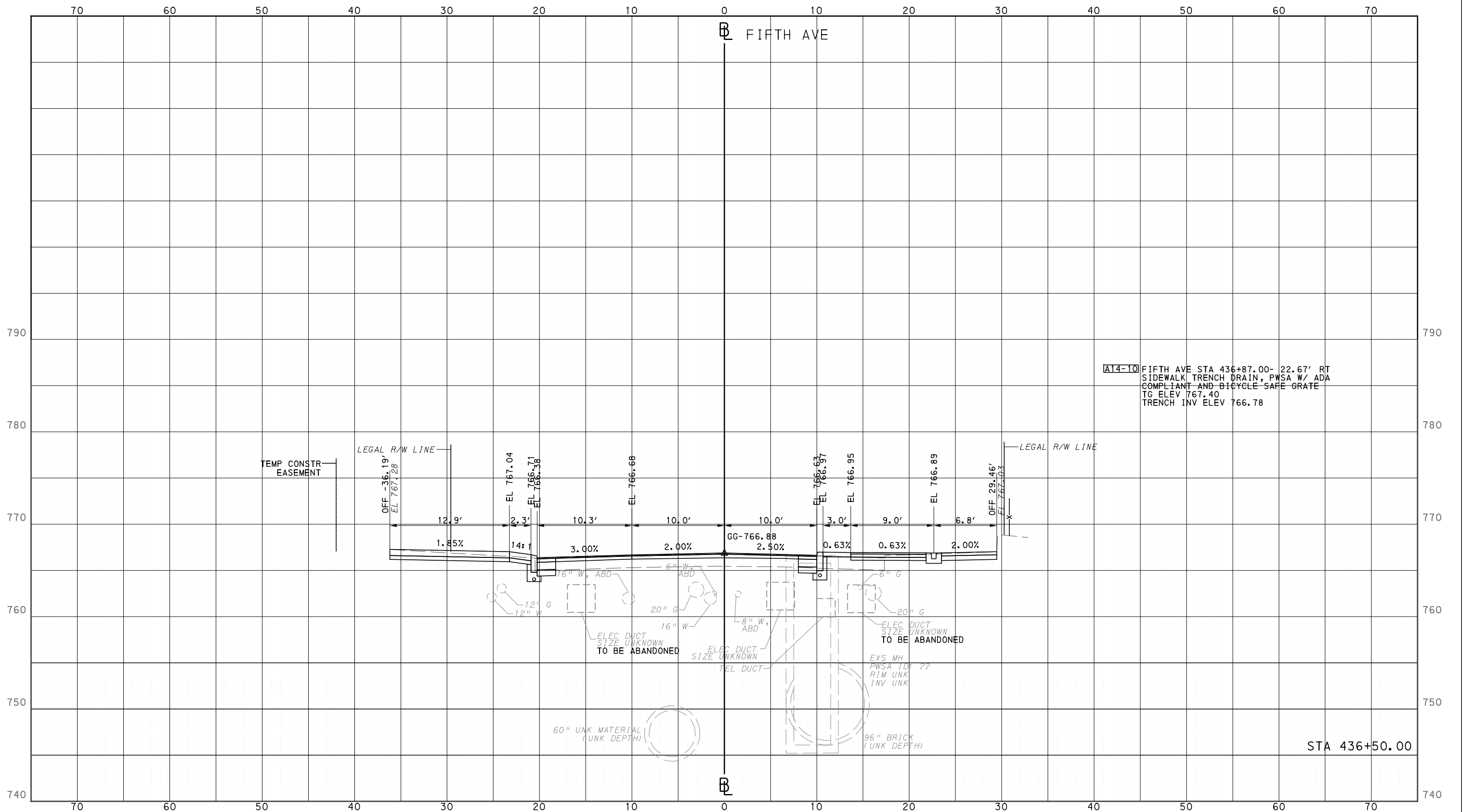
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DWG. NO. XS3 SHT. 1208

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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS



A14-10 FIFTH AVE STA 436+87.00- 22.67' RT  
SIDEWALK TRENCH DRAIN, PWSA W/ ADA  
COMPLIANT AND BICYCLE SAFE GRATE  
TG ELEV 767.40  
TRENCH INV ELEV 766.78

STA 436+50.00

**AECOM**  
Gulf Tower  
707 Grant Street  
5th Floor  
Pittsburgh, PA 15219

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DRAWN	DRS
CHECKED	BFS
IN CHARGE	LAR
DATE	05/01/24
SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT**  
CROSS SECTIONS  
FIFTH AVE - STA 436+50.00

**Port Authority** connecting people to life™

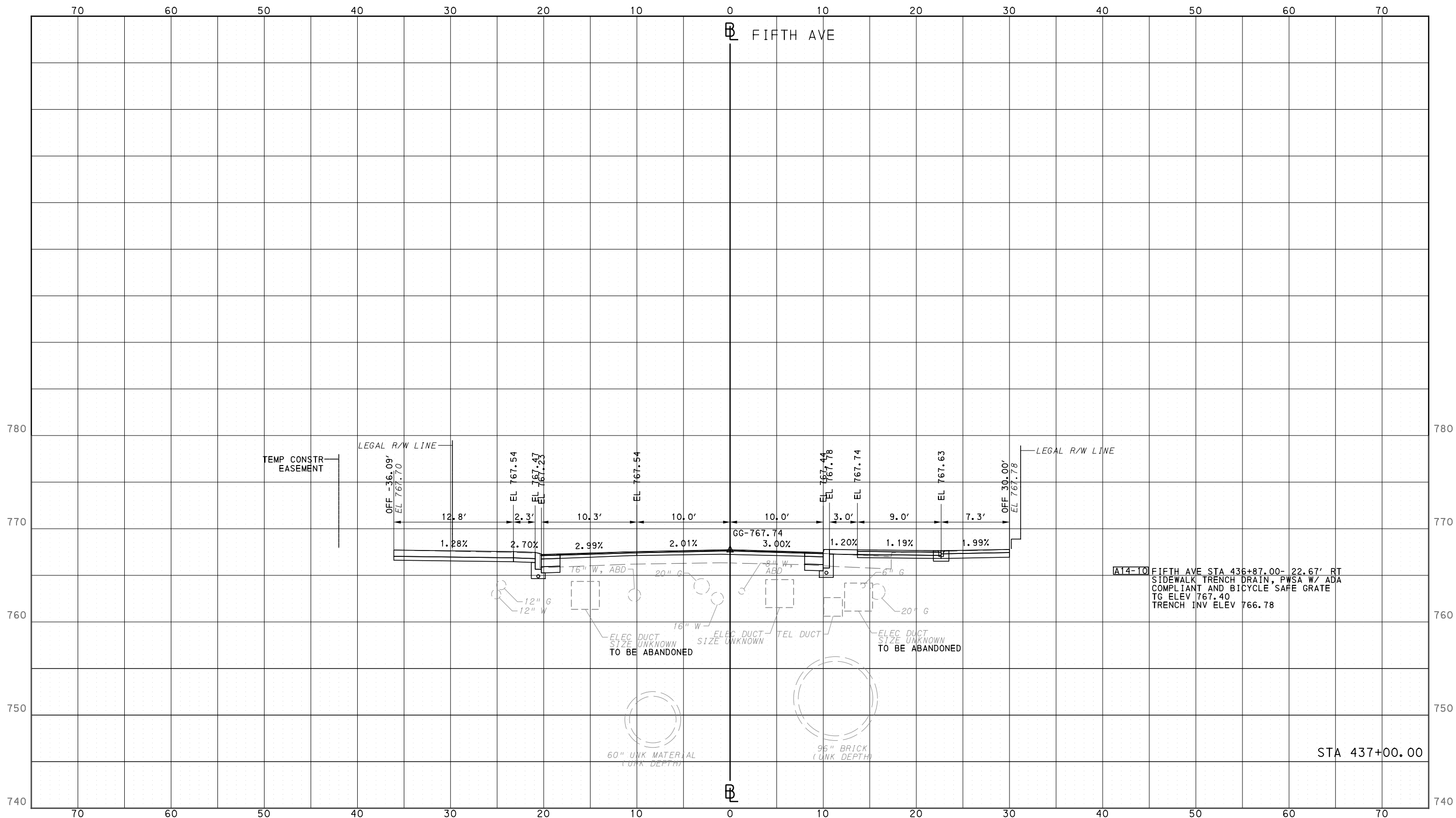
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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS



A14-10 FIFTH AVE STA 436+87.00- 22.67' RT  
SIDEWALK TRENCH DRAIN, PWSA W/ ADA  
COMPLIANT AND BICYCLE SAFE GRATE  
TG ELEV 767.40  
TRENCH INV ELEV 766.78

STA 437+00.00



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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT  
CROSS SECTIONS  
FIFTH AVE - STA 437+00.00**

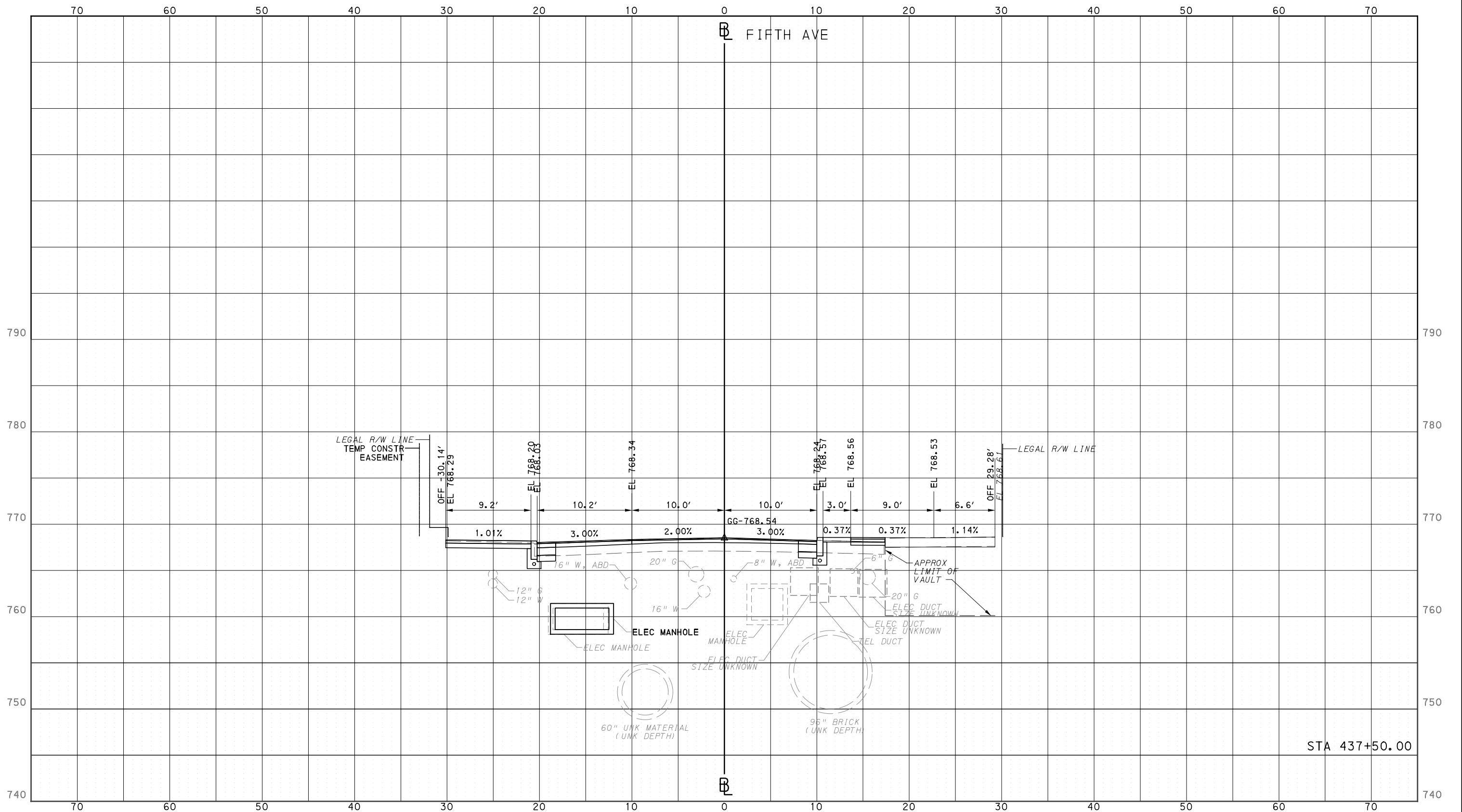
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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS



Gulf Tower  
707 Grant Street  
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Pittsburgh, PA 15219

NO.	DATE	DESCRIPTION
REVISIONS		

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DESIGNED	DRS
DRAWN	DRS
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IN CHARGE	LAR
DATE	05/01/24
SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT**  
CROSS SECTIONS  
FIFTH AVE - STA 437+50.00

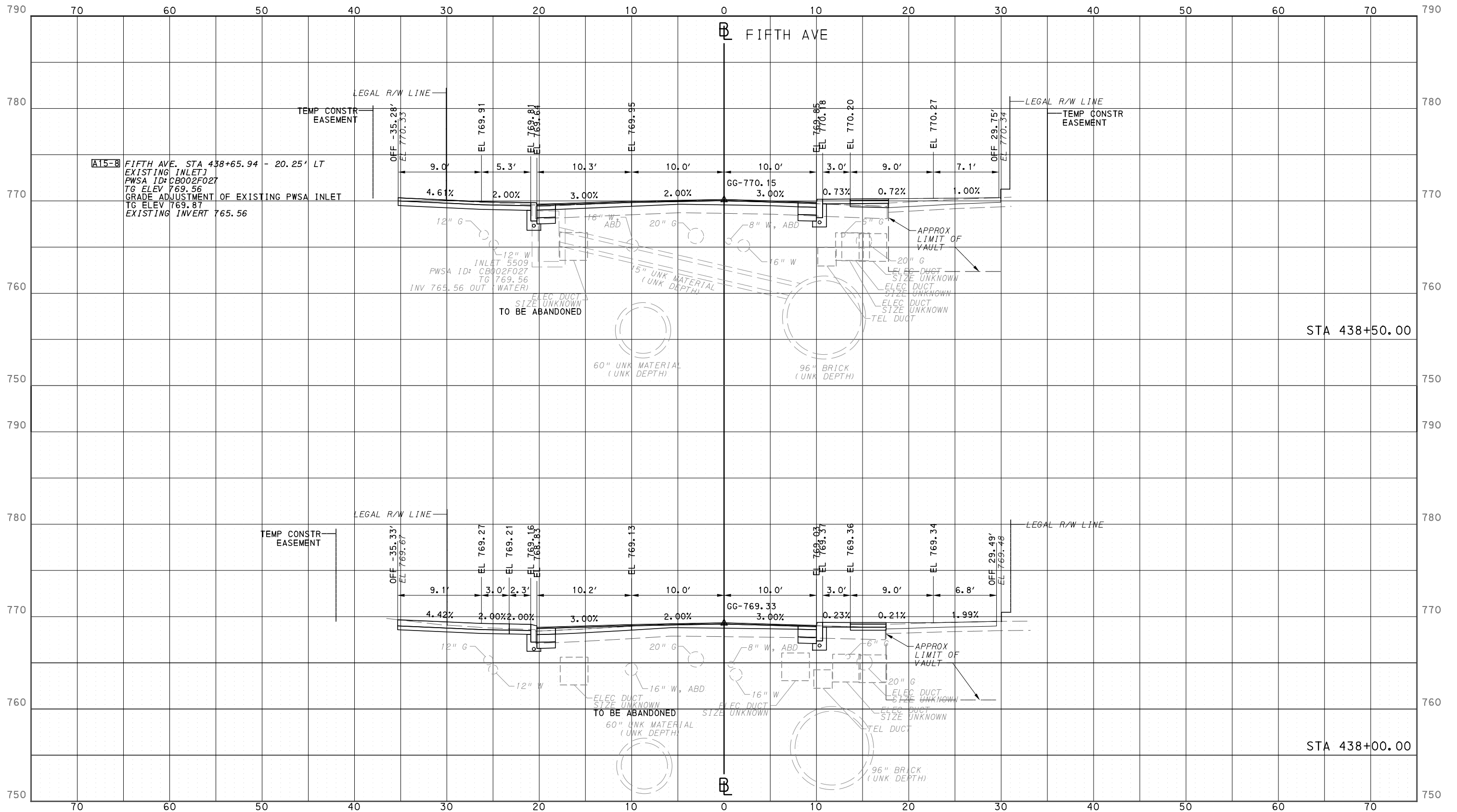
**Port Authority** connecting people to life

CONTRACT NO. BRT-001  
DWG. NO. XS6 SHT. 1211

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PORT AUTHORITY OF ALLEGHENY COUNTY  
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DATE	05/01/24
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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT**  
CROSS SECTIONS  
FIFTH AVE - STA 438+00.00 TO STA 438+50.00

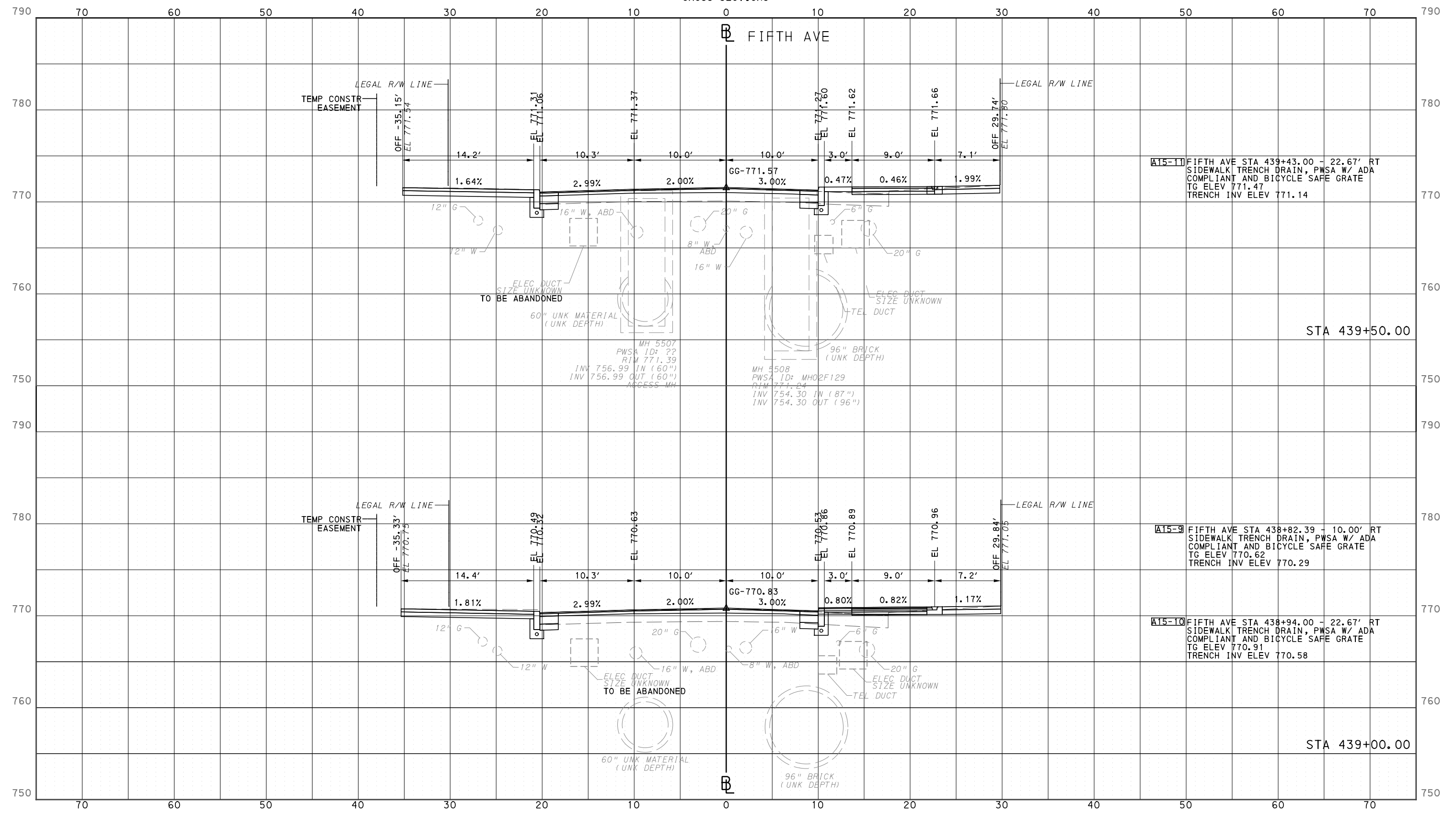
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CONTRACT NO. BRT-001  
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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS



[A15-11] FIFTH AVE STA 439+43.00 - 22.67' RT  
SIDEWALK TRENCH DRAIN, PWSA W/ ADA  
COMPLIANT AND BICYCLE SAFE GRATE  
TG ELEV 771.47  
TRENCH INV ELEV 771.14

STA 439+50.00

[A15-9] FIFTH AVE STA 438+82.39 - 10.00' RT  
SIDEWALK TRENCH DRAIN, PWSA W/ ADA  
COMPLIANT AND BICYCLE SAFE GRATE  
TG ELEV 770.62  
TRENCH INV ELEV 770.29

[A15-10] FIFTH AVE STA 438+94.00 - 22.67' RT  
SIDEWALK TRENCH DRAIN, PWSA W/ ADA  
COMPLIANT AND BICYCLE SAFE GRATE  
TG ELEV 770.91  
TRENCH INV ELEV 770.58

STA 439+00.00



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PORT AUTHORITY OF ALLEGHENY COUNTY  
PITTSBURGH PENNSYLVANIA

BUS RAPID TRANSIT  
CROSS SECTIONS  
FIFTH AVE - STA 439+00.00 TO STA 439+50.00

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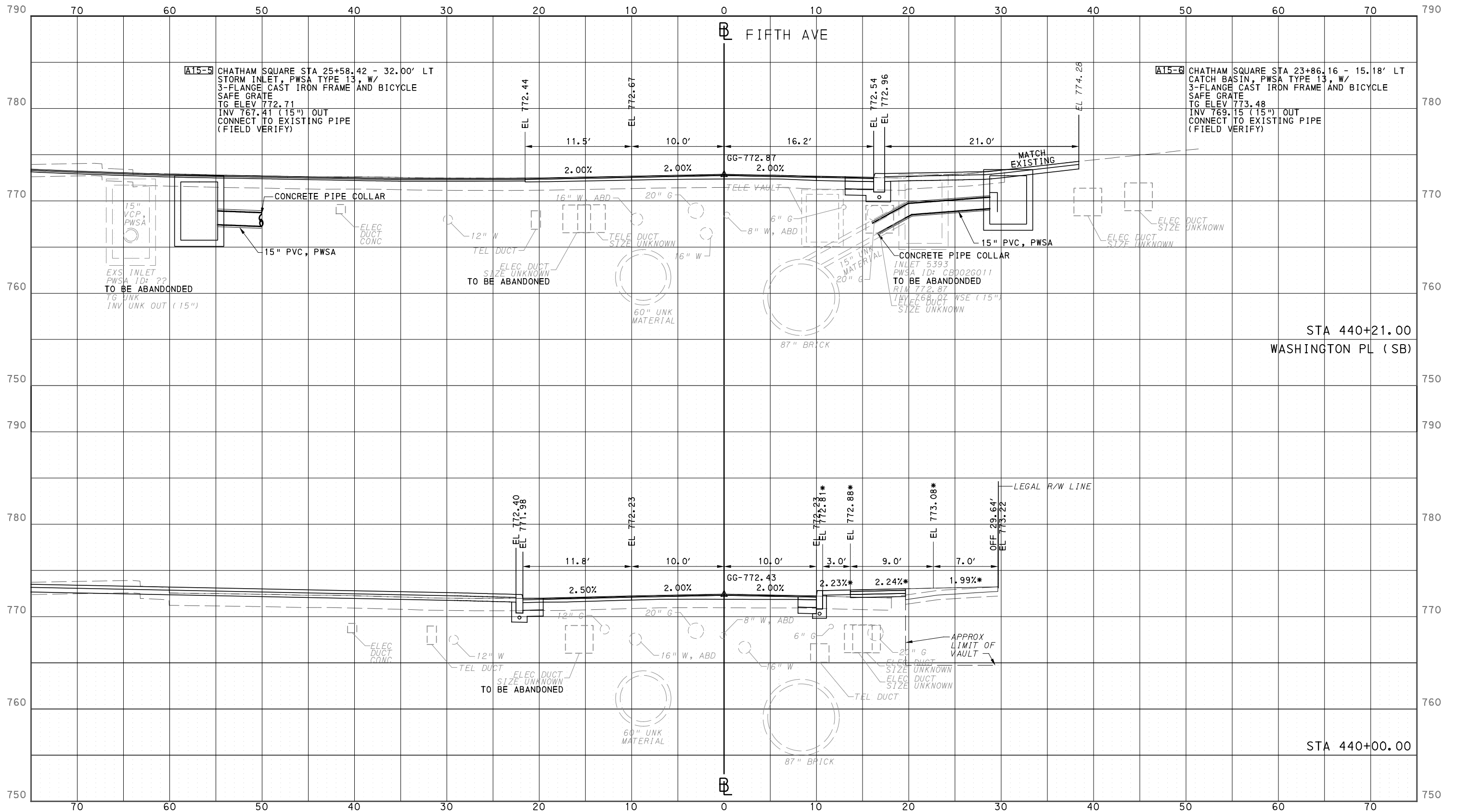
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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS

\*TOP OF CURB ELEVATION AND SIDEWALK SLOPES TO BE DETERMINED PER ITEM 01900.001 - DESIGN OF CURB RAMPS



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SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT**  
CROSS SECTIONS  
FIFTH AVE - STA 440+00.00 TO STA 440+21.00

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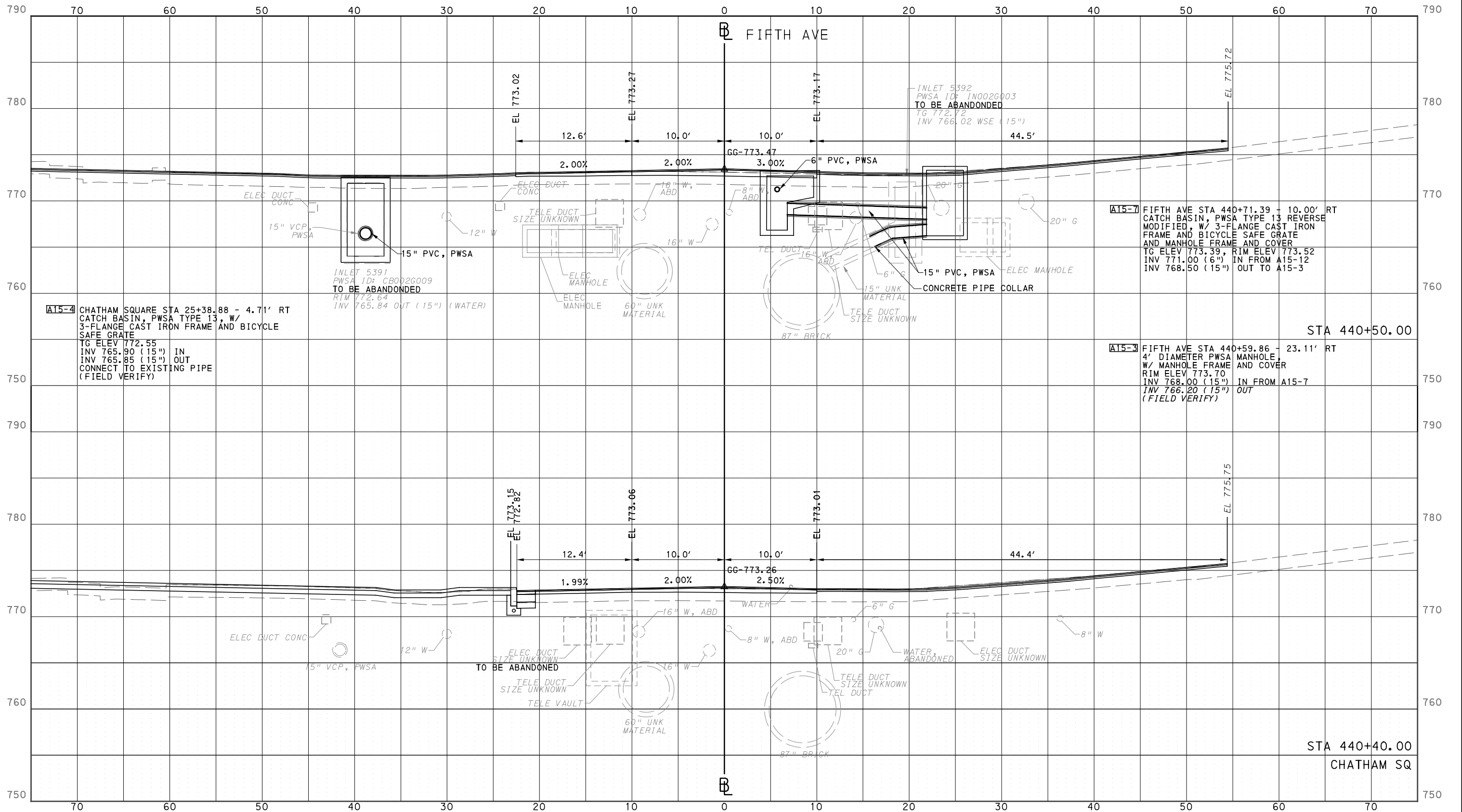
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PORT AUTHORITY OF ALLEGHENY COUNTY  
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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT**  
CROSS SECTIONS  
FIFTH AVE - STA 440+40.00 TO STA 440+50.00

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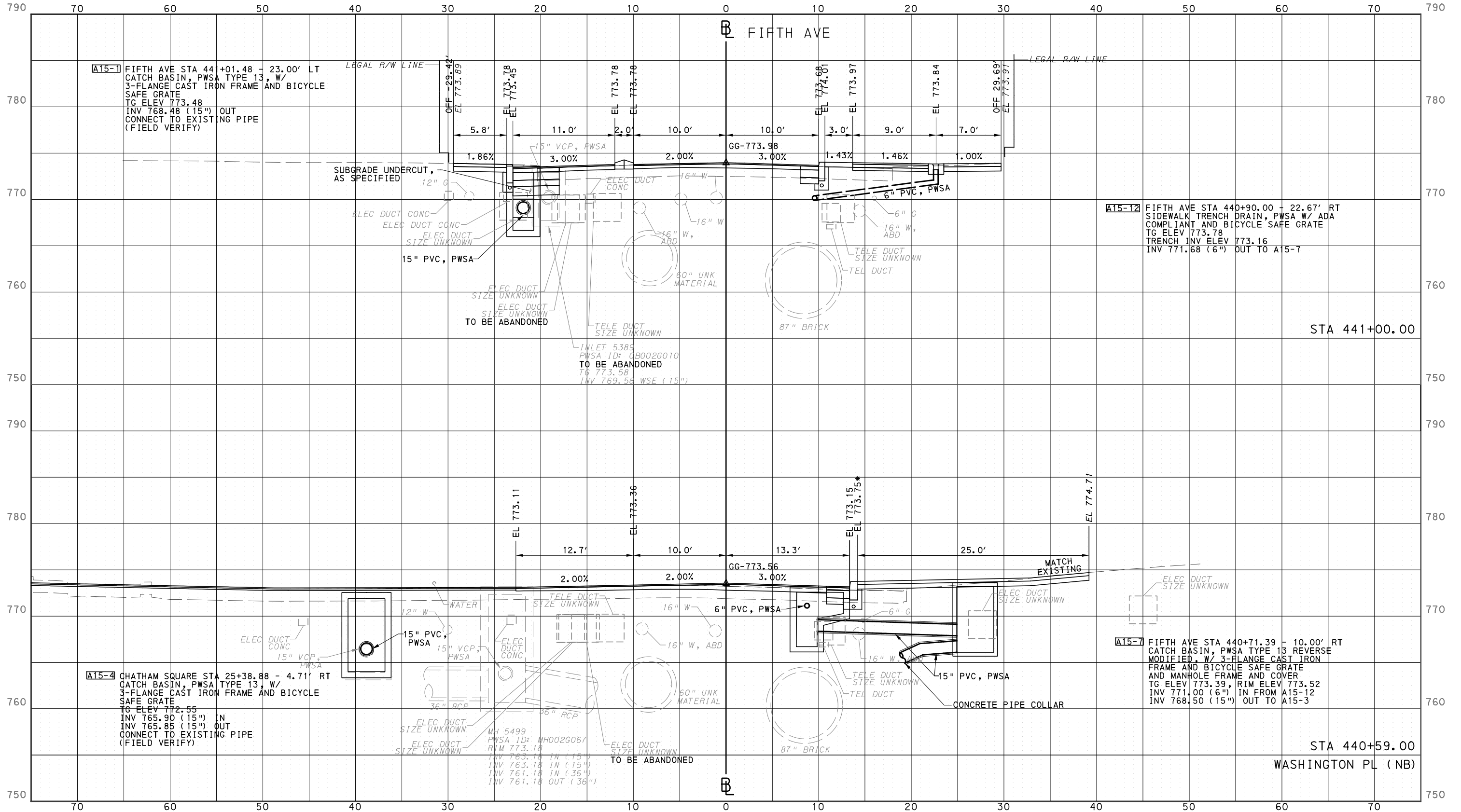
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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS

\*TOP OF CURB ELEVATION AND SIDEWALK SLOPES TO BE DETERMINED PER ITEM 01900.001 - DESIGN OF CURB RAMPS



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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT**  
CROSS SECTIONS  
FIFTH AVE - STA 440+59.00 TO STA 441+00.00

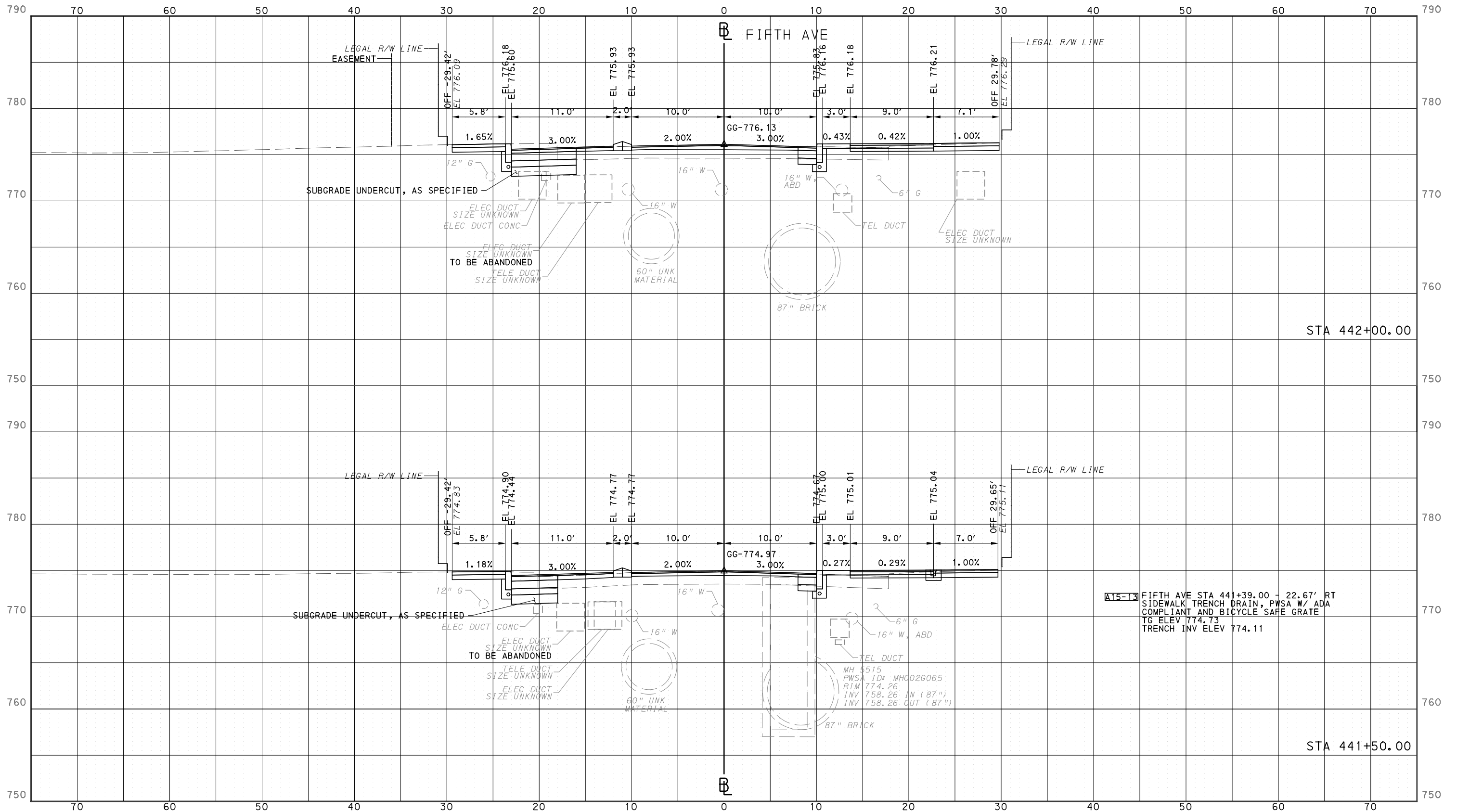
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CONTRACT NO. BRT-001	
DWG. NO. XS11	SHT. 1216

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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS



**A15-13** FIFTH AVE STA 441+39.00 - 22.67' RT  
SIDEWALK TRENCH DRAIN, PWSA W/ ADA  
COMPLIANT AND BICYCLE SAFE GRATE  
TG ELEV 774.73  
TRENCH INV ELEV 774.11

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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT  
CROSS SECTIONS**  
FIFTH AVE - STA 441+50.00 TO STA 442+00.00

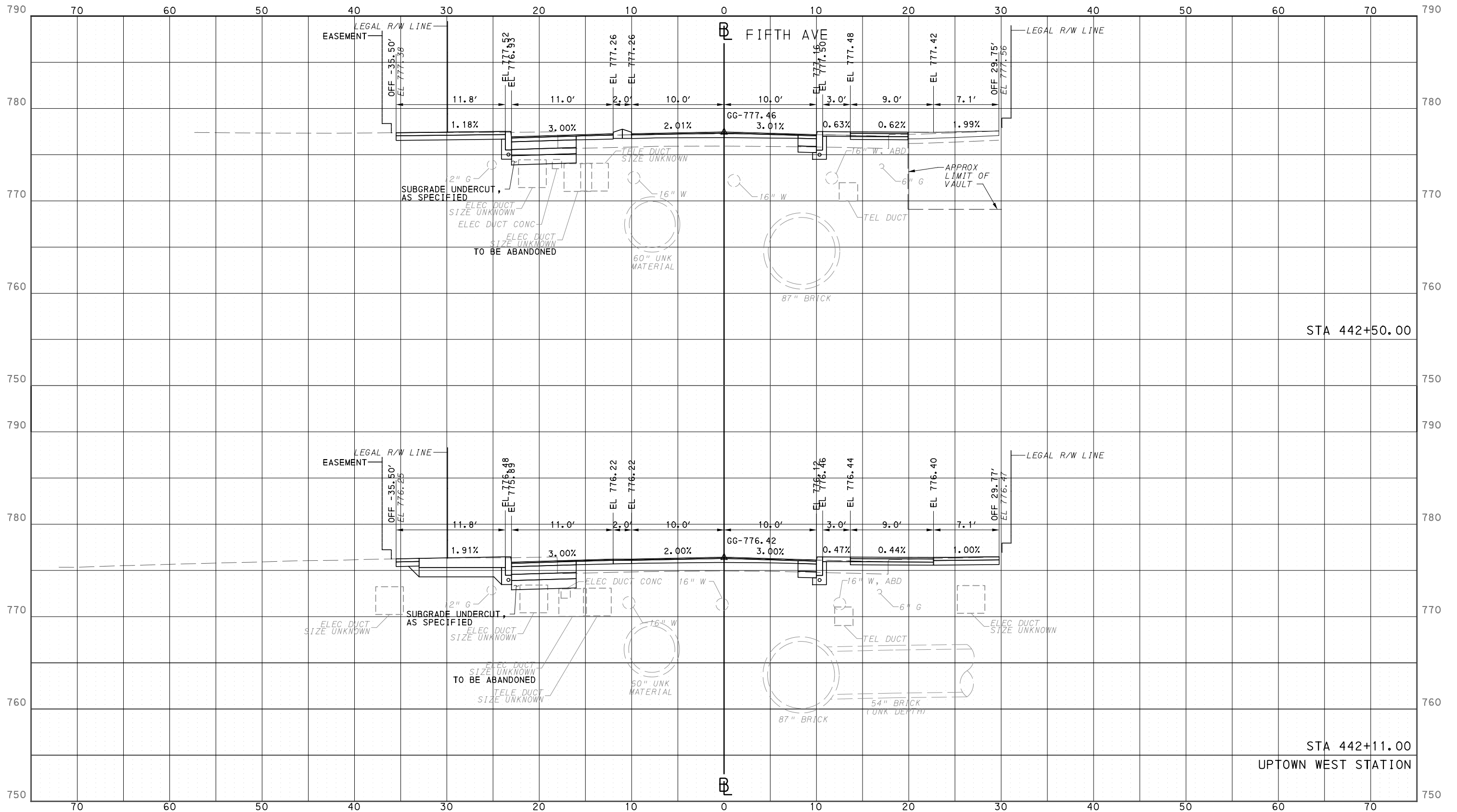
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CONTRACT NO. BRT-001	
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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT**  
CROSS SECTIONS  
FIFTH AVE - STA 442+11.00 TO STA 442+50.00

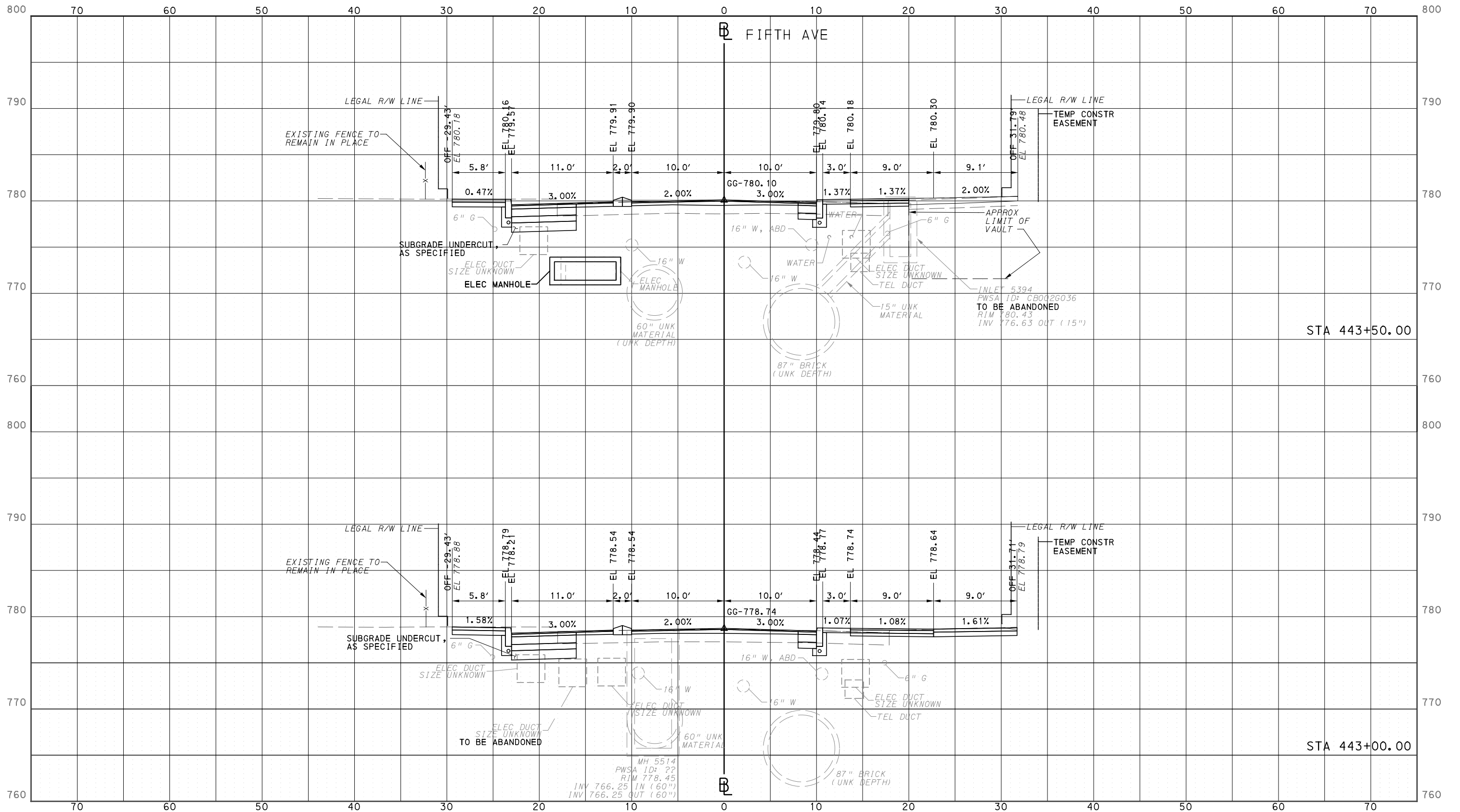
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DWG. NO. XS13	SHT. 1218

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PORT AUTHORITY OF ALLEGHENY COUNTY  
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DATE	05/01/24
SCALE	0 5 10 FEET

PORT AUTHORITY OF ALLEGHENY COUNTY  
PITTSBURGH PENNSYLVANIA

BUS RAPID TRANSIT  
CROSS SECTIONS  
FIFTH AVE - STA 443+00.00 TO STA 443+50.00



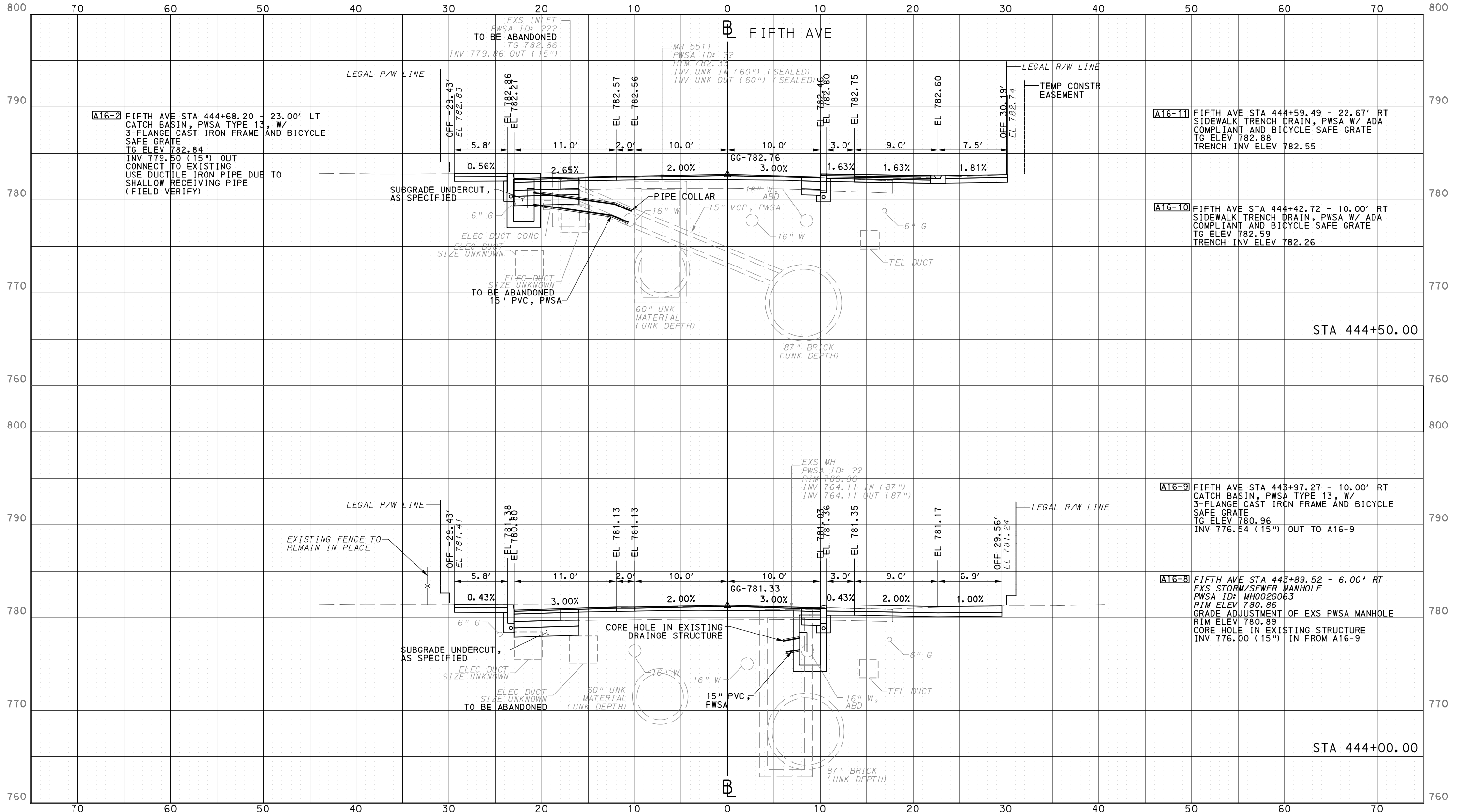
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PORT AUTHORITY OF ALLEGHENY COUNTY  
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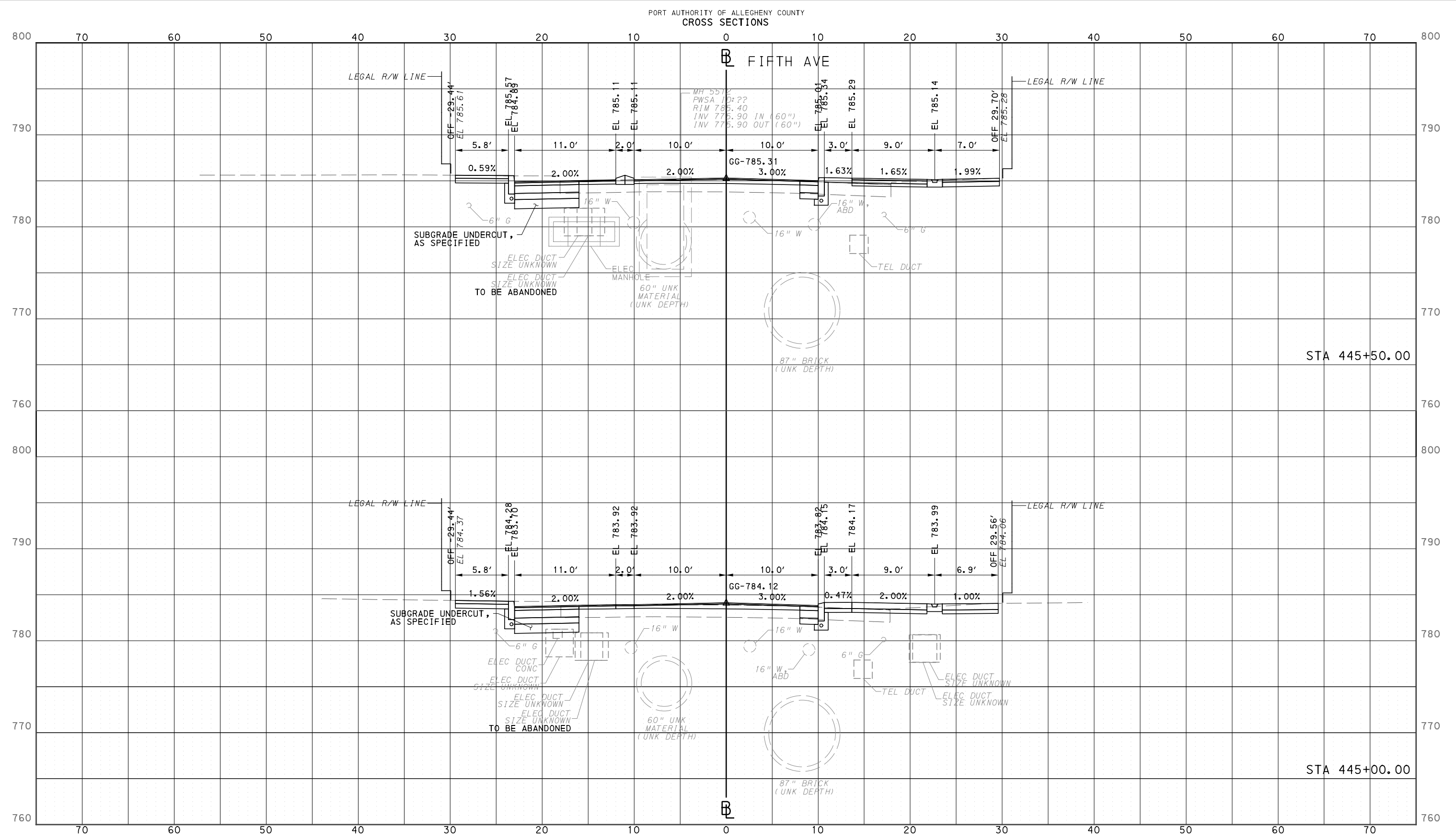
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DATE	05/01/24
SCALE	0 5 10 FEET

<b>PORT AUTHORITY OF ALLEGHENY COUNTY</b> PITTSBURGH PENNSYLVANIA	
<b>BUS RAPID TRANSIT CROSS SECTIONS</b> FIFTH AVE - STA 440+00.00 TO STA 444+50.00	
<b>Port Authority</b> connecting people to life®	CONTRACT NO. BRT-001 DWG. NO. XS15 SHT. 1220

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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
 PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT**  
 CROSS SECTIONS  
 FIFTH AVE - STA 445+00.00 TO STA 445+50.00

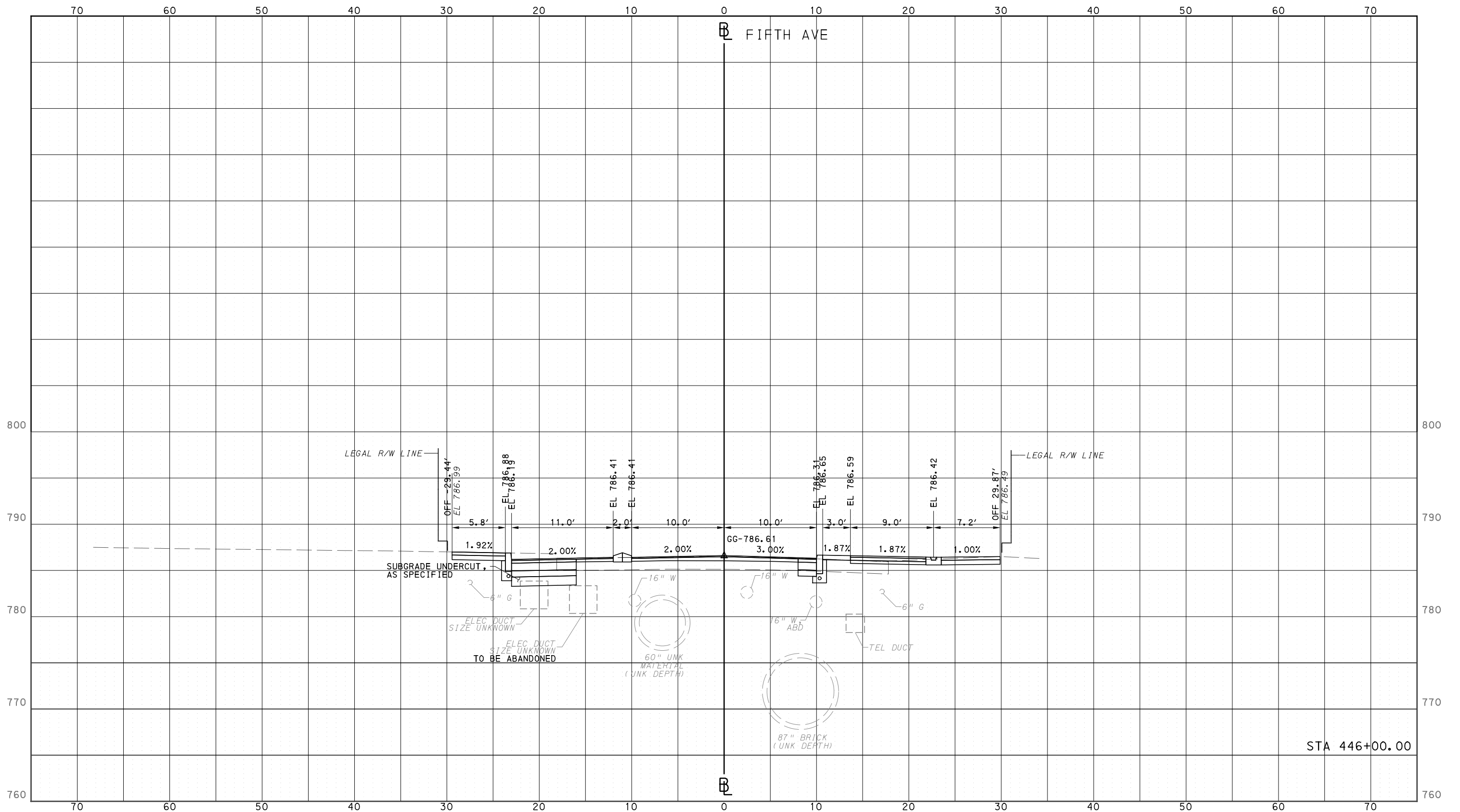
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PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT  
CROSS SECTIONS  
FIFTH AVE - STA 446+00.00**

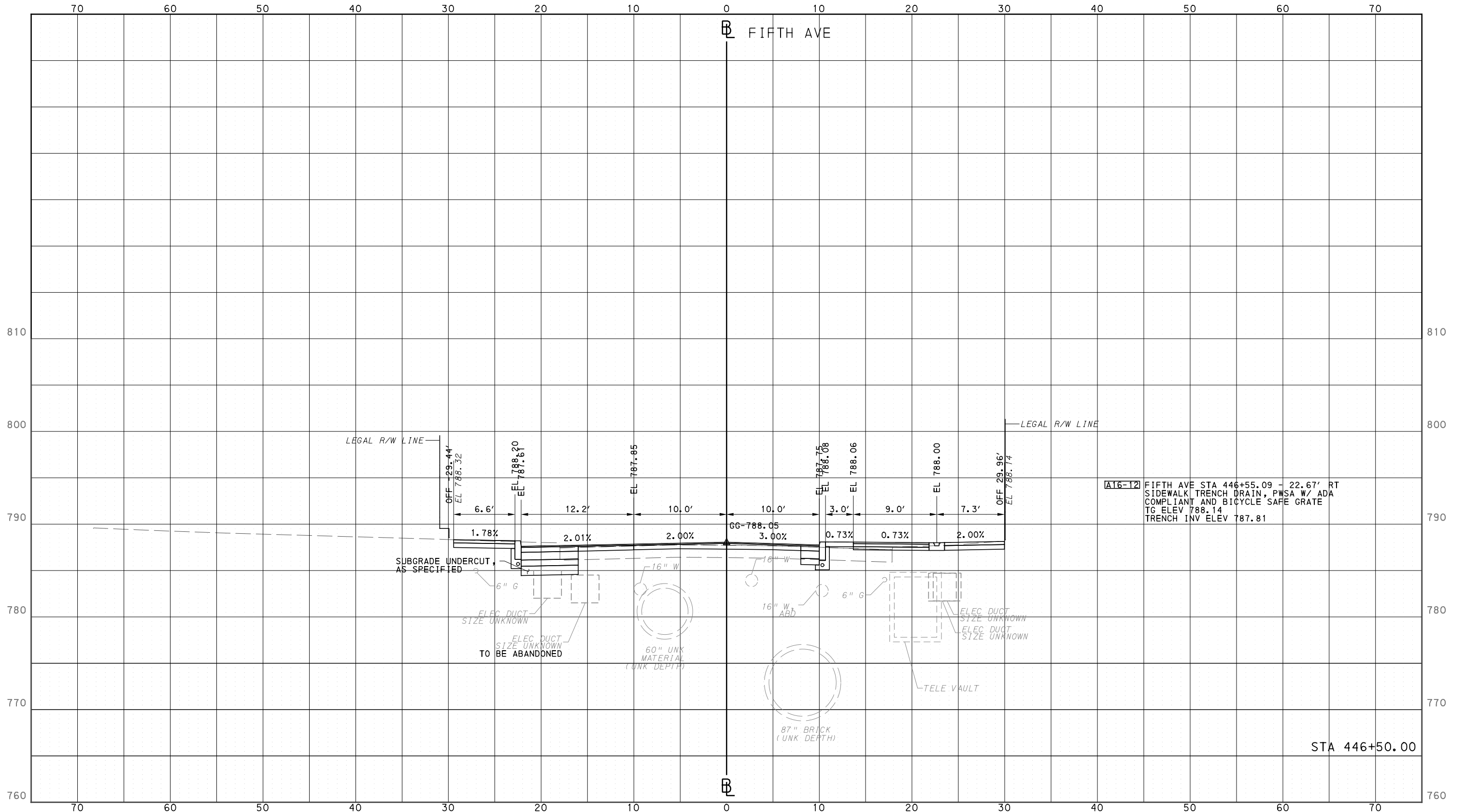
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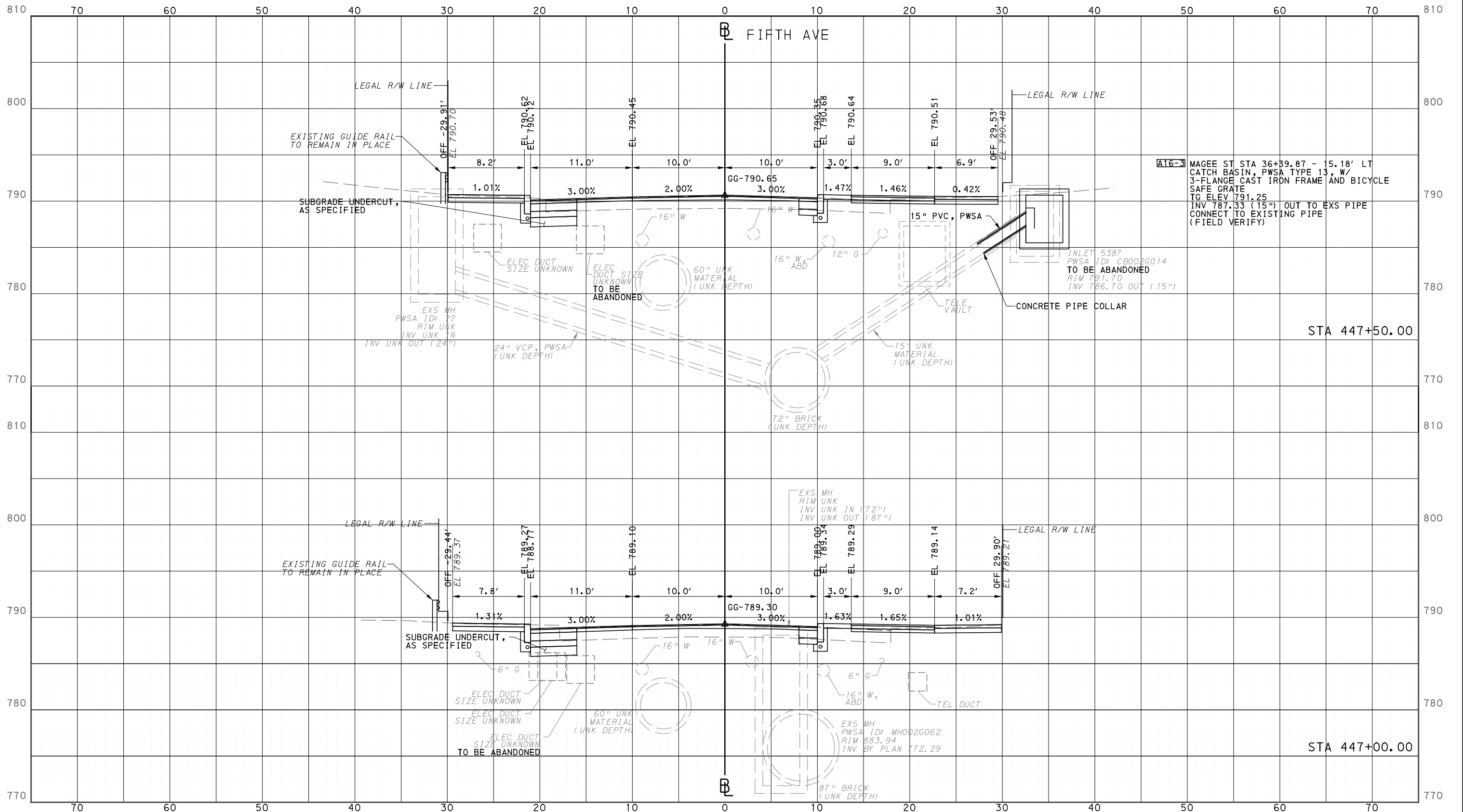
PORT AUTHORITY OF ALLEGHENY COUNTY PITTSBURGH PENNSYLVANIA		
BUS RAPID TRANSIT CROSS SECTIONS FIFTH AVE - STA 446+50.00		
CONTRACT NO. BRT-001		SHT. 1223
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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
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**BUS RAPID TRANSIT**  
CROSS SECTIONS  
FIFTH AVE - STA 447+00.00 TO STA 447+50.00

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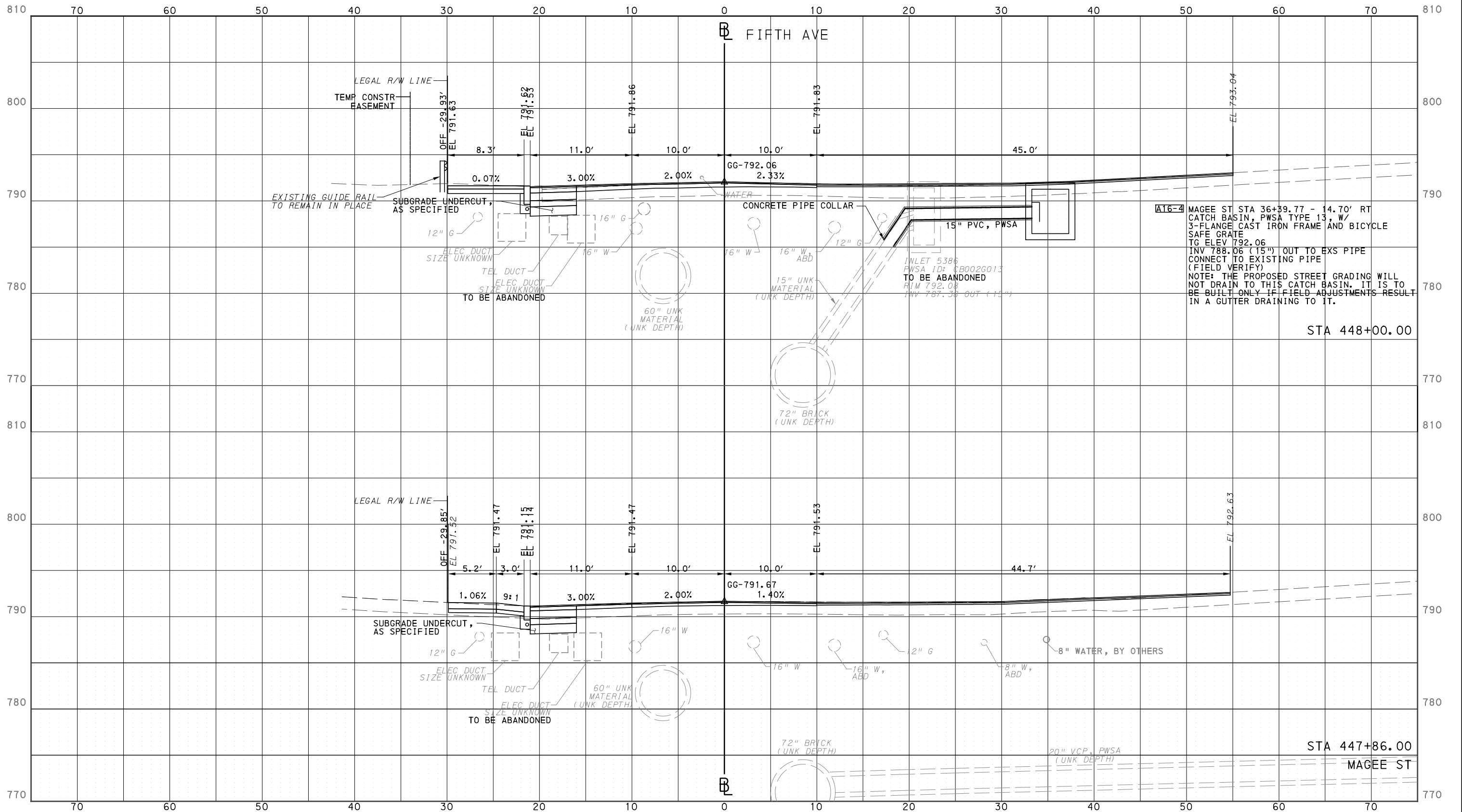
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PORT AUTHORITY OF ALLEGHENY COUNTY  
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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT**  
CROSS SECTIONS  
FIFTH AVE - STA 447+86.00 TO STA 448+00.00

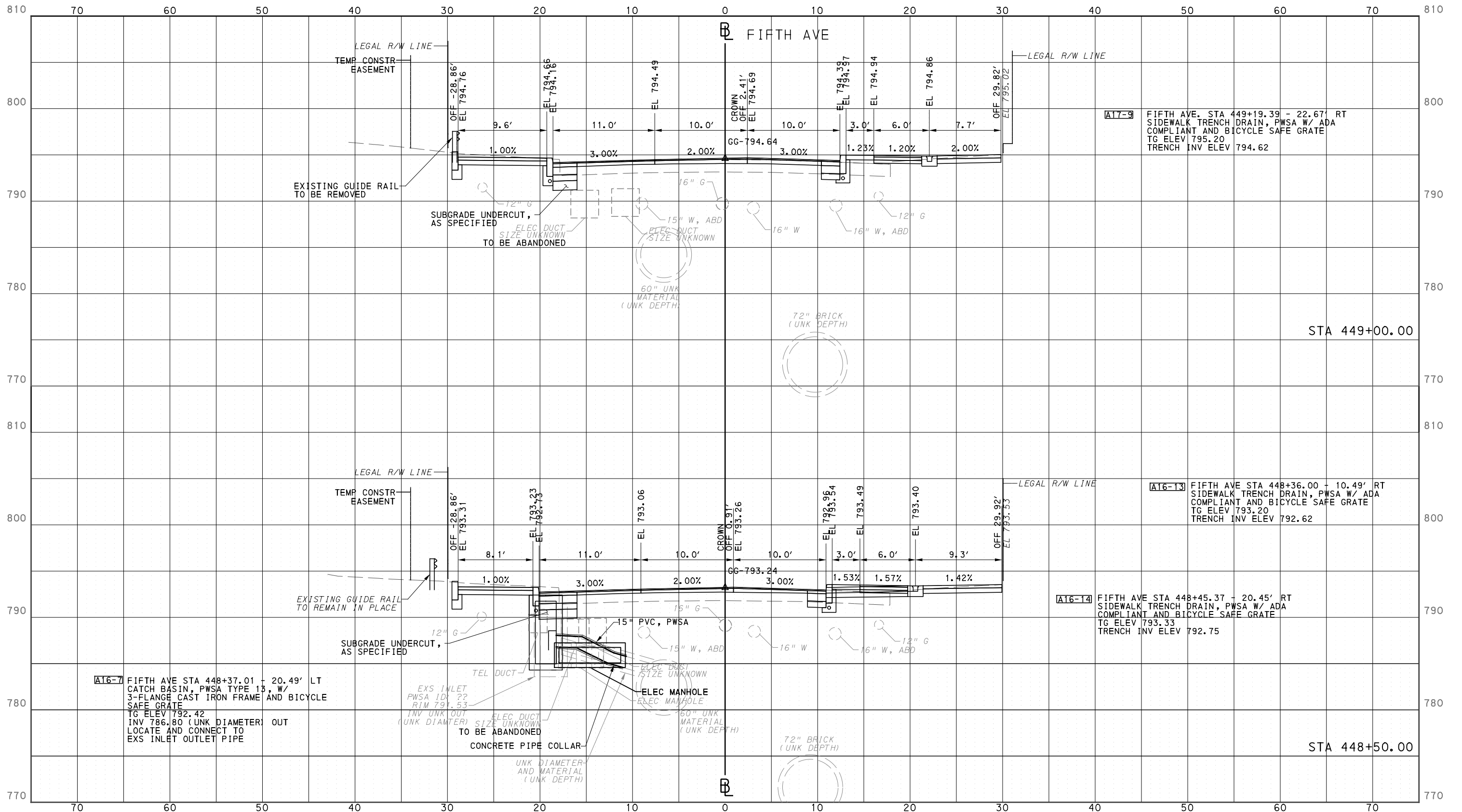
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PORT AUTHORITY OF ALLEGHENY COUNTY  
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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT**  
CROSS SECTIONS  
FIFTH AVE - STA 448+50.00 TO STA 449+00.00

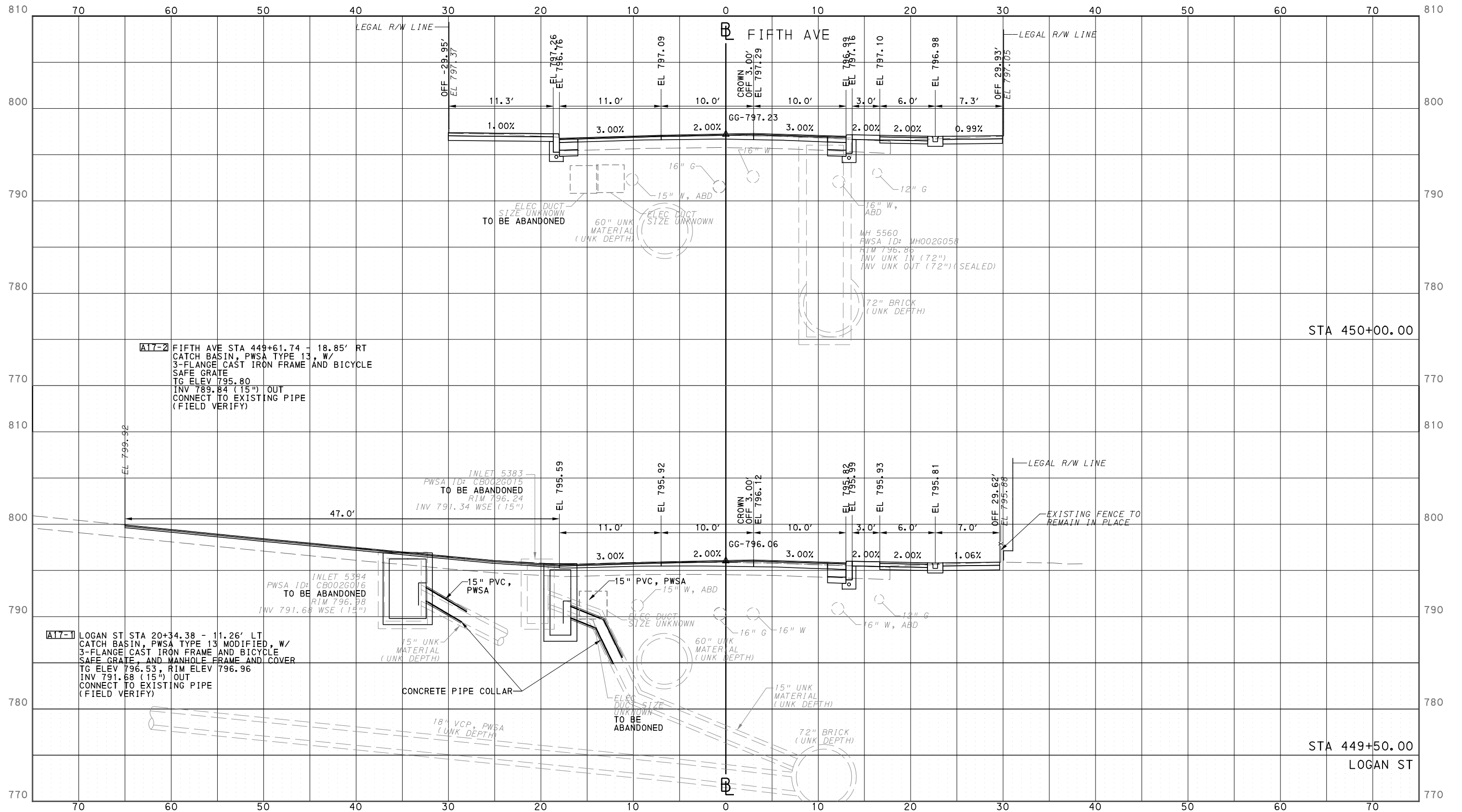
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DRAWN	DRS
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DATE	05/01/24
SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT**  
CROSS SECTIONS  
FIFTH AVE - STA 449+50.00 TO STA 450+00.00

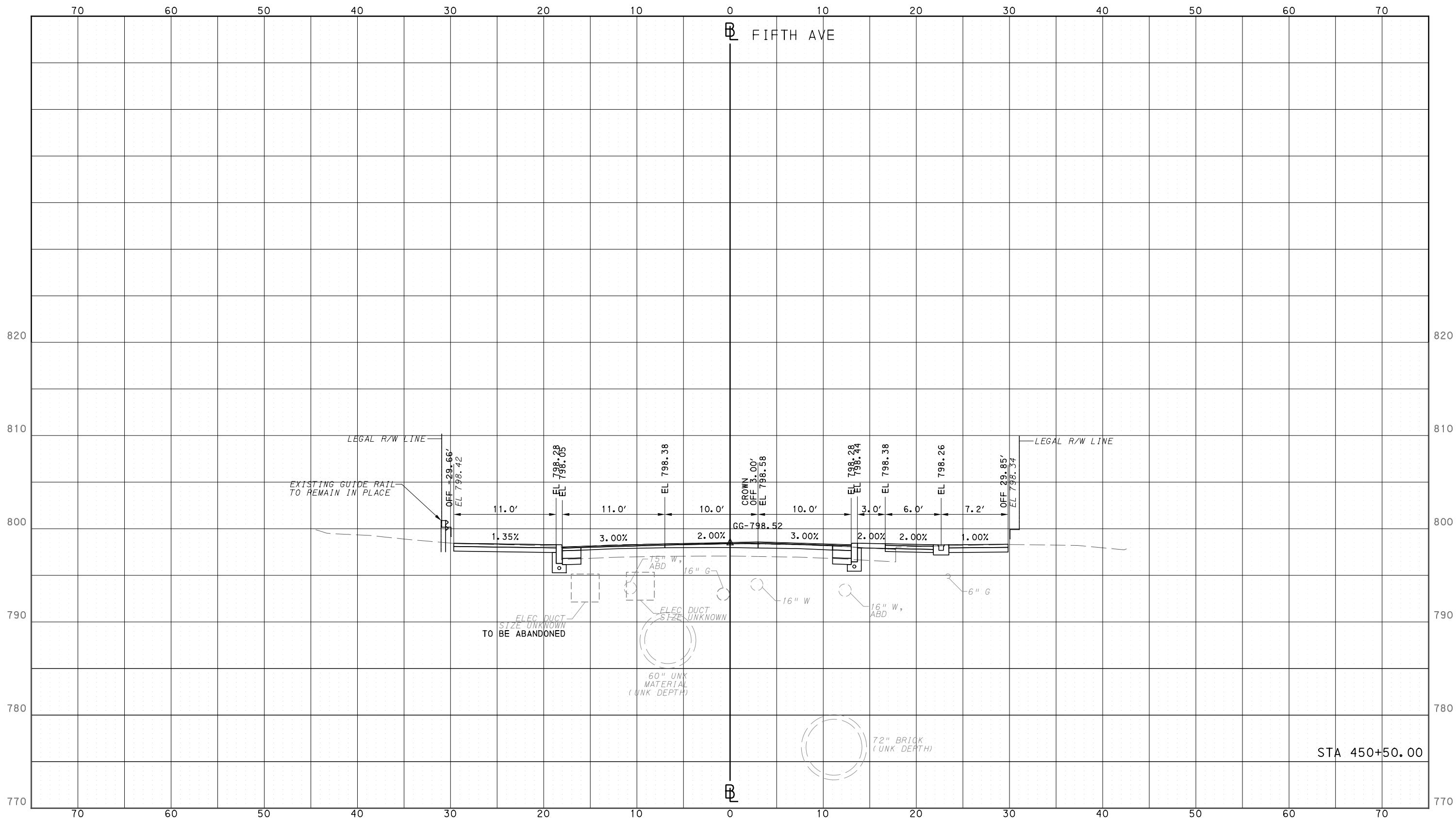
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CONTRACT NO. BRT-001	
DWG. NO. XS22	SHT. 1227

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PORT AUTHORITY OF ALLEGHENY COUNTY  
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PORT AUTHORITY OF ALLEGHENY COUNTY  
PITTSBURGH PENNSYLVANIA

BUS RAPID TRANSIT  
CROSS SECTIONS  
FIFTH AVE - STA 450+50.00



CONTRACT NO. BRT-001

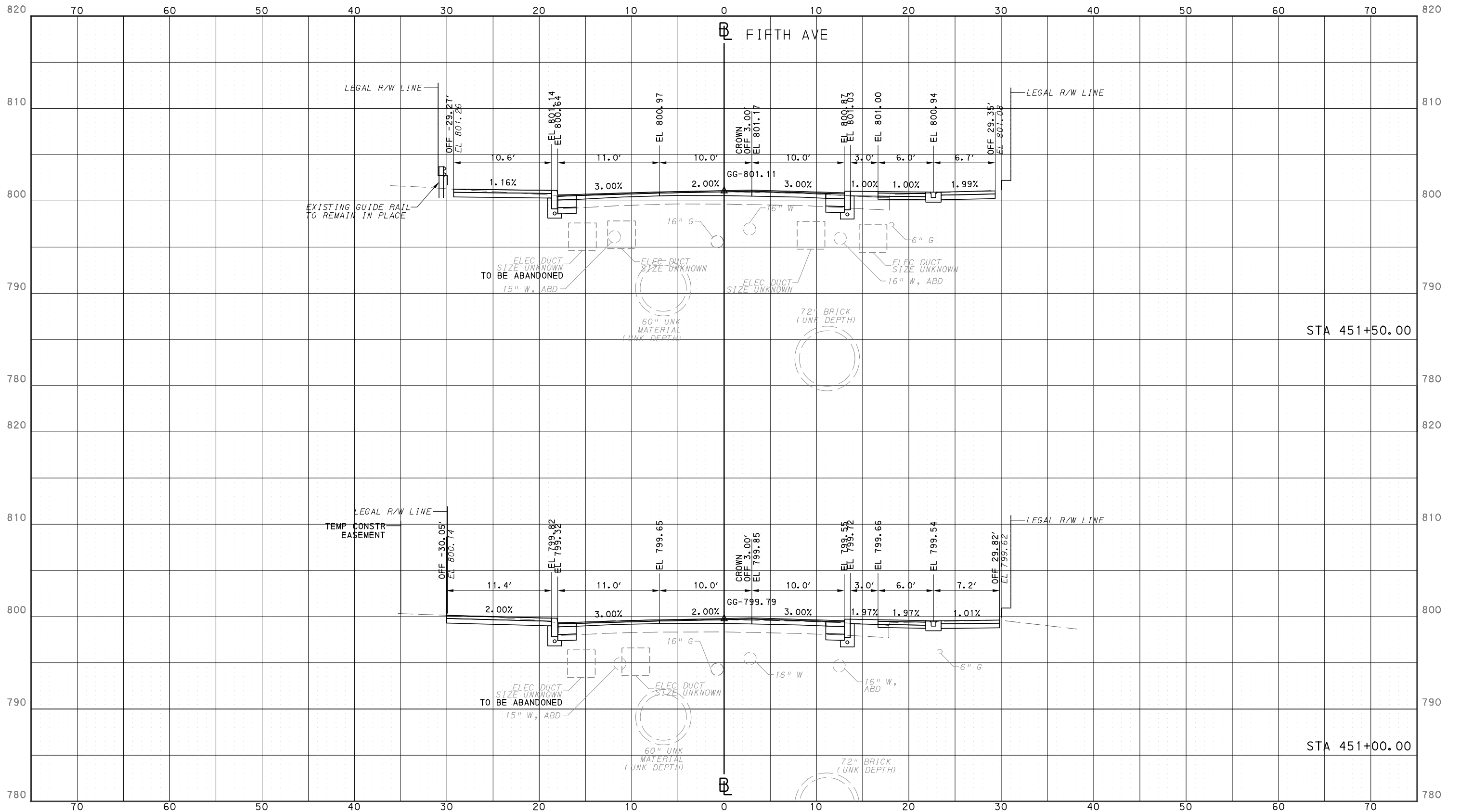
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SHT. 1228

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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT**  
CROSS SECTIONS  
FIFTH AVE - STA 451+00.00 TO STA 451+50.00

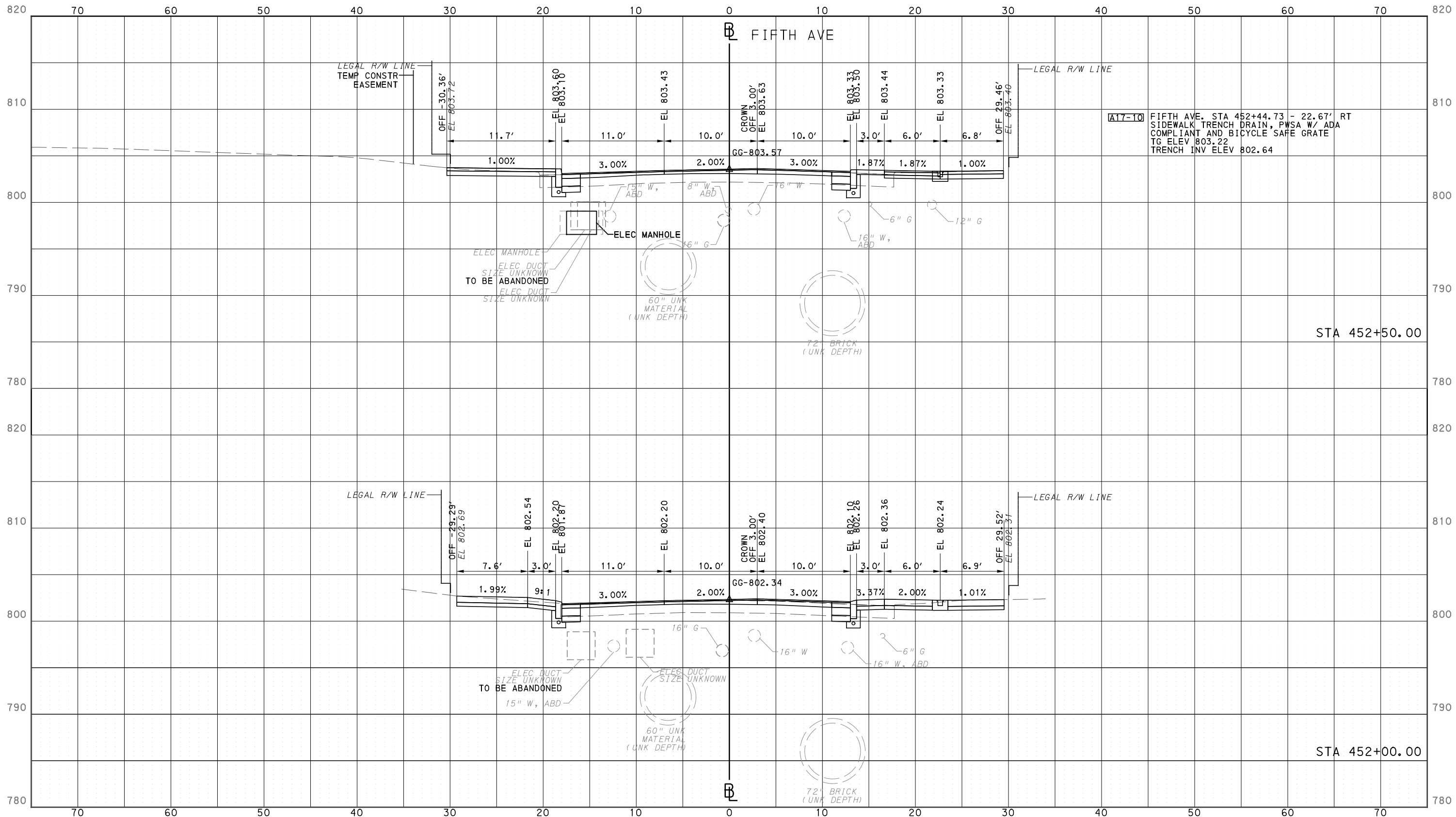
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CONTRACT NO. BRT-001  
DWG. NO. XS24 SHT. 1229

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PORT AUTHORITY OF ALLEGHENY COUNTY  
PITTSBURGH PENNSYLVANIA

BUS RAPID TRANSIT  
CROSS SECTIONS  
FIFTH AVE - STA 452+00.00 TO STA 452+50.00



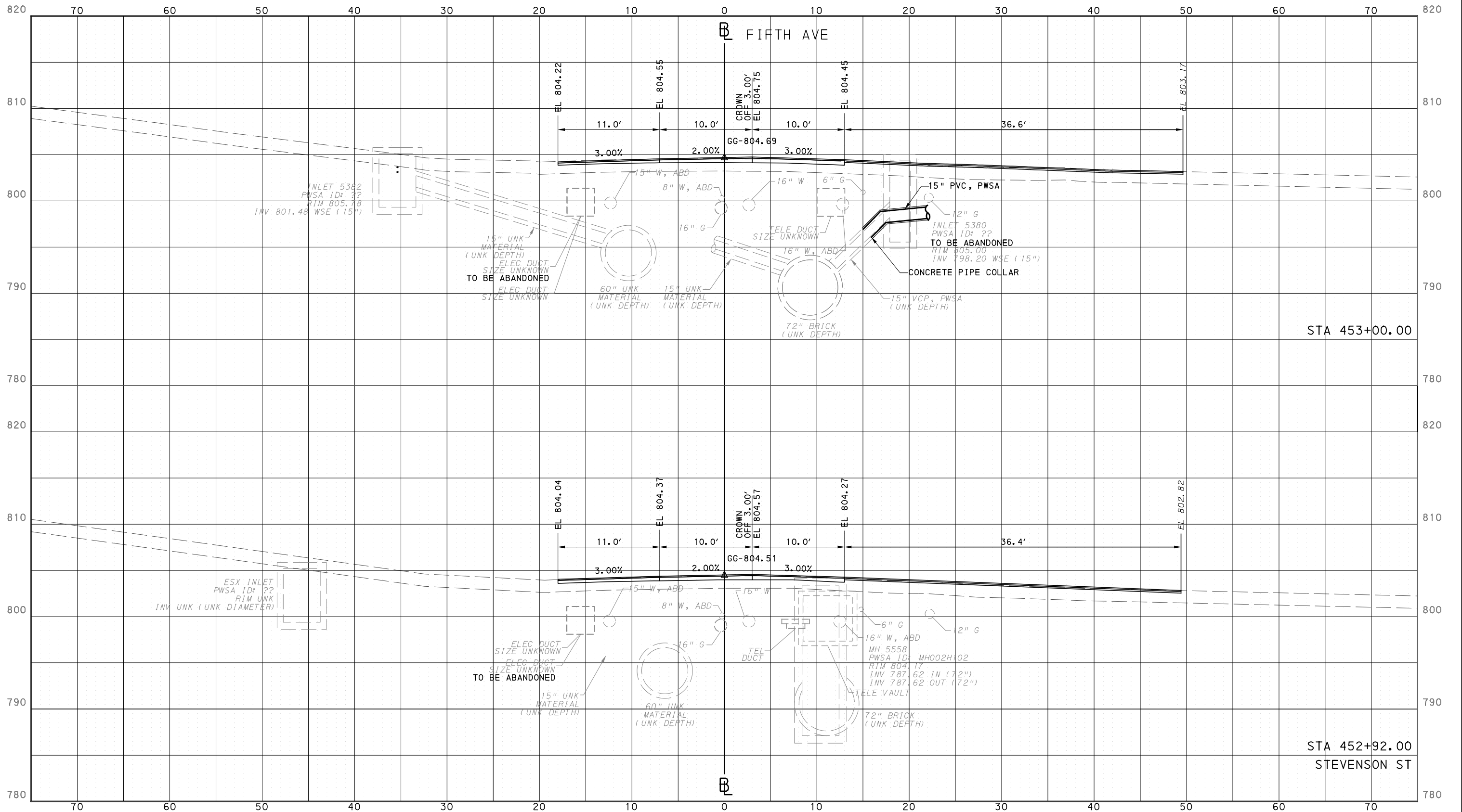
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DWG. NO. XS25 SHT. 1230



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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT**  
CROSS SECTIONS  
FIFTH AVE - STA 452+92.00 TO STA 453+00.00

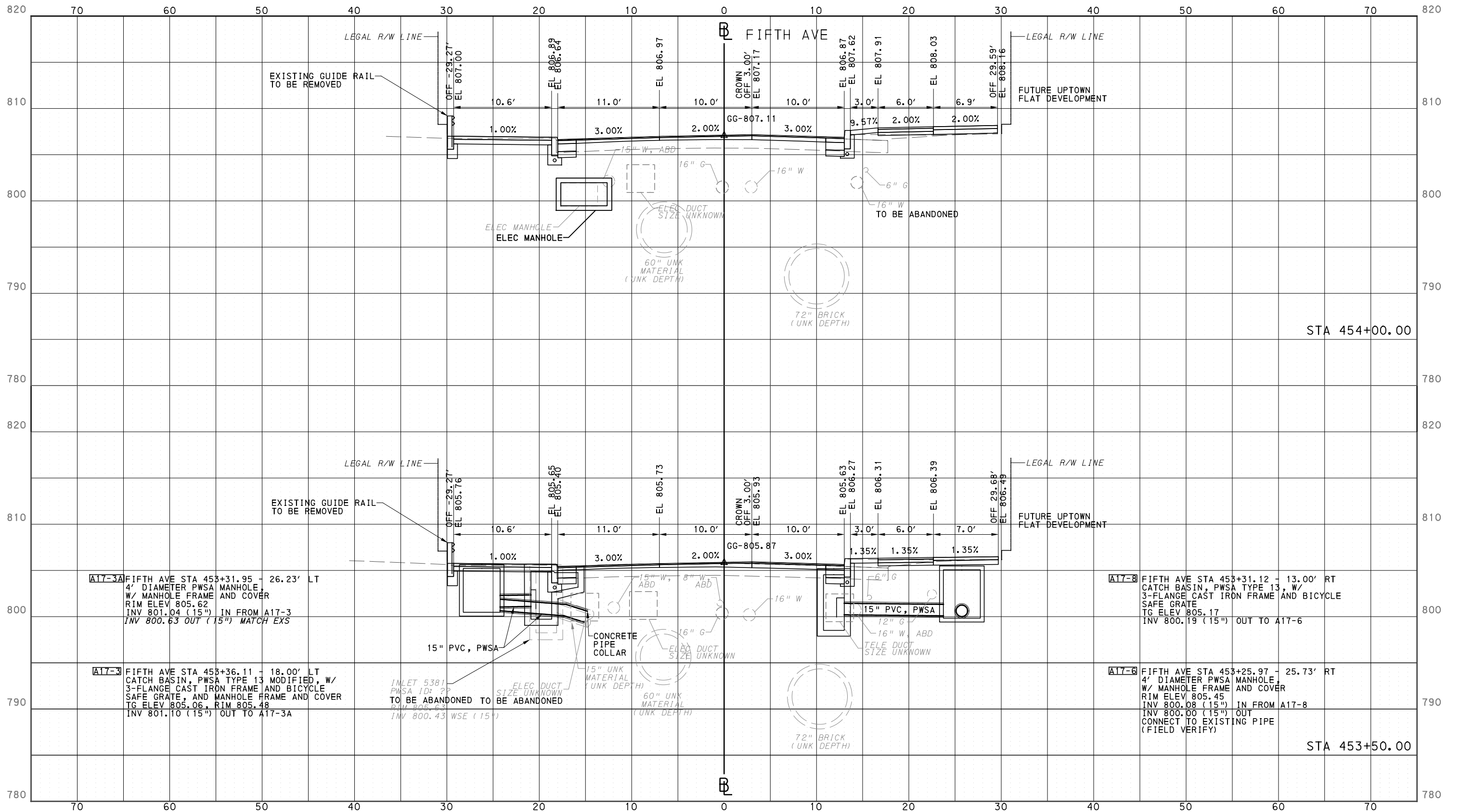
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CONTRACT NO. BRT-001  
DWG. NO. XS26 SHT. 1231

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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT**  
CROSS SECTIONS  
FIFTH AVE - STA 453+50.00 TO STA 454+00.00

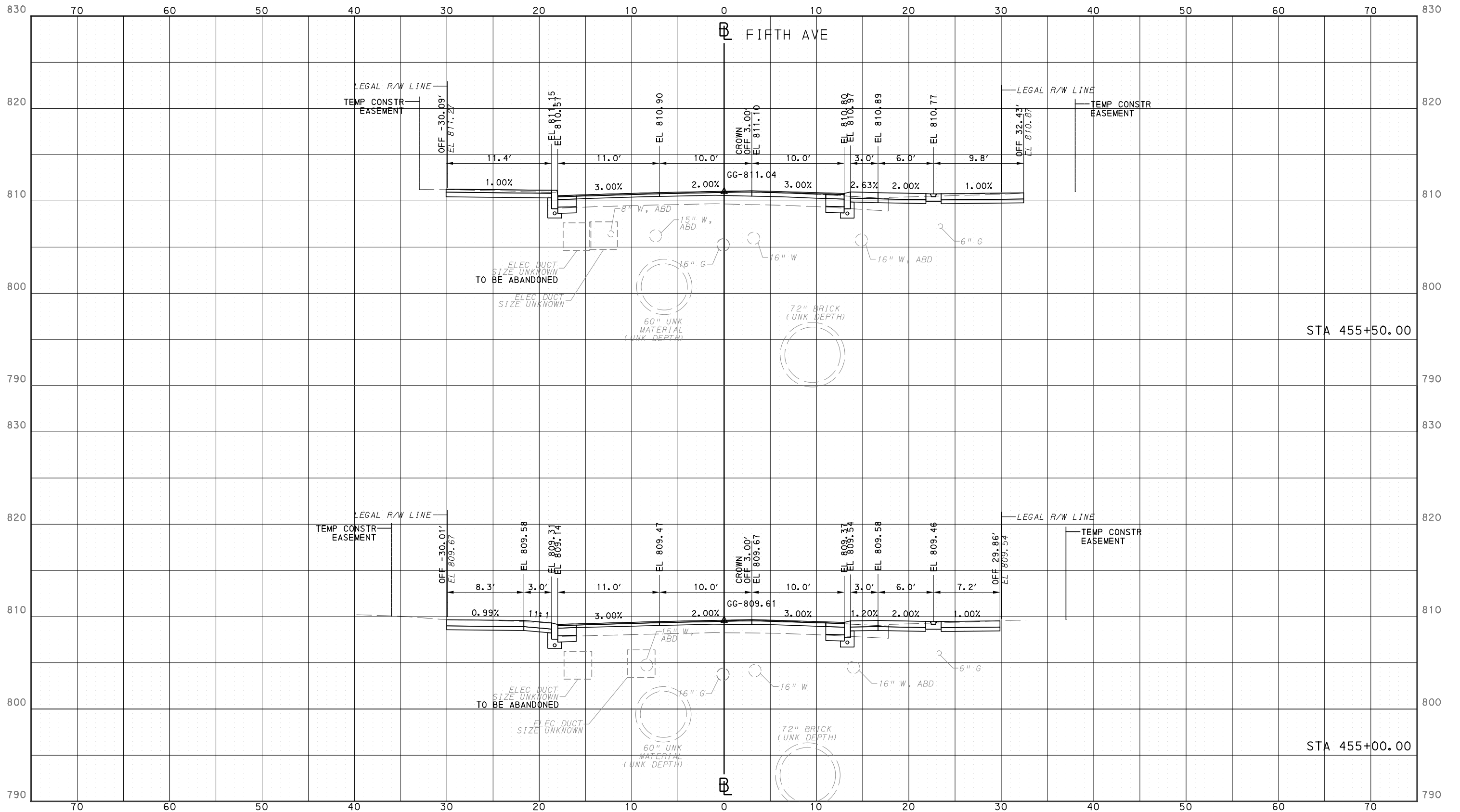
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CONTRACT NO. BRT-001  
DWG. NO. XS27 SHT. 1232

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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT**  
CROSS SECTIONS  
FIFTH AVE - STA 455+00.00 TO STA 455+50.00

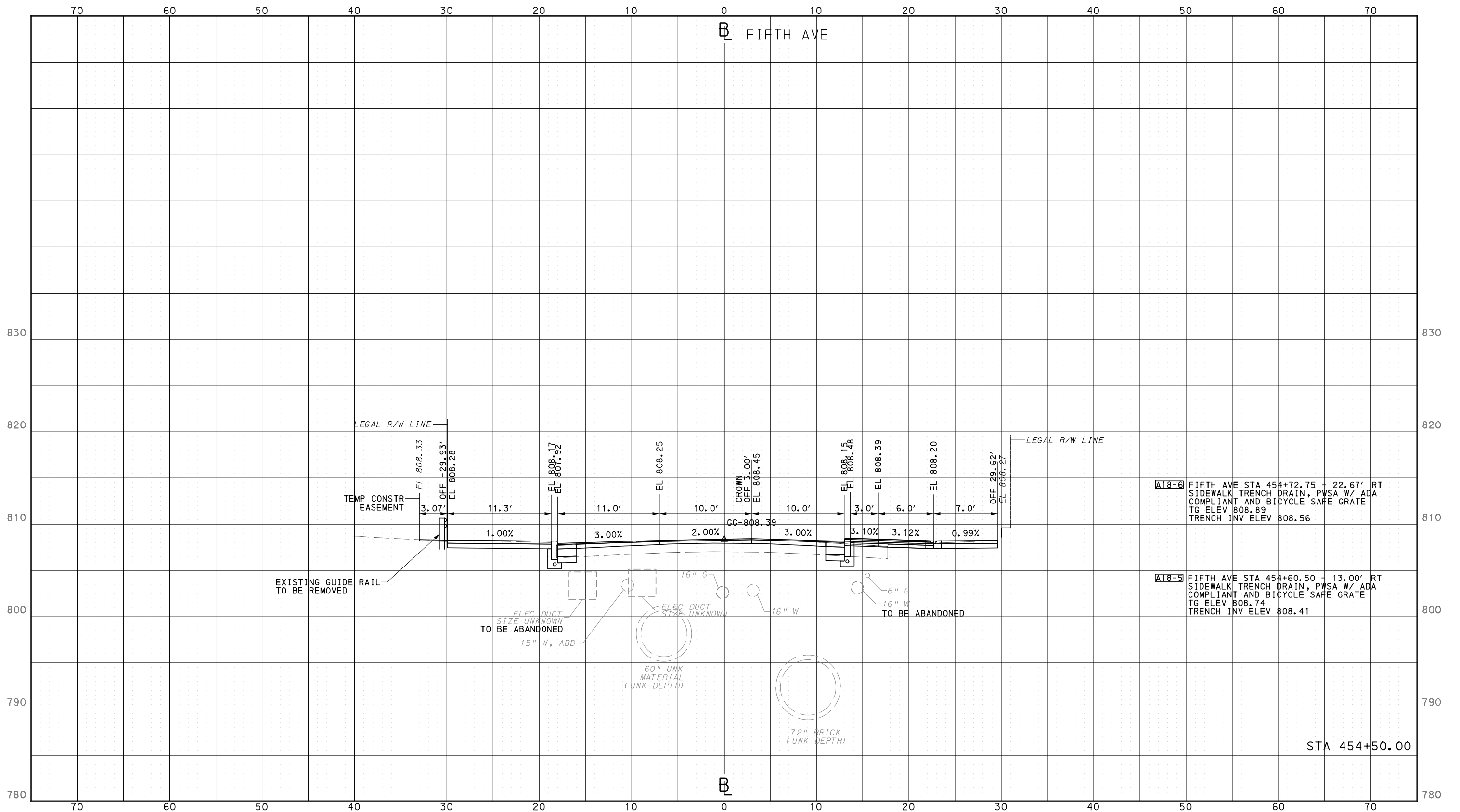
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CONTRACT NO. BRT-001  
DWG. NO. XS29 SHT. 1234

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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS



- A18-6** FIFTH AVE STA 454+72.75 - 22.67' RT SIDEWALK TRENCH DRAIN, PWSA W/ ADA COMPLIANT AND BICYCLE SAFE GRATE TG ELEV 808.89 TRENCH INV ELEV 808.56
- A18-5** FIFTH AVE STA 454+60.50 - 13.00' RT SIDEWALK TRENCH DRAIN, PWSA W/ ADA COMPLIANT AND BICYCLE SAFE GRATE TG ELEV 808.74 TRENCH INV ELEV 808.41



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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT  
CROSS SECTIONS  
FIFTH AVE - STA 454+50.00**

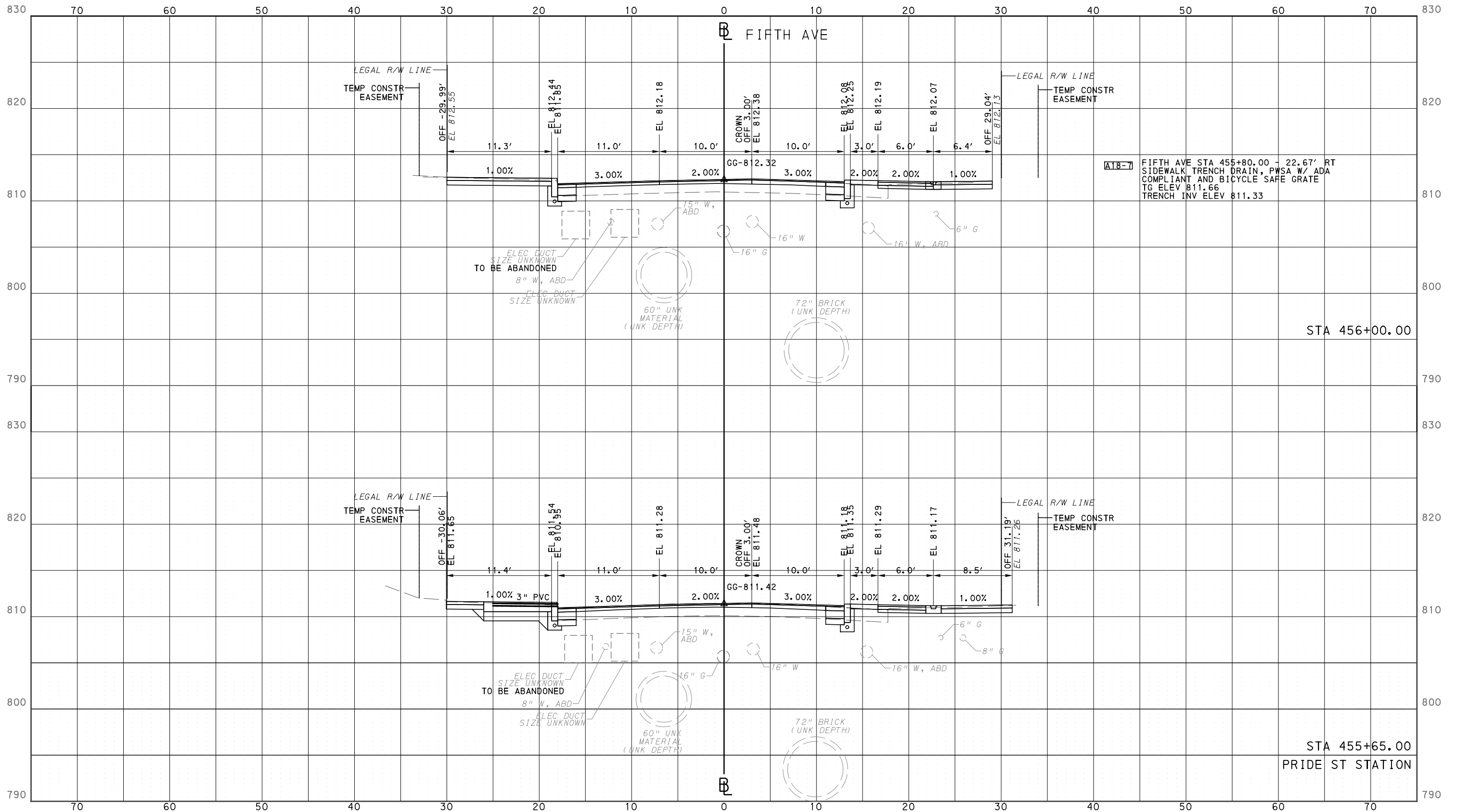
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CONTRACT NO. BRT-001  
DWG. NO. XS28 SHT. 1233

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PORT AUTHORITY OF ALLEGHENY COUNTY  
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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
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**BUS RAPID TRANSIT**  
CROSS SECTIONS  
FIFTH AVE - STA 455+65.00 TO STA 456+00.00

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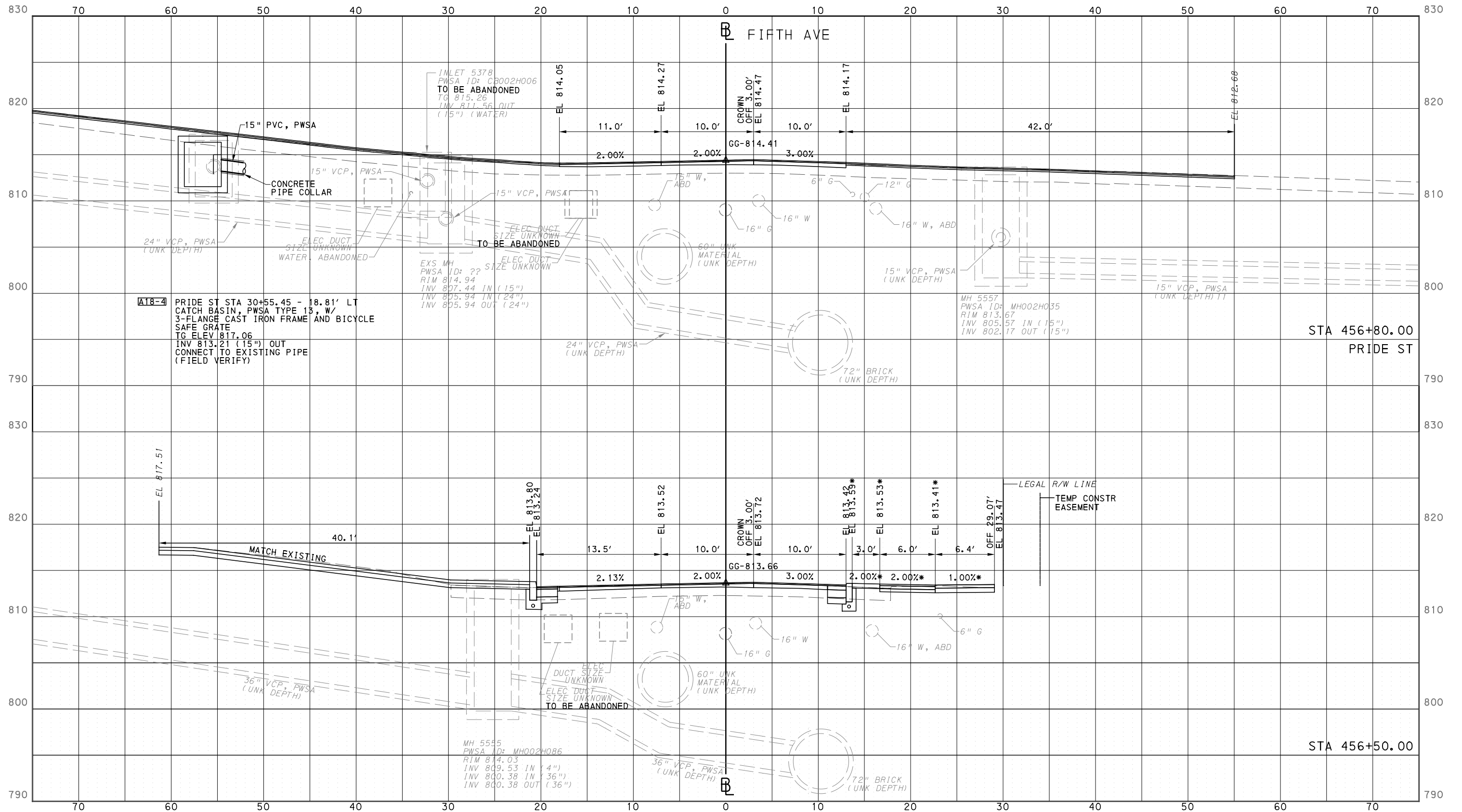
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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS

\*TOP OF CURB ELEVATION AND SIDEWALK SLOPES TO BE DETERMINED PER ITEM 01900.001 - DESIGN OF CURB RAMPS



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PORT AUTHORITY OF ALLEGHENY COUNTY  
PITTSBURGH PENNSYLVANIA

BUS RAPID TRANSIT  
CROSS SECTIONS  
FIFTH AVE - STA 456+50.00 TO STA 456+80.00



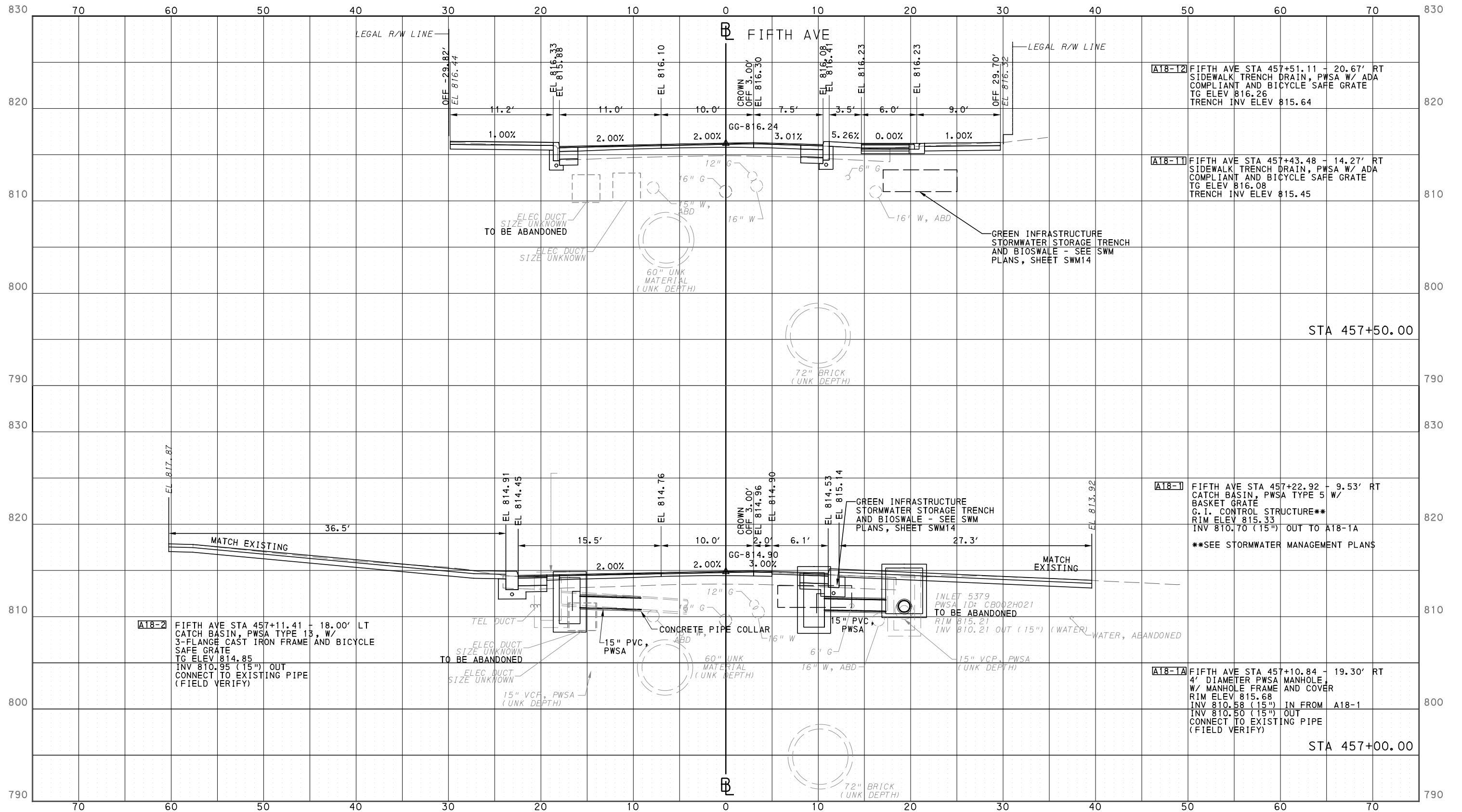
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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT**  
CROSS SECTIONS  
FIFTH AVE - STA 457+00.00 TO STA 457+50.00

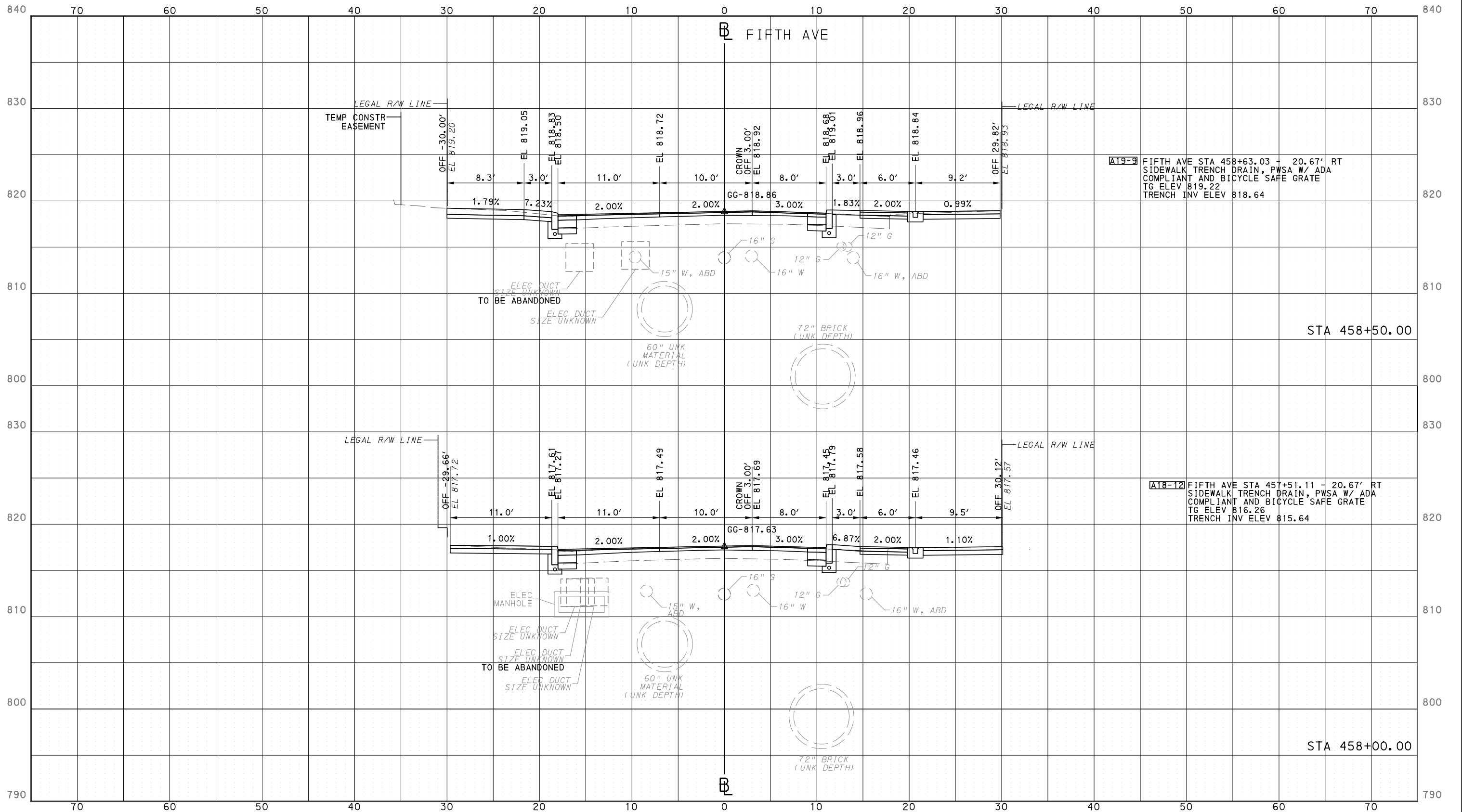
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DWG. NO. XS32
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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT**  
CROSS SECTIONS  
FIFTH AVE - STA 458+00.00 TO STA 458+50.00

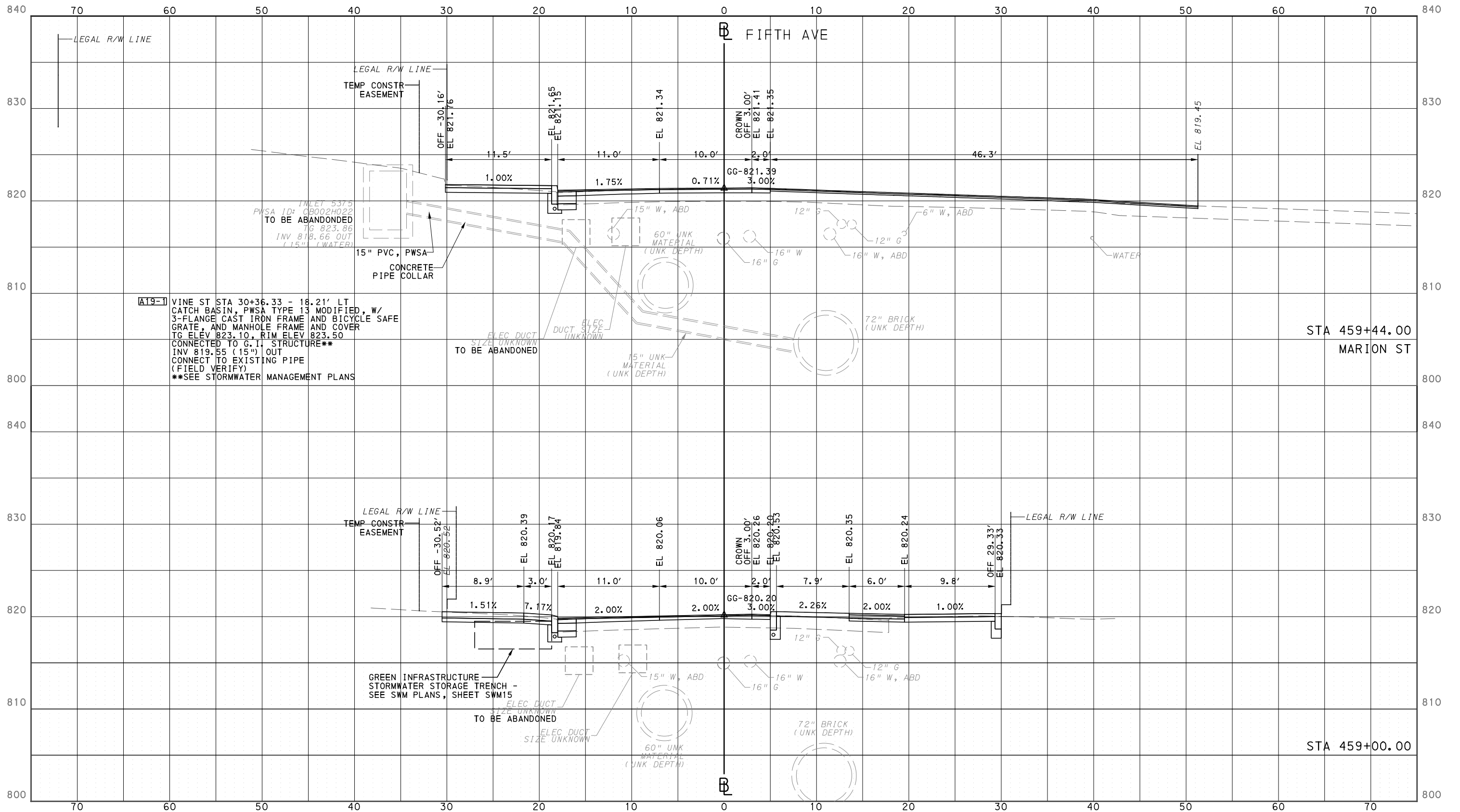
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PORT AUTHORITY OF ALLEGHENY COUNTY  
PITTSBURGH PENNSYLVANIA

BUS RAPID TRANSIT  
CROSS SECTIONS  
FIFTH AVE - STA 459+00.00 TO STA 459+44.00

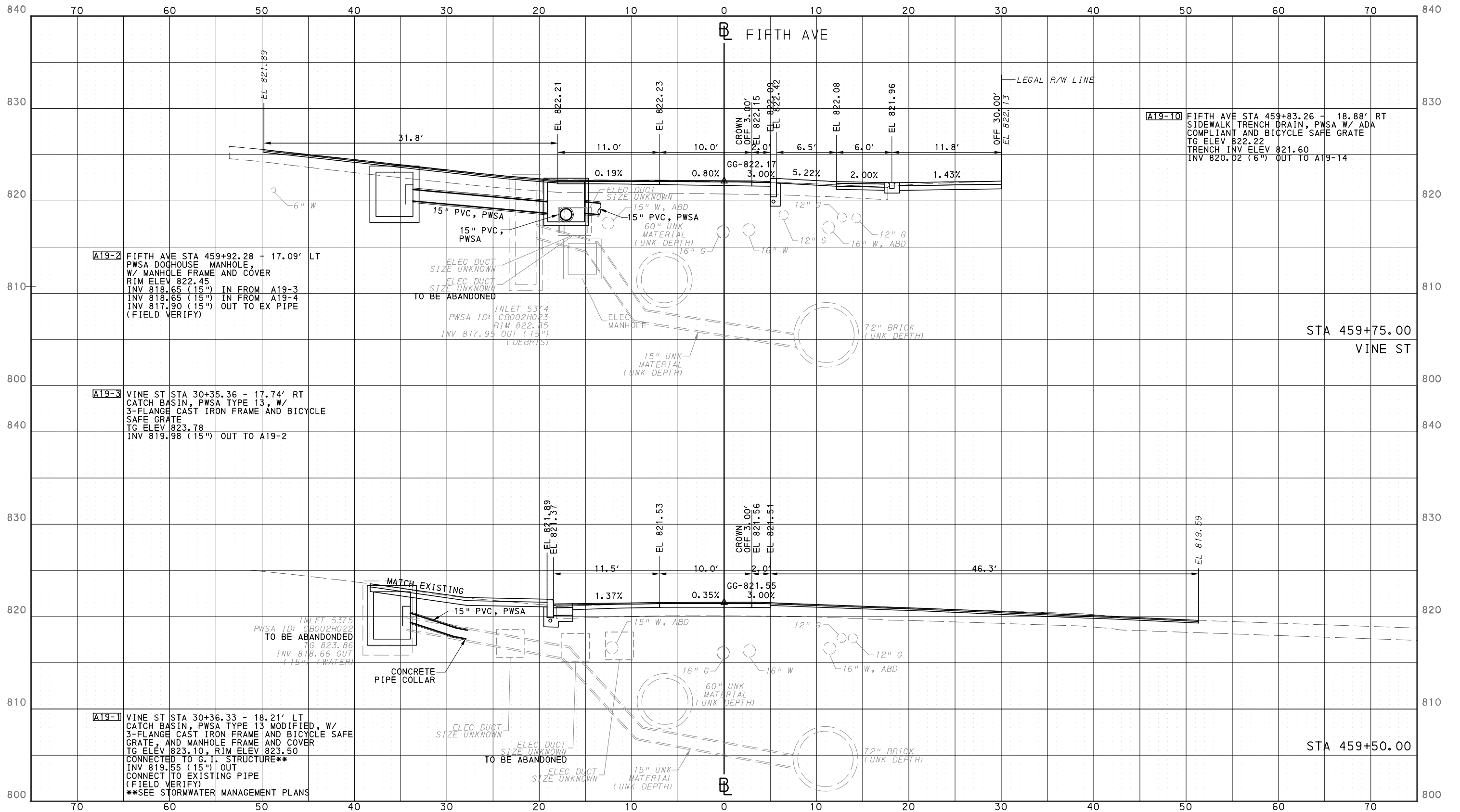


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PORT AUTHORITY OF ALLEGHENY COUNTY  
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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
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**BUS RAPID TRANSIT**  
CROSS SECTIONS  
FIFTH AVE - STA 459+50.00 TO STA 459+75.00

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SHT. 1240

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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS

\*TOP OF CURB ELEVATION AND SIDEWALK SLOPES TO BE DETERMINED PER ITEM 01900.001 - DESIGN OF CURB RAMPS



**A19-3** VINE ST STA 30+35.36 - 17.74' RT  
CATCH BASIN, PWSA TYPE 13, W/  
3-FLANGE CAST IRON FRAME AND BICYCLE  
SAFE GRATE  
TG ELEV 823.78  
INV 819.98 (15") OUT TO A19-2

**A19-2** FIFTH AVE STA 459+92.28 - 17.09' LT  
PWSA DOGHOUSE MANHOLE,  
W/ MANHOLE FRAME AND COVER  
RIM ELEV 822.45  
INV 818.65 (15") IN FROM A19-3  
INV 817.90 (15") IN FROM A19-4  
OUT TO EX PIPE  
(FIELD VERIFY)

**A19-4** FIFTH AVE STA 460+13.96 - 18.00' LT  
CATCH BASIN, PWSA TYPE 13, W/  
3-FLANGE CAST IRON FRAME AND BICYCLE  
SAFE GRATE  
TG ELEV 822.73  
INV 818.93 (15") OUT TO A19-2

**A19-6** FIFTH AVE STA 460+44.13 - 11.00' RT  
CATCH BASIN, PWSA TYPE 13, W/  
3-FLANGE CAST IRON FRAME AND BICYCLE  
SAFE GRATE  
TG ELEV 823.52  
INV 818.70 (6") IN FROM A19-14  
INV 817.68 (15") OUT TO A19-5

**A19-5** FIFTH AVE STA 460+63.73 - 23.37' RT  
PWSA MANHOLE SA-10C, W/ MANHOLE  
FRAME AND COVER  
RIM ELEV 823.93  
INV 817.40 (15") IN FROM A19-6  
INV 814.26 (15") OUT TO EX PIPE  
CONNECT TO EXISTING PIPE  
(FIELD VERIFY)

**A19-13** FIFTH AVE STA 460+37.51 - 20.67' RT  
SIDEWALK TRENCH DRAIN, PWSA W/ ADA  
COMPLIANT AND BICYCLE SAFE GRATE  
TG ELEV 823.39  
TRENCH INV ELEV 822.77

**A19-11** FIFTH AVE STA 459+96.21 - 20.18' RT  
SIDEWALK TRENCH DRAIN, PWSA W/ ADA  
COMPLIANT AND BICYCLE SAFE GRATE  
TG ELEV 822.58  
TRENCH INV ELEV 821.96

**A19-12** FIFTH AVE STA 460+24.51 - 20.67' RT  
SIDEWALK TRENCH DRAIN, PWSA W/ ADA  
COMPLIANT AND BICYCLE SAFE GRATE  
TG ELEV 823.21  
TRENCH INV ELEV 822.59  
INV 820.91 (6") OUT TO A19-14

**A19-14** FIFTH AVE STA 460+31.92 - 11.75' RT  
6" WYE CONNECTION  
INV 819.00 OUT TO A19-6



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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT**  
CROSS SECTIONS  
FIFTH AVE - STA 460+00.00 TO STA 460+50.00

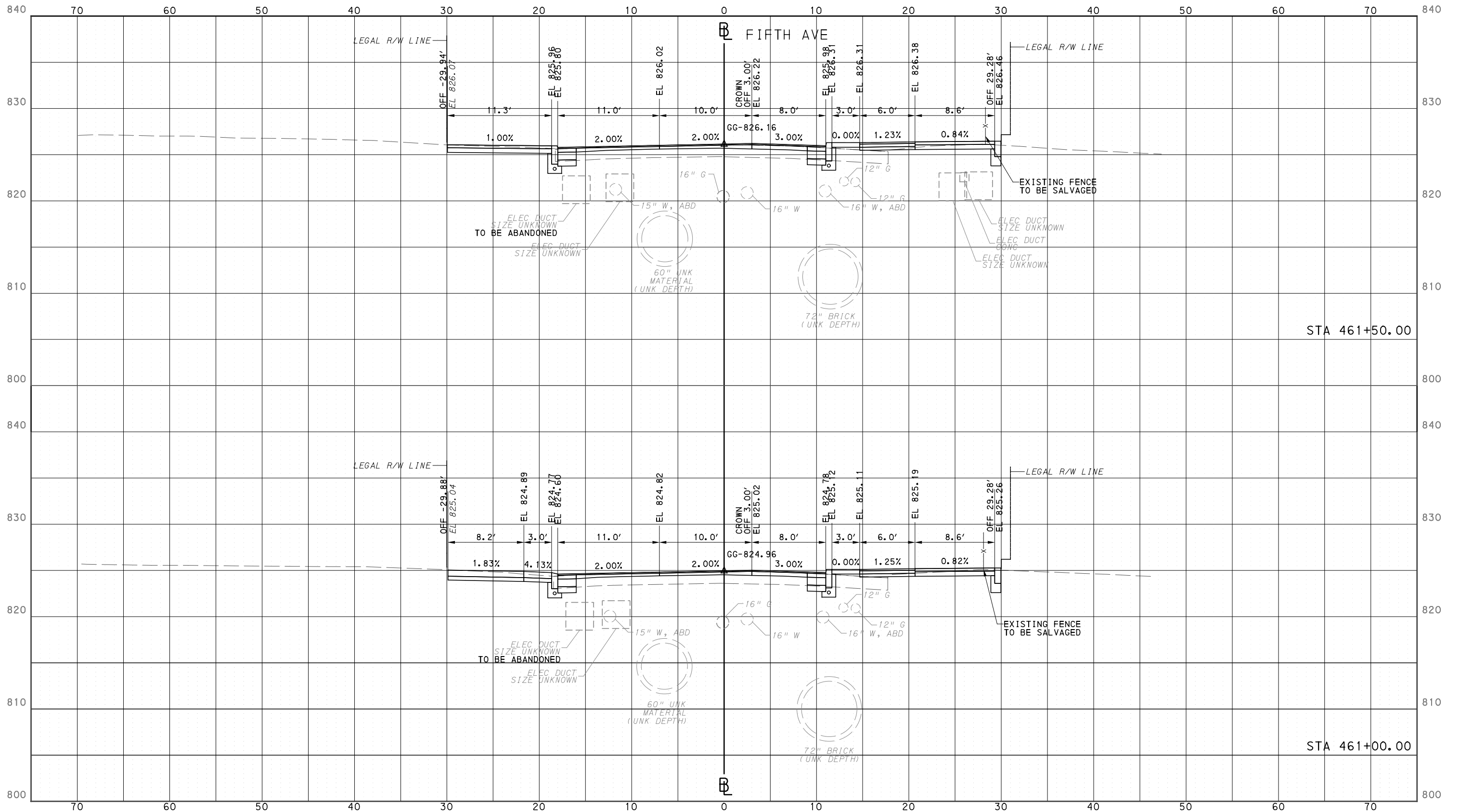
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CONTRACT NO. BRT-001  
DWG. NO. XS36 SHT. 1241

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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS



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PITTSBURGH PENNSYLVANIA

BUS RAPID TRANSIT  
CROSS SECTIONS  
FIFTH AVE - STA 461+00.00 TO STA 461+50.00



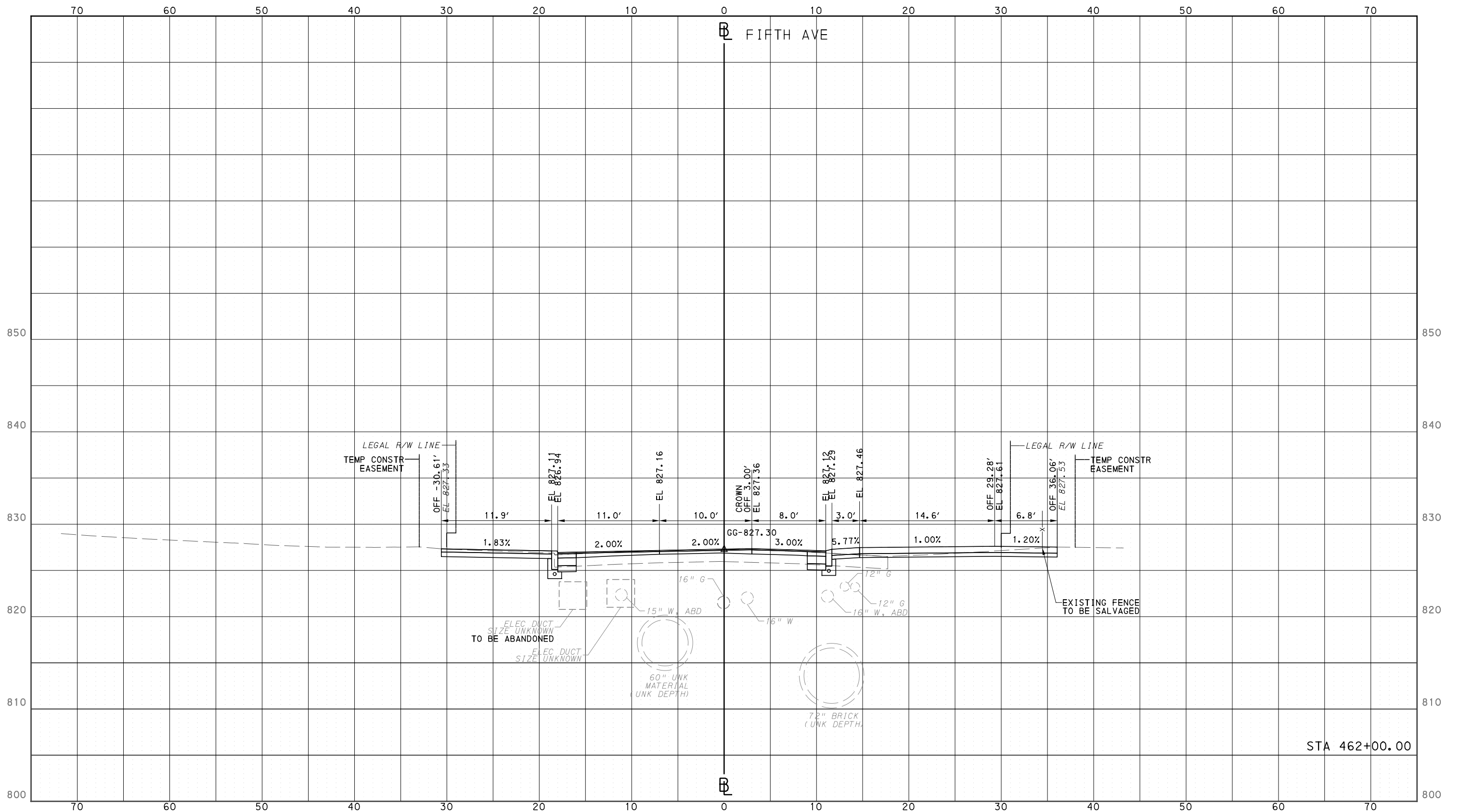
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DWG. NO. XS37 SHT. 1242



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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS



Gulf Tower  
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(NOT FOR CONSTRUCTION)

DESIGNED	DRS
DRAWN	DRS
CHECKED	BFS
IN CHARGE	LAR
DATE	05/01/24
SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT  
CROSS SECTIONS  
FIFTH AVE - STA 462+00.00**

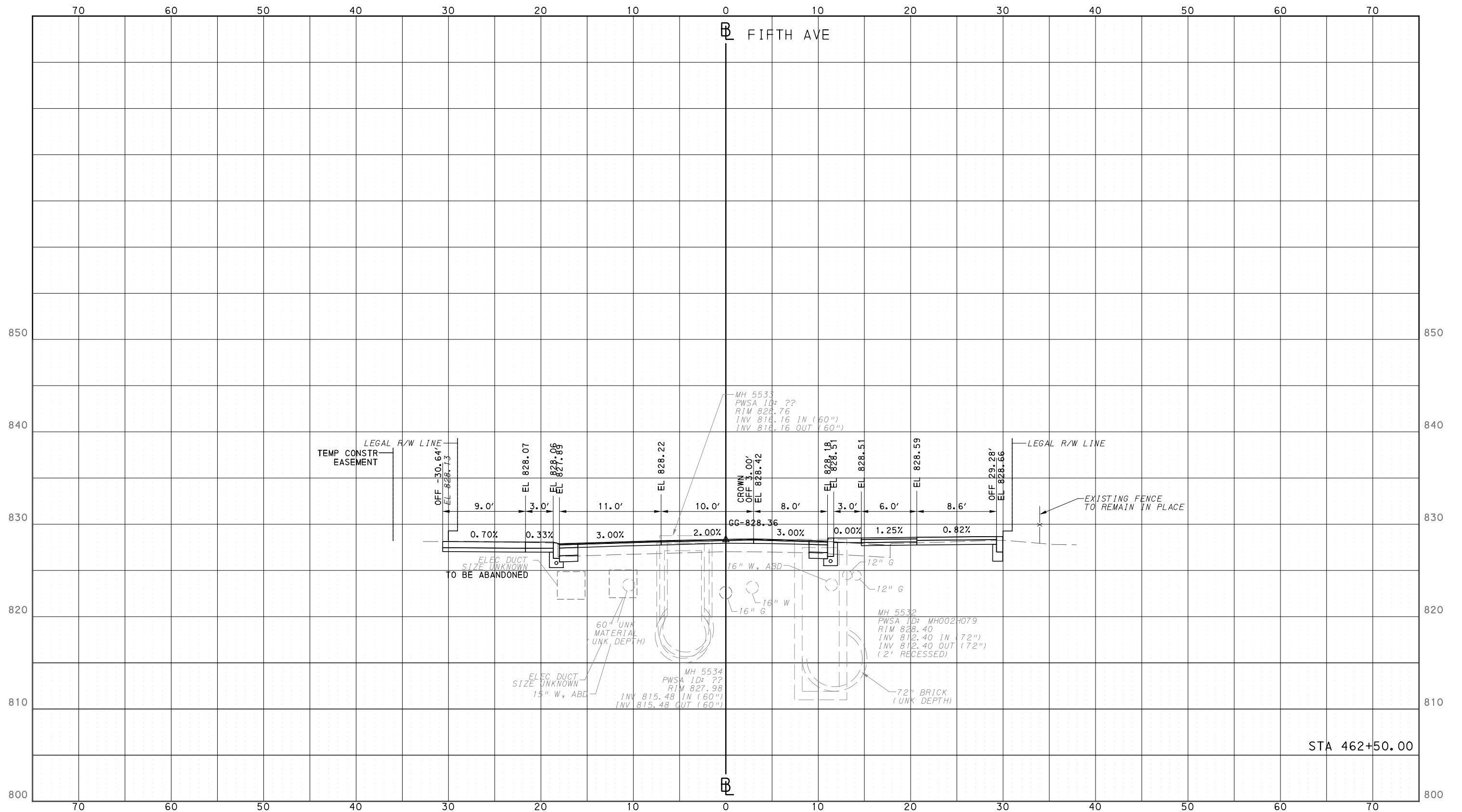
**Port Authority** connecting people to life

CONTRACT NO. BRT-001  
DWG. NO. XS38 SHT. 1243

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PORT AUTHORITY OF ALLEGHENY COUNTY  
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STA 462+50.00



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IN CHARGE	LAR
DATE	05/01/24
SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT  
CROSS SECTIONS  
FIFTH AVE - STA 462+50.00**

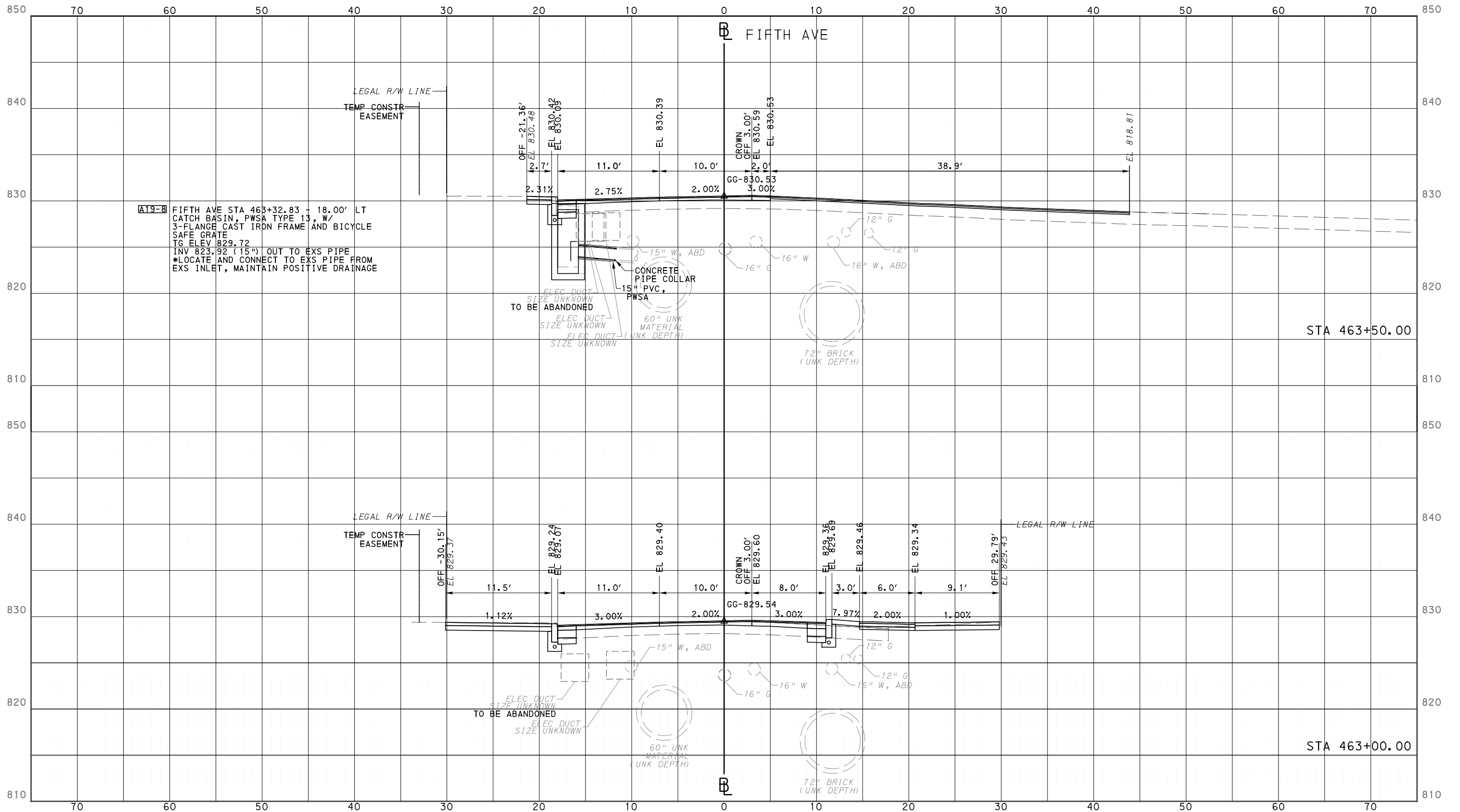
**Port Authority**  
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CONTRACT NO. BRT-001  
DWG. NO. XS39 SHT. 1244

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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS



**A19-B** FIFTH AVE STA 463+32.83 + 18.00' LT  
 CATCH BASIN, PWSA TYPE 13, W/  
 3-FLANGE CAST IRON FRAME AND BICYCLE  
 SAFE GRATE  
 TG ELEV 829.72  
 INV 823.92 (15") OUT TO EXS PIPE  
 \*LOCATE AND CONNECT TO EXS PIPE FROM  
 EXS INLET, MAINTAIN POSITIVE DRAINAGE

ELEC DUCT  
 SIZE UNKNOWN  
 TO BE ABANDONED  
 ELEC DUCT  
 SIZE UNKNOWN  
 ELEC DUCT  
 SIZE UNKNOWN



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IN CHARGE	LAR
DATE	05/01/24
SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
 PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT**  
 CROSS SECTIONS  
 FIFTH AVE - STA 463+00.00 TO STA 463+50.00

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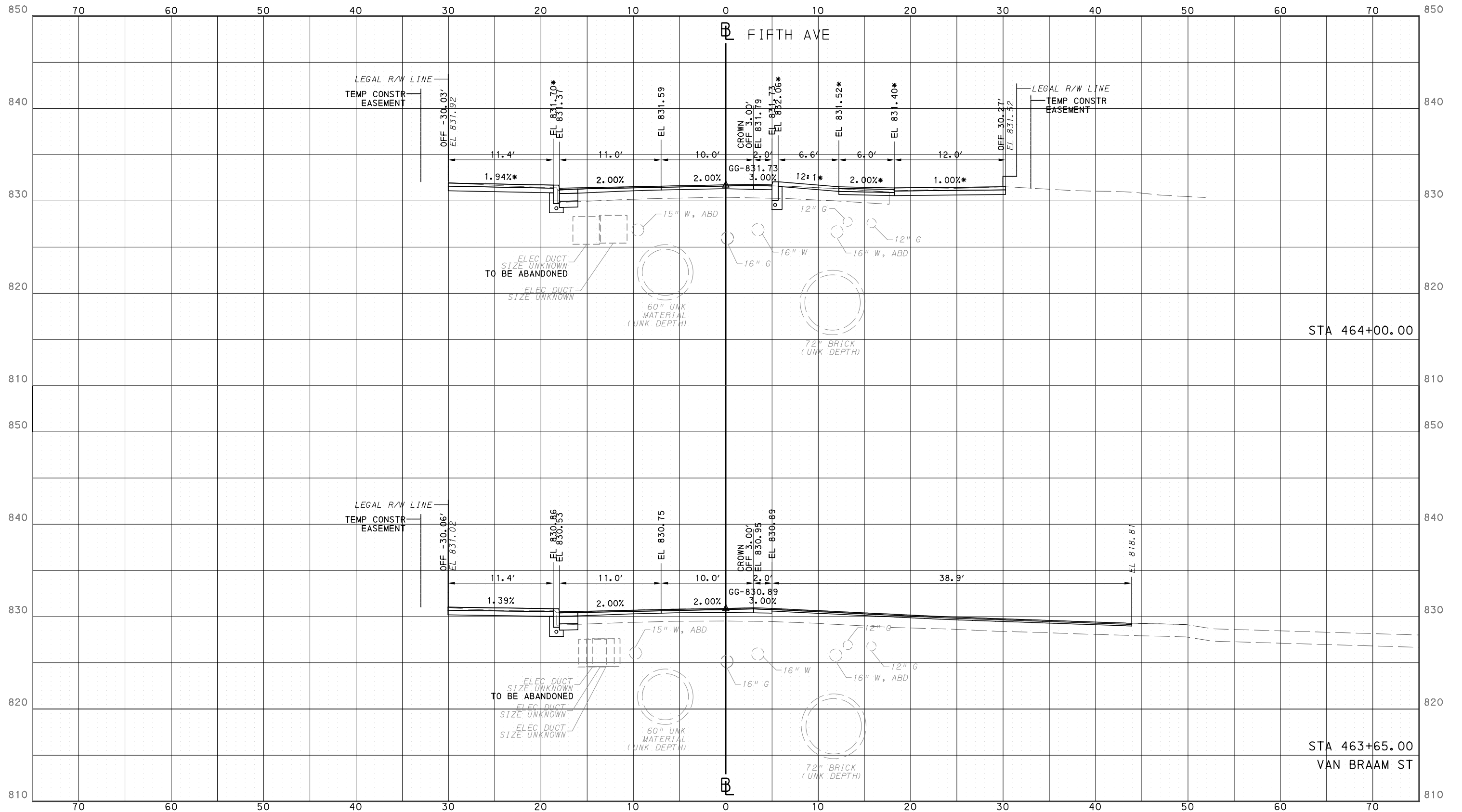
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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS

\*TOP OF CURB ELEVATION AND SIDEWALK SLOPES TO BE DETERMINED PER ITEM 01900.001 - DESIGN OF CURB RAMPS



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IN CHARGE	LAR
DATE	05/01/24
SCALE	0 5 10 FEET

PORT AUTHORITY OF ALLEGHENY COUNTY  
PITTSBURGH PENNSYLVANIA

BUS RAPID TRANSIT  
CROSS SECTIONS  
FIFTH AVE - STA 463+65.00 TO STA 464+00.00



CONTRACT NO. BRT-001

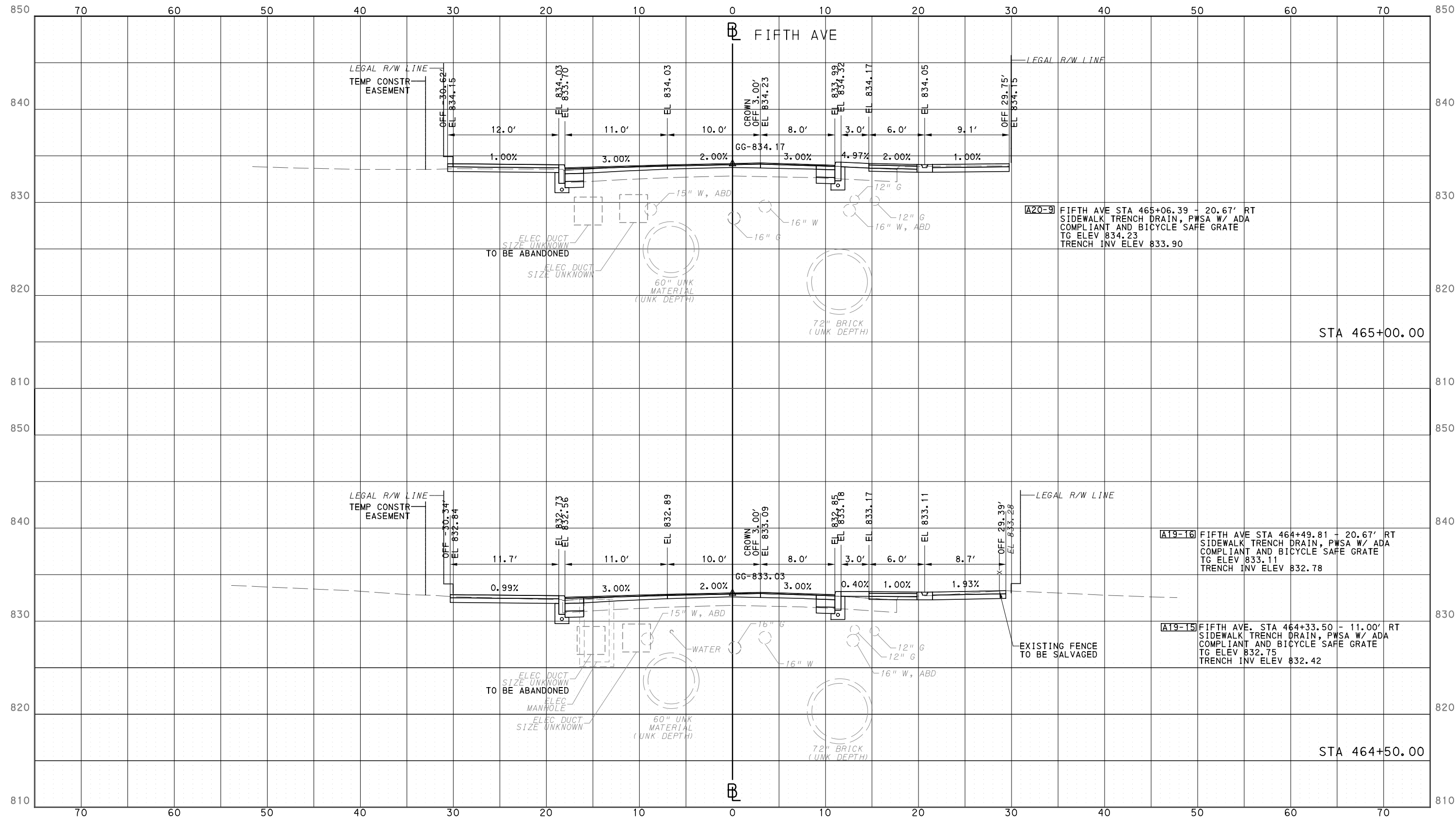
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### PORT AUTHORITY OF ALLEGHENY COUNTY CROSS SECTIONS



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DATE	05/01/24
SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT  
CROSS SECTIONS  
FIFTH AVE - STA 464+50.00 TO STA 465+00.00**

**Port Authority**  
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CONTRACT NO. BRT-001

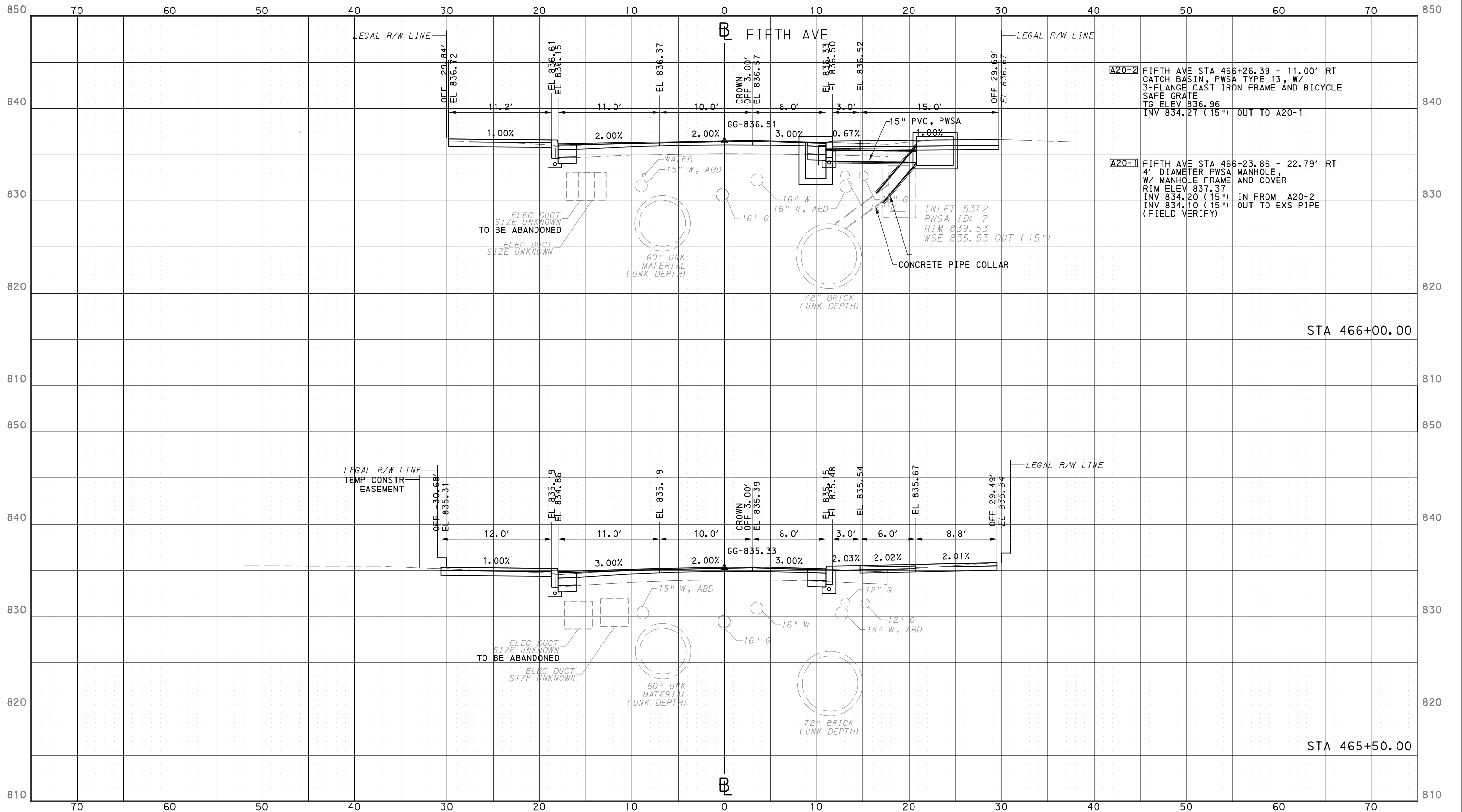
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PORT AUTHORITY OF ALLEGHENY COUNTY  
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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT  
CROSS SECTIONS**  
FIFTH AVE - STA 465+50.00 TO STA 466+00.00

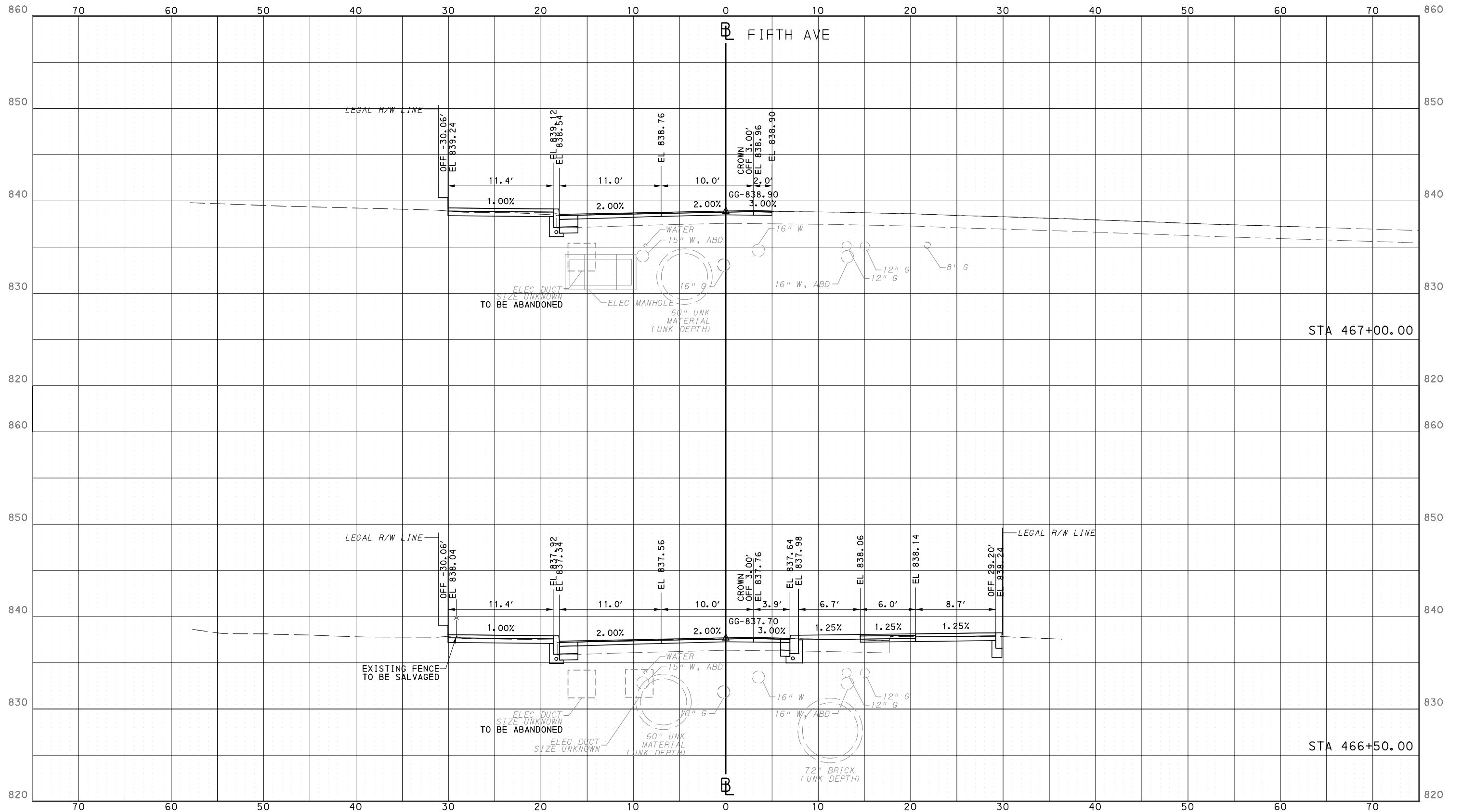
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CONTRACT NO. BRT-001  
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PORT AUTHORITY OF ALLEGHENY COUNTY  
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SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT**  
CROSS SECTIONS  
FIFTH AVE - STA 466+50.00 TO STA 467+00.00

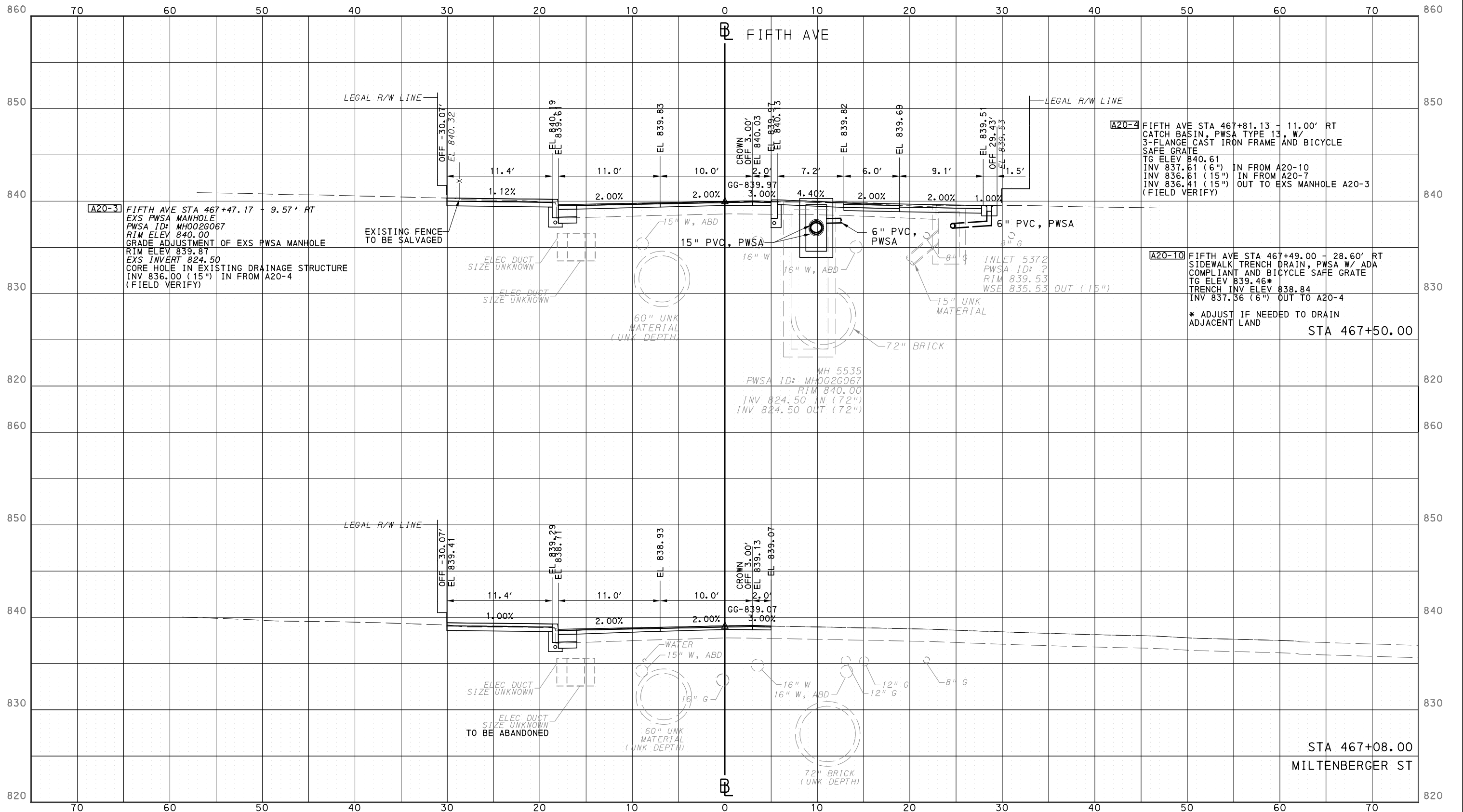
**Port Authority**  
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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS



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IN CHARGE	LAR
DATE	05/01/24
SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

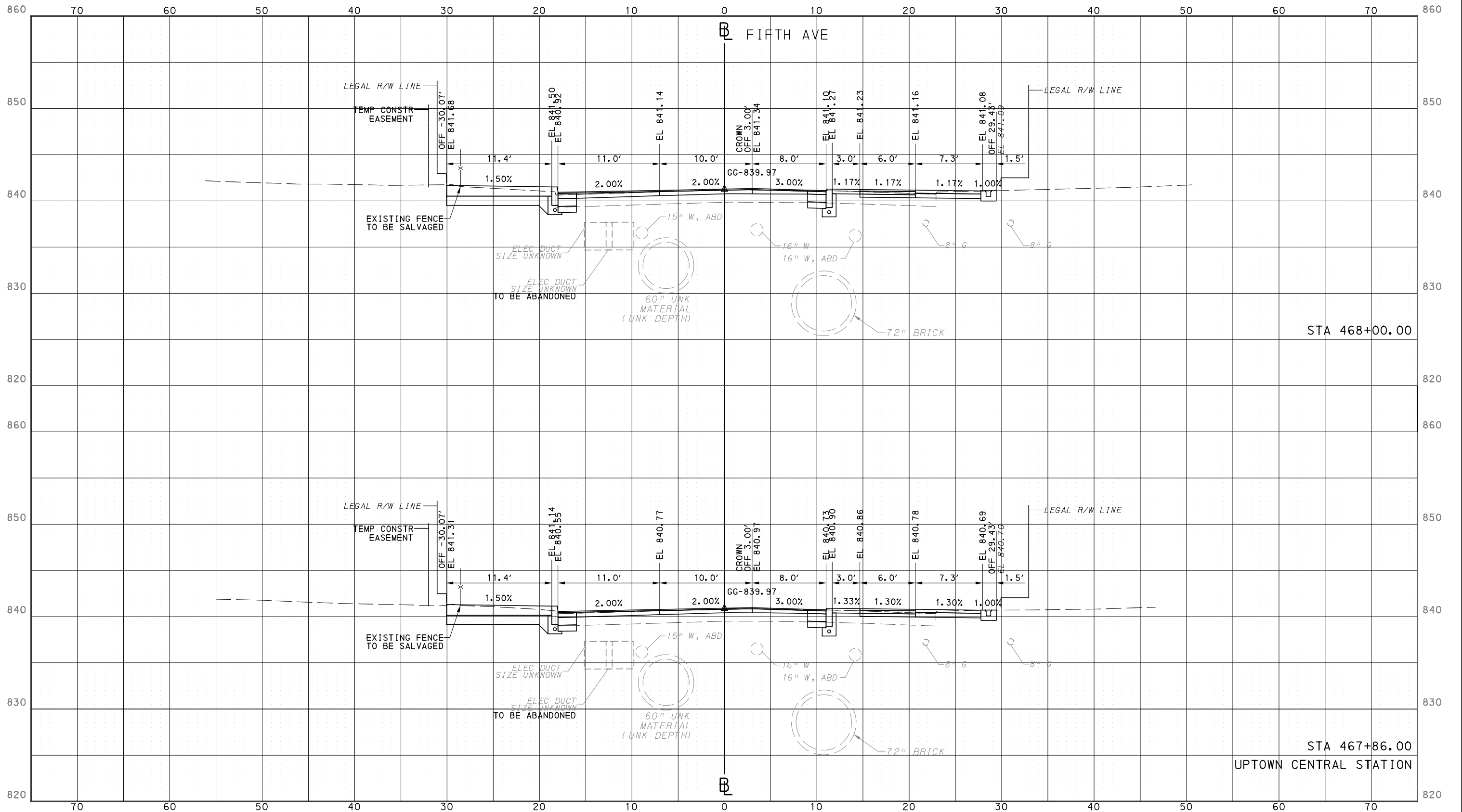
**BUS RAPID TRANSIT**  
CROSS SECTIONS  
FIFTH AVE - STA 467+08.00 TO 467+50.00

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CONTRACT NO. BRT-001  
DWG. NO. XS45 SHT. 1250

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DATE	05/01/24
SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT**  
CROSS SECTIONS  
FIFTH AVE - STA 467+86.00 TO 468+00.00

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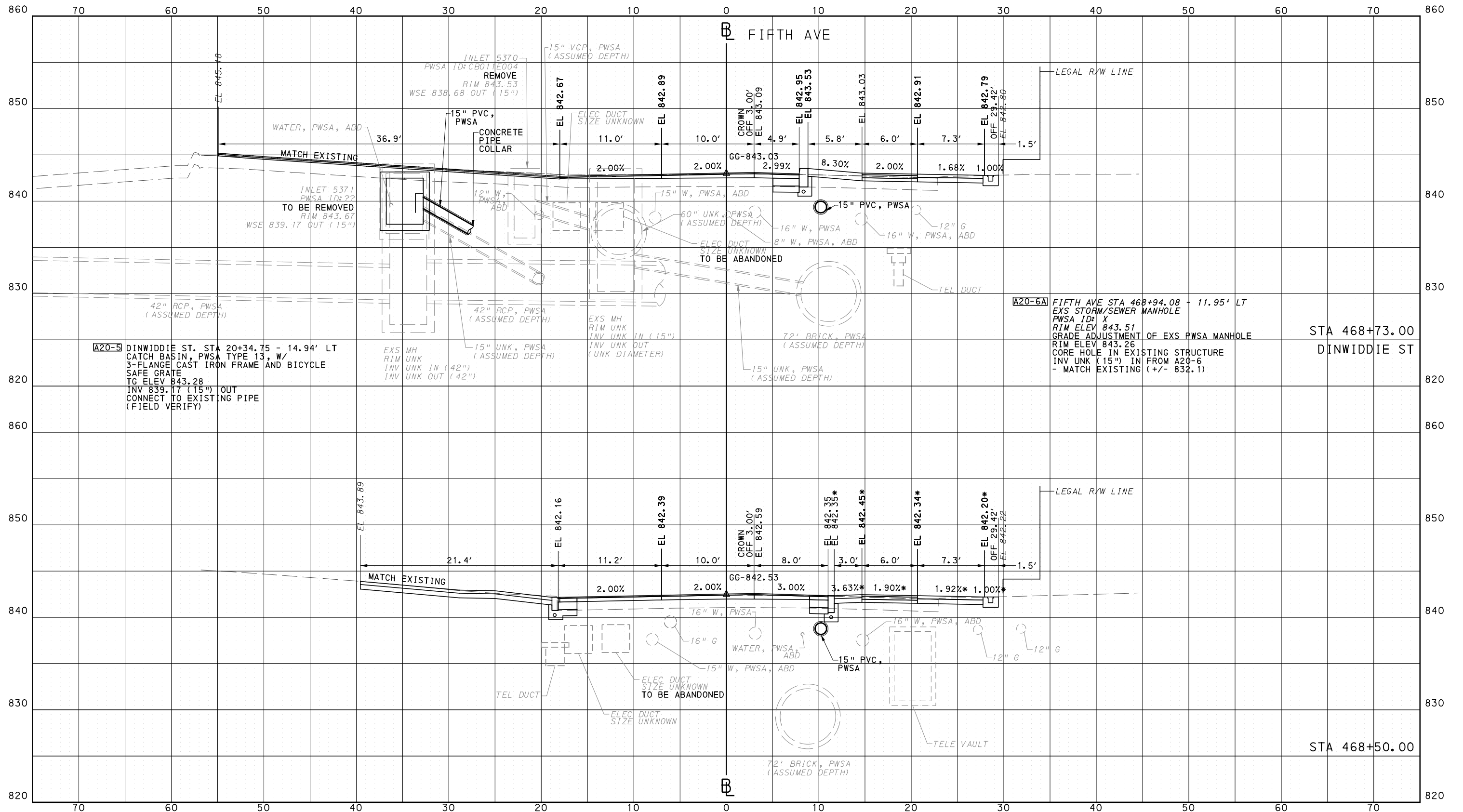
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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS

\*TOP OF CURB ELEVATION AND SIDEWALK SLOPES TO BE DETERMINED PER ITEM 01900.001 - DESIGN OF CURB RAMPS



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IN CHARGE	LAR
DATE	05/01/24
SCALE	0 5 10 FEET

PORT AUTHORITY OF ALLEGHENY COUNTY  
PITTSBURGH PENNSYLVANIA

BUS RAPID TRANSIT  
CROSS SECTIONS  
FIFTH AVE - STA 468+50.00 TO 468+73.00



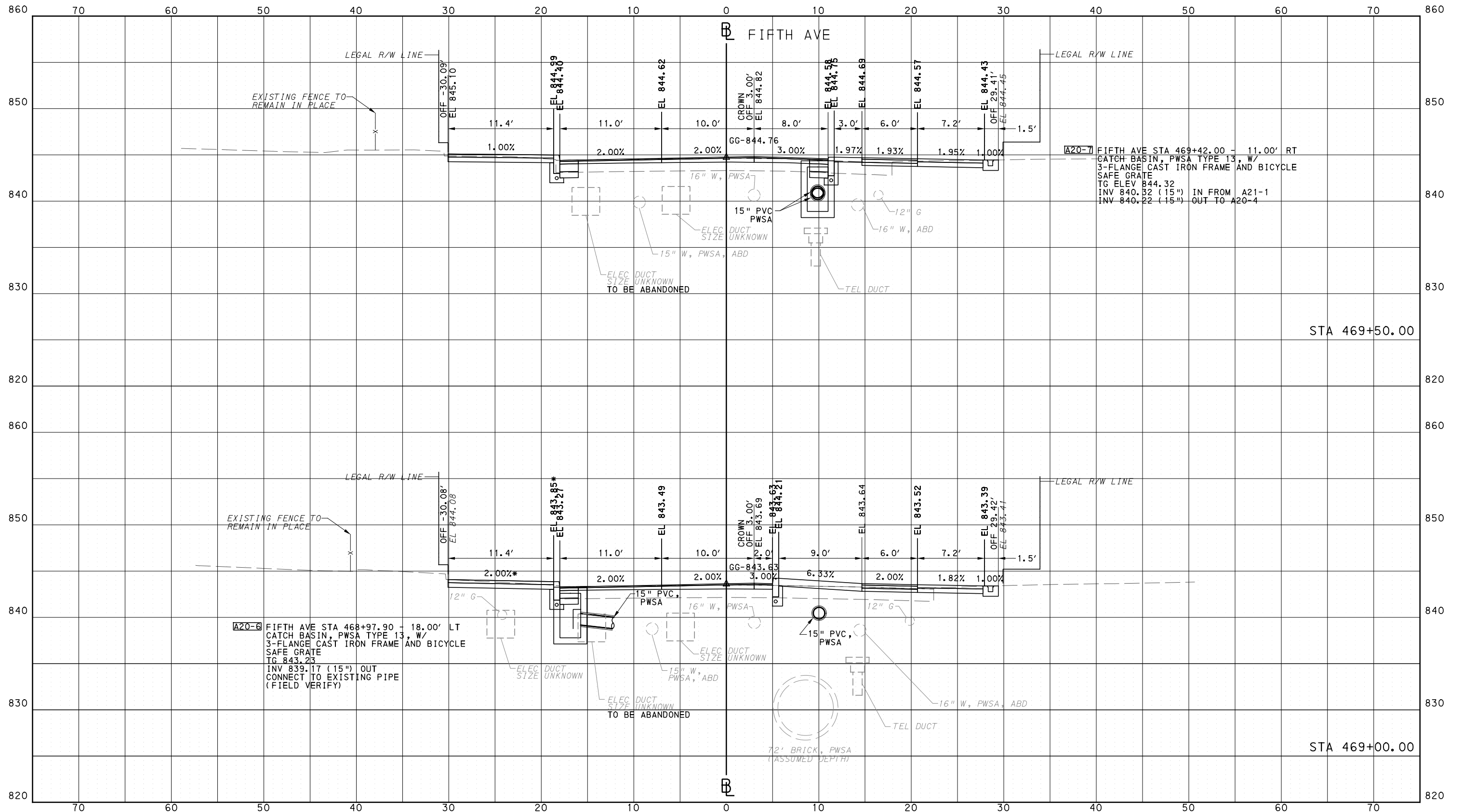
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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS

\*TOP OF CURB ELEVATION AND SIDEWALK SLOPES TO BE DETERMINED PER ITEM 01900.001 - DESIGN OF CURB RAMPS



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SCALE	0 5 10 FEET

PORT AUTHORITY OF ALLEGHENY COUNTY  
PITTSBURGH PENNSYLVANIA

BUS RAPID TRANSIT  
CROSS SECTIONS  
FIFTH AVE - STA 469+00.00 TO STA 469+50.00



CONTRACT NO. BRT-001

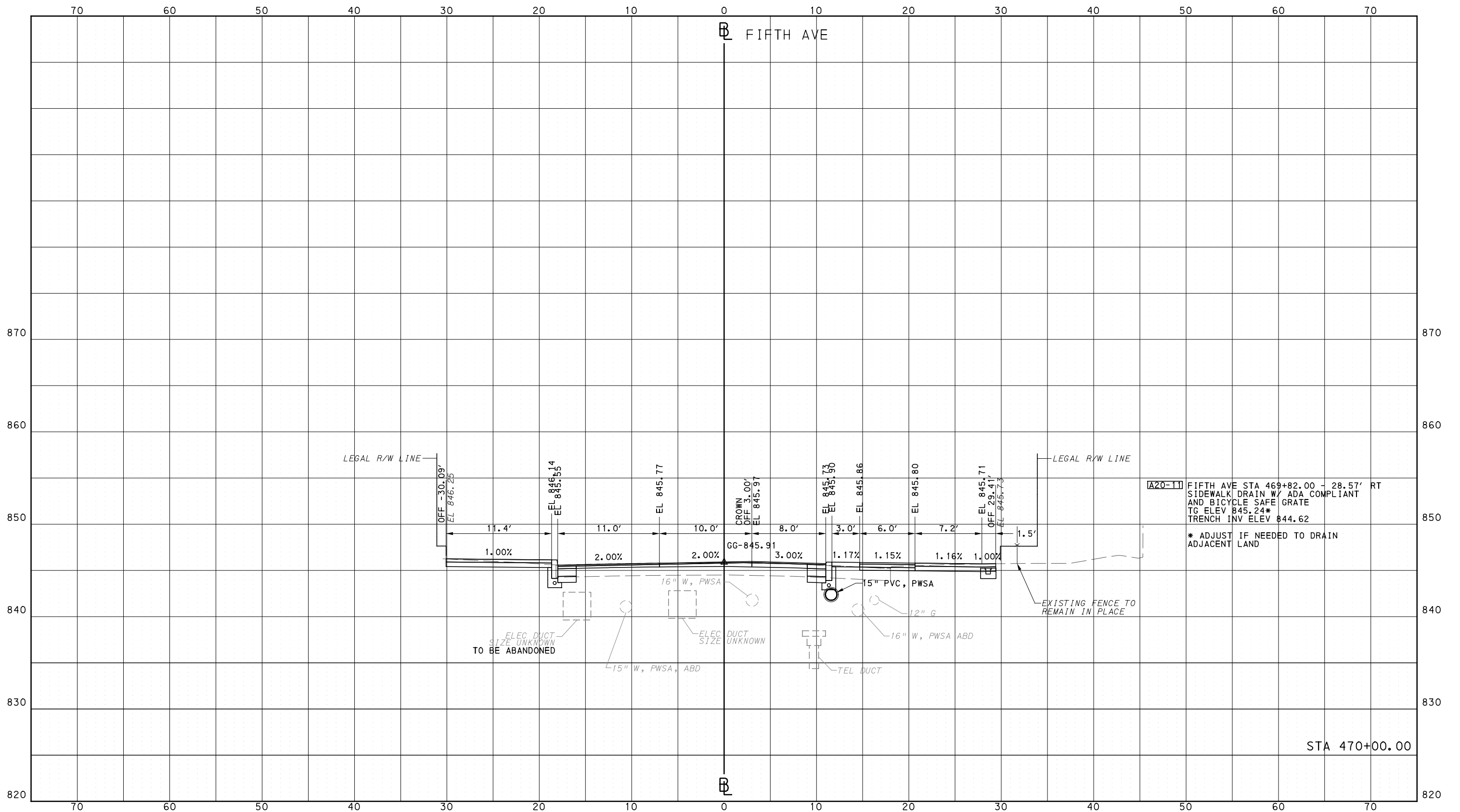
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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS



**A20-11** FIFTH AVE STA 469+82.00 - 28.57' RT  
SIDEWALK DRAIN W/ ADA COMPLIANT  
AND BICYCLE SAFE GRATE  
TG ELEV 845.24\*  
TRENCH INV ELEV 844.62  
\* ADJUST IF NEEDED TO DRAIN  
ADJACENT LAND

STA 470+00.00



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DRAWN	DRS
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DATE	05/01/24
SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT  
CROSS SECTIONS  
FIFTH AVE - STA 470+00.00**

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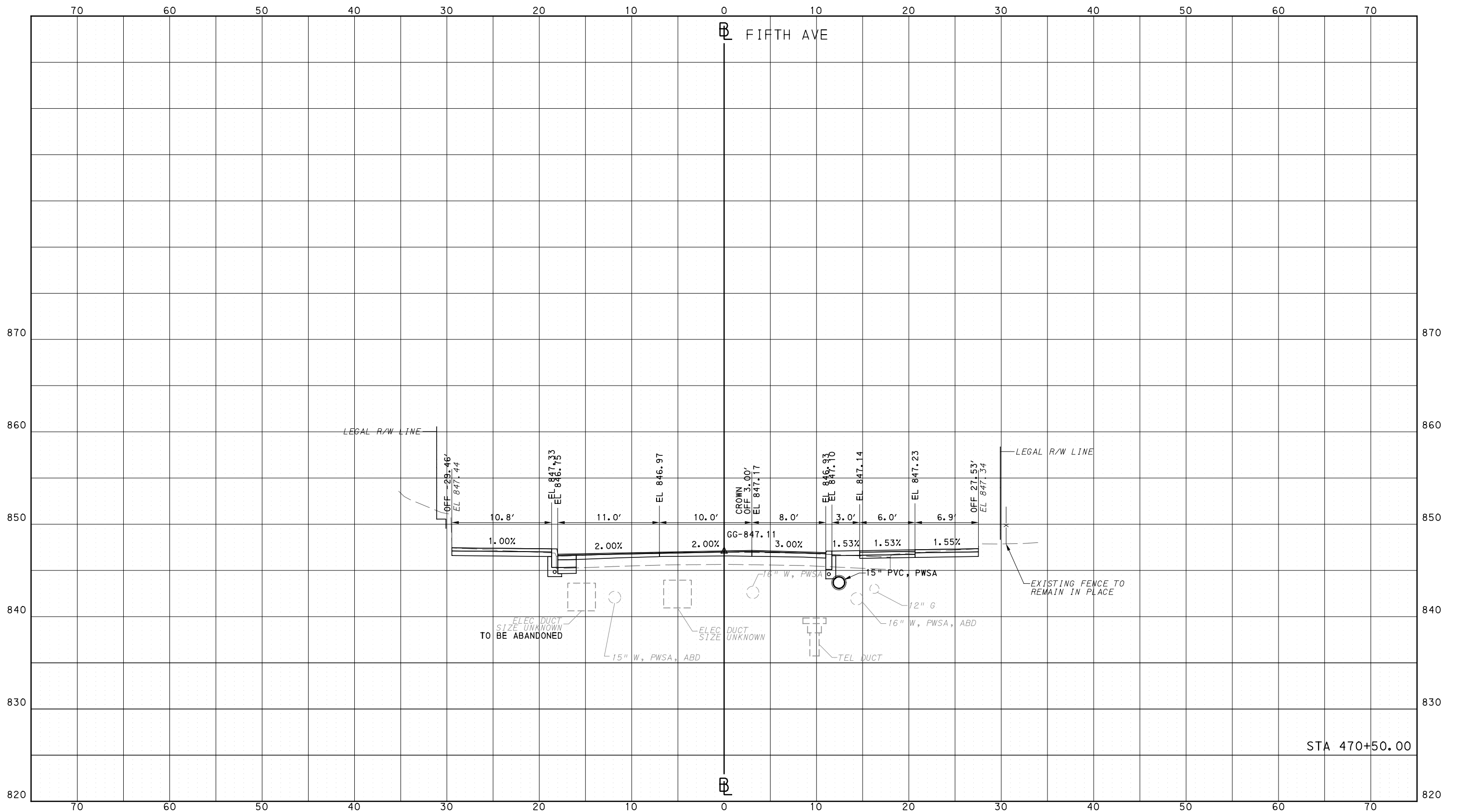
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PORT AUTHORITY OF ALLEGHENY COUNTY  
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SCALE	0 5 10 FEET

PORT AUTHORITY OF ALLEGHENY COUNTY  
PITTSBURGH PENNSYLVANIA

BUS RAPID TRANSIT  
CROSS SECTIONS  
FIFTH AVE - STA 470+50.00

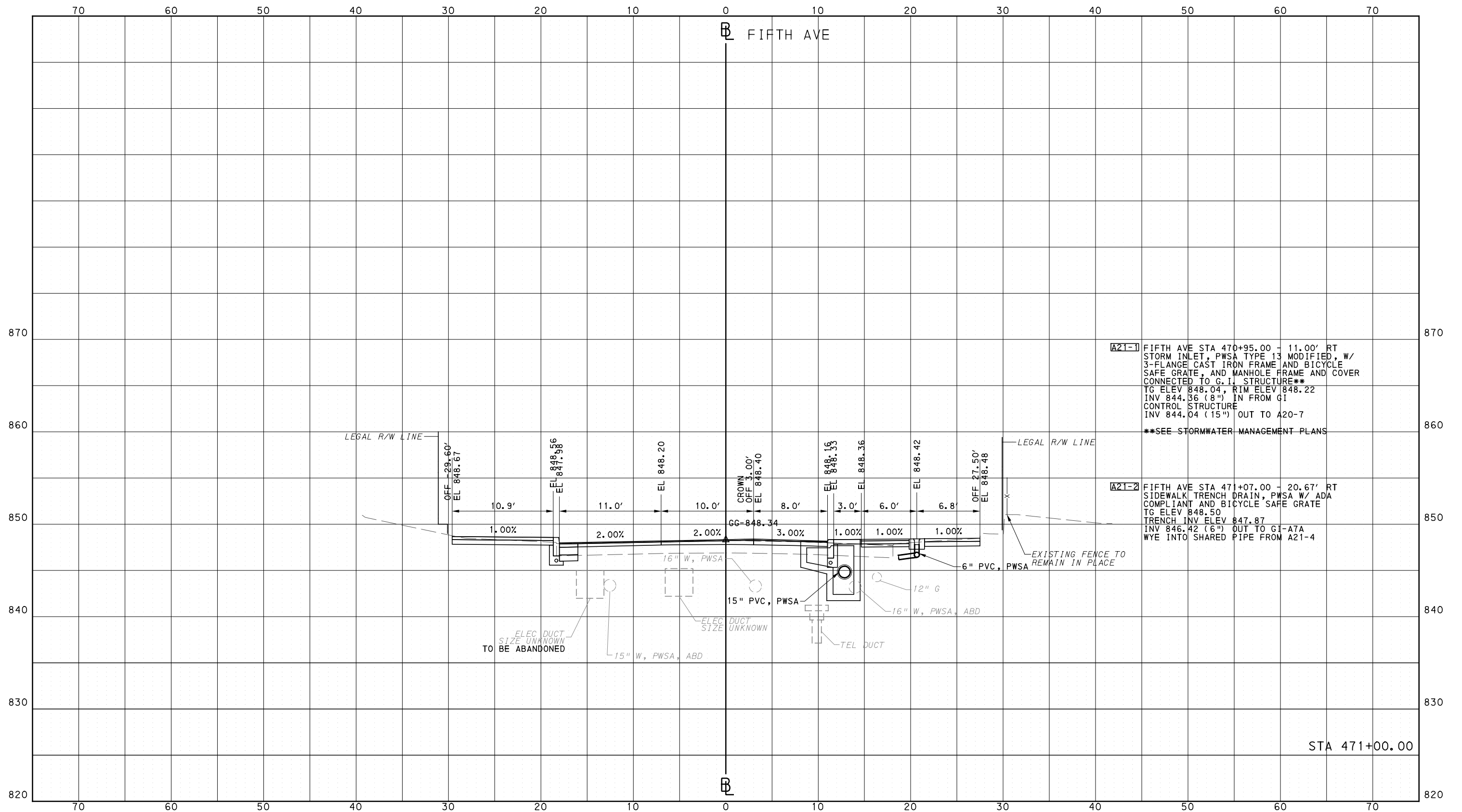


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PORT AUTHORITY OF ALLEGHENY COUNTY  
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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT  
CROSS SECTIONS  
FIFTH AVE - STA 471+00.00**

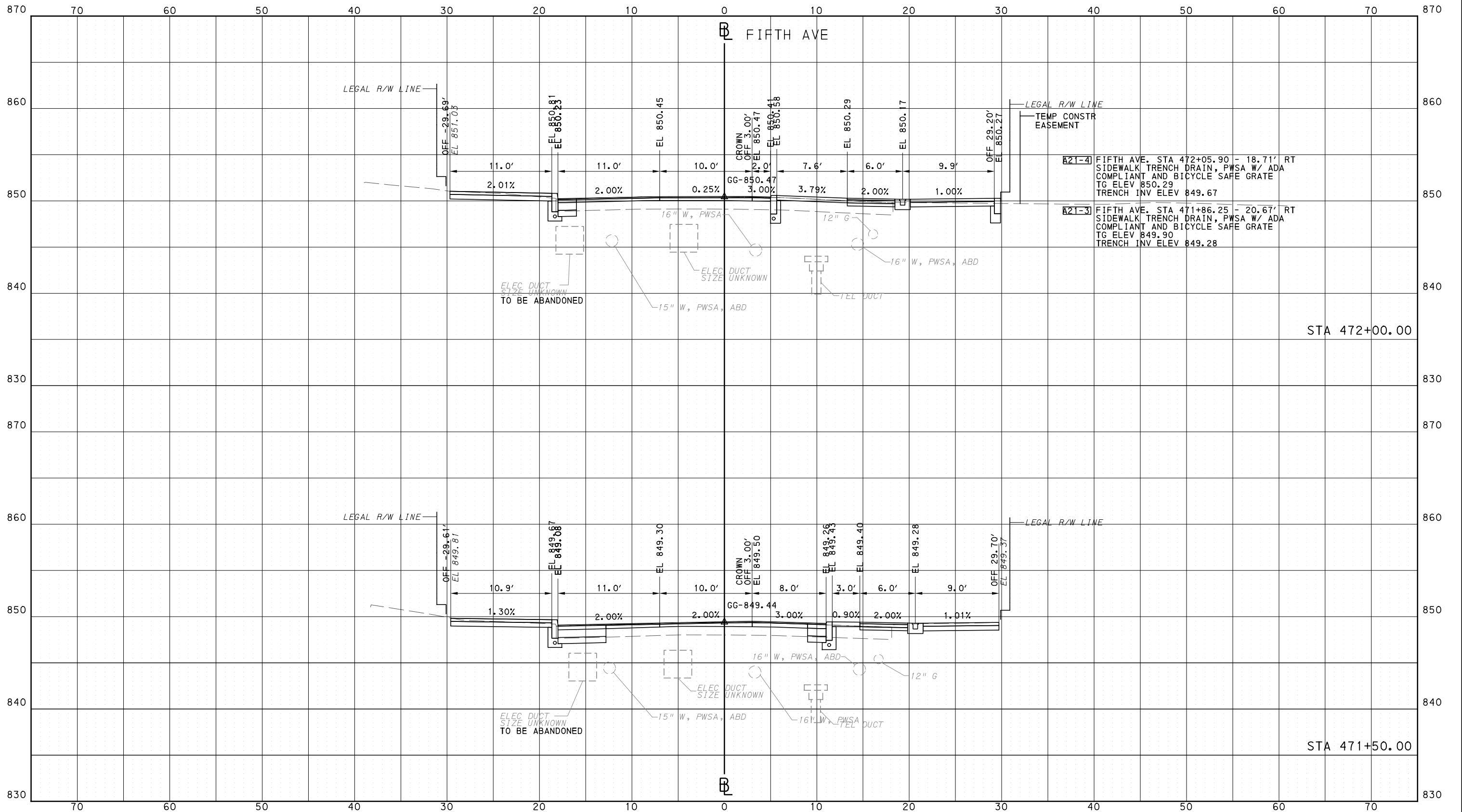
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CONTRACT NO. BRT-001  
DWG. NO. XS51 SHT. 1256

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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT**  
CROSS SECTIONS  
FIFTH AVE - STA 471+50.00 TO STA 472+00.00

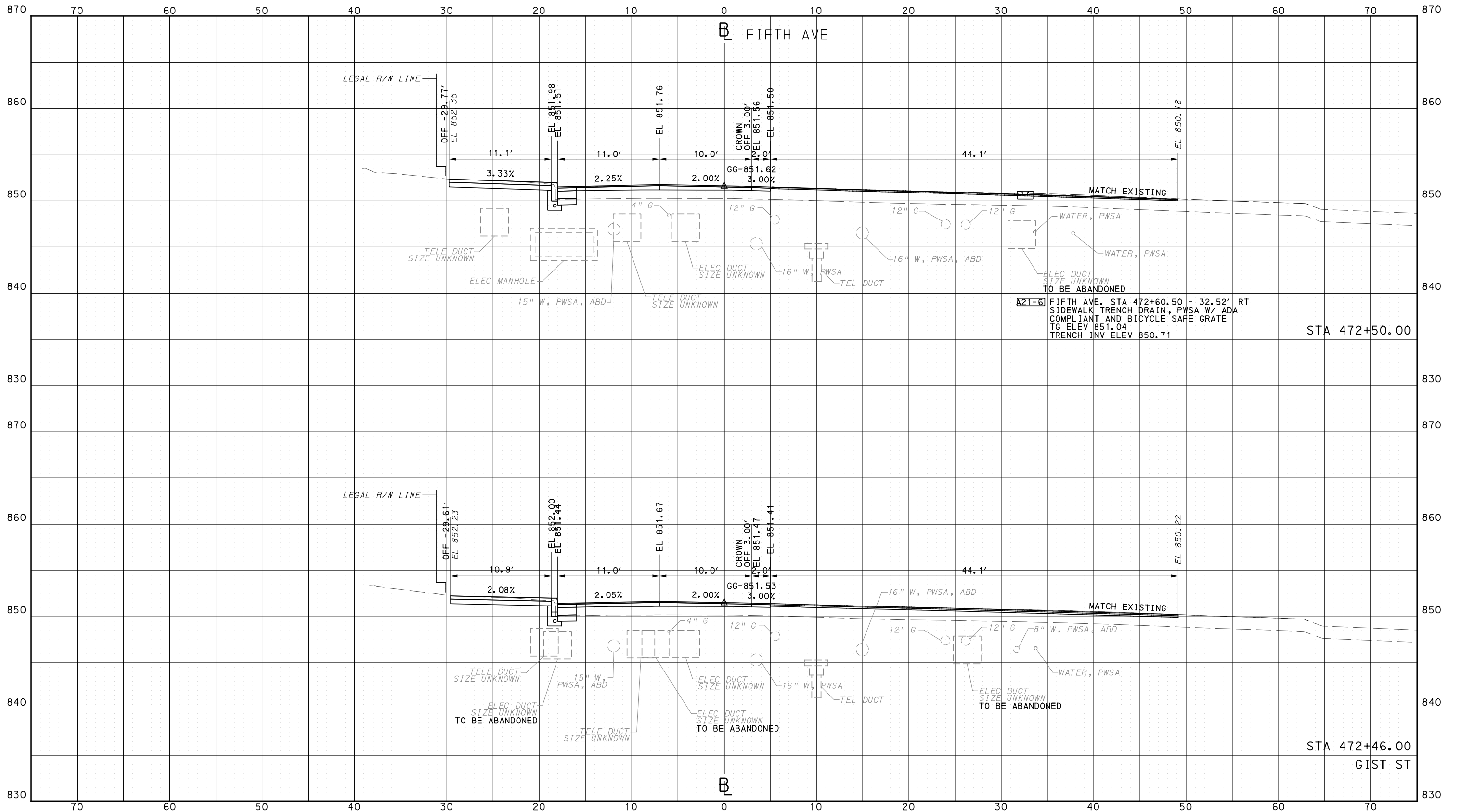
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PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT**  
CROSS SECTIONS  
FIFTH AVE - STA 472+46.00 TO STA 472+50.00

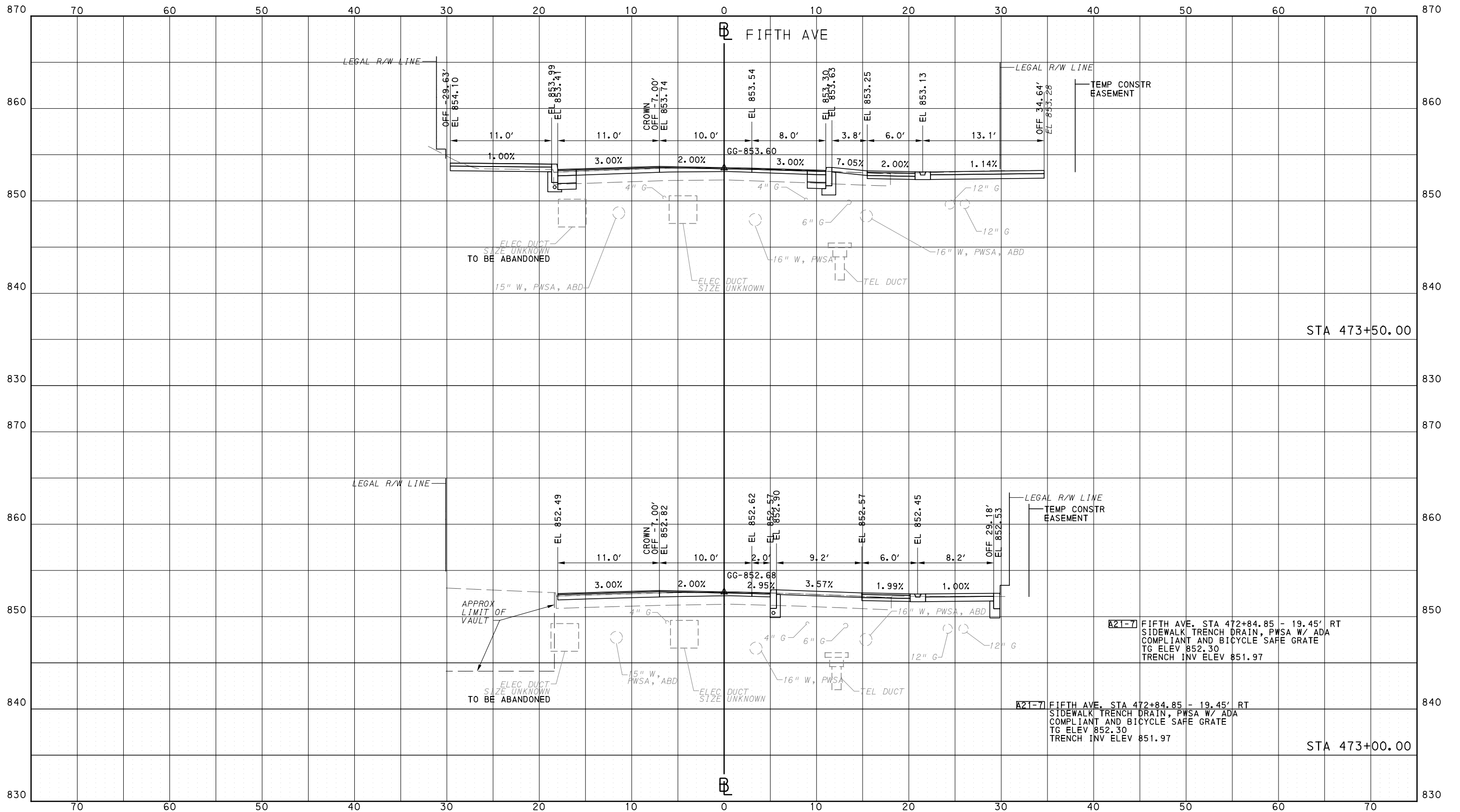
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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS



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Pittsburgh, PA 15219

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(NOT FOR CONSTRUCTION)

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IN CHARGE	LAR
DATE	05/01/24
SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT**  
CROSS SECTIONS  
FIFTH AVE - STA 473+00.00 TO STA 473+50.00

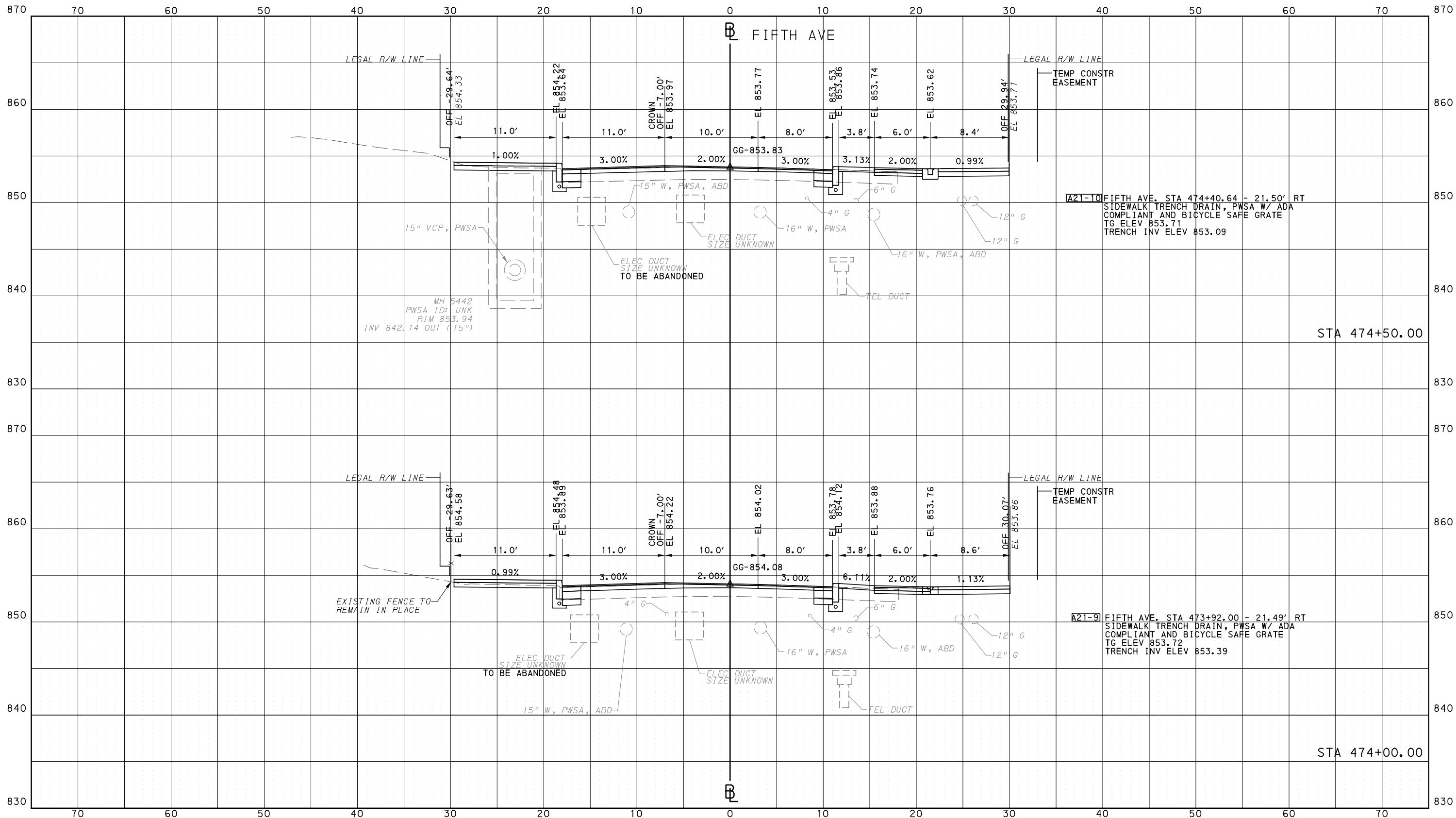
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CONTRACT NO. BRT-001  
DWG. NO. XS54 SHT. 1259

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PORT AUTHORITY OF ALLEGHENY COUNTY  
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BUS RAPID TRANSIT  
CROSS SECTIONS  
FIFTH AVE - STA 474+00.00 TO STA 474+50.00



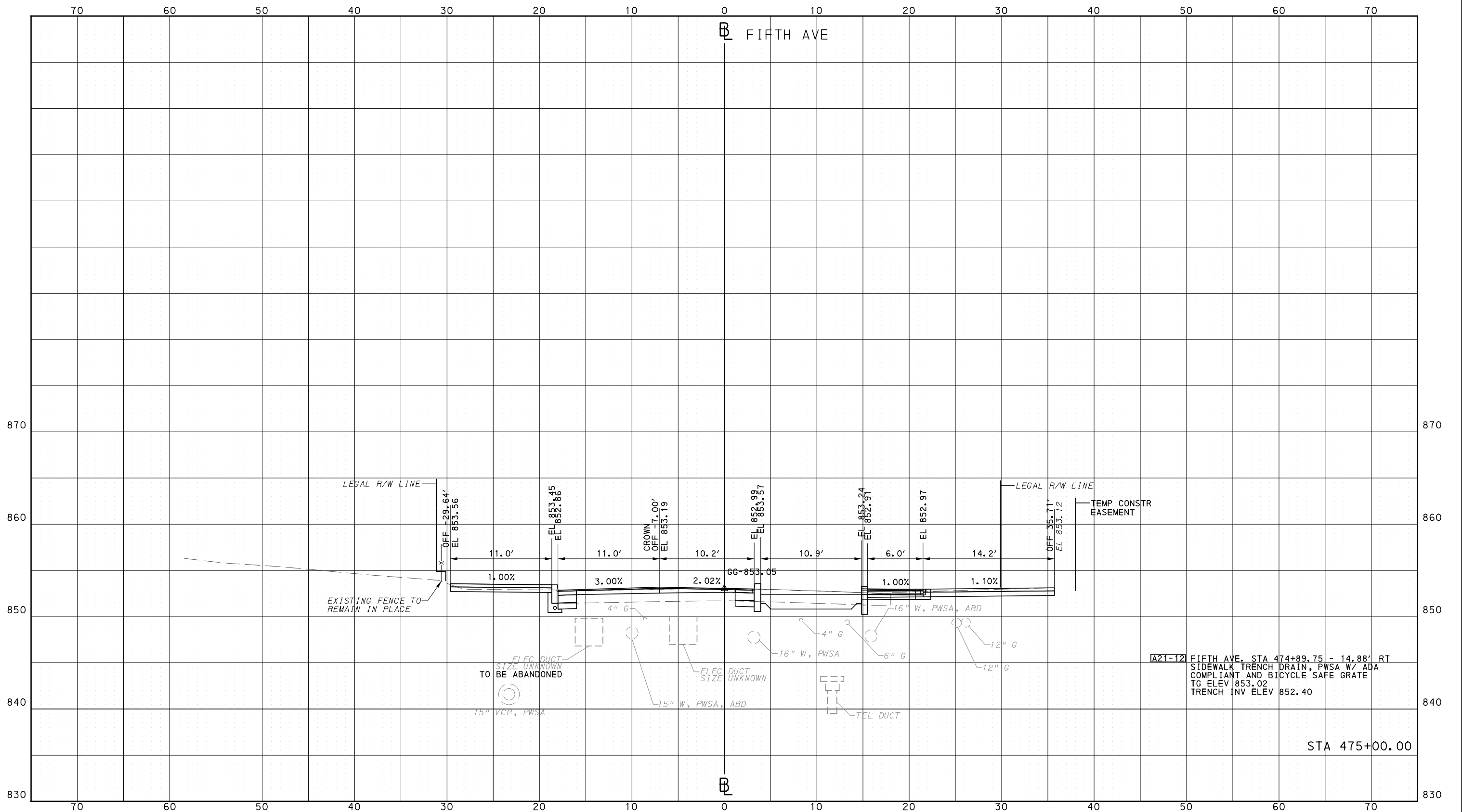
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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS



A21-12 FIFTH AVE. STA 474+89.75 - 14.88' RT  
SIDEWALK TRENCH DRAIN, PWSA W/ ADA  
COMPLIANT AND BICYCLE SAFE GRATE  
TG ELEV 853.02  
TRENCH INV ELEV 852.40



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PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT  
CROSS SECTIONS  
FIFTH AVE - STA 475+00.00**

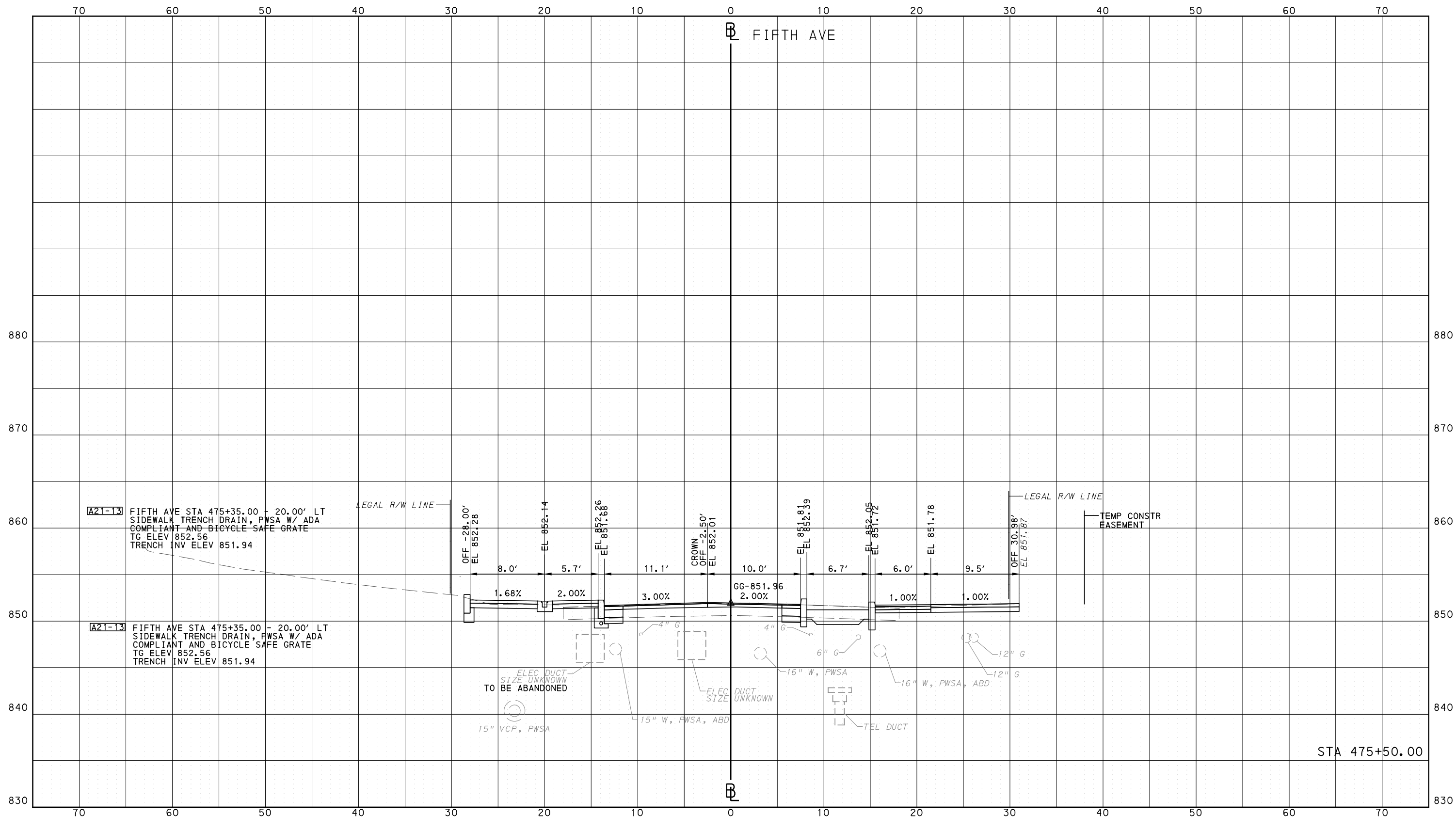
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CONTRACT NO. BRT-001  
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PORT AUTHORITY OF ALLEGHENY COUNTY  
PITTSBURGH PENNSYLVANIA

BUS RAPID TRANSIT  
CROSS SECTIONS  
FIFTH AVE - STA 475+50.00



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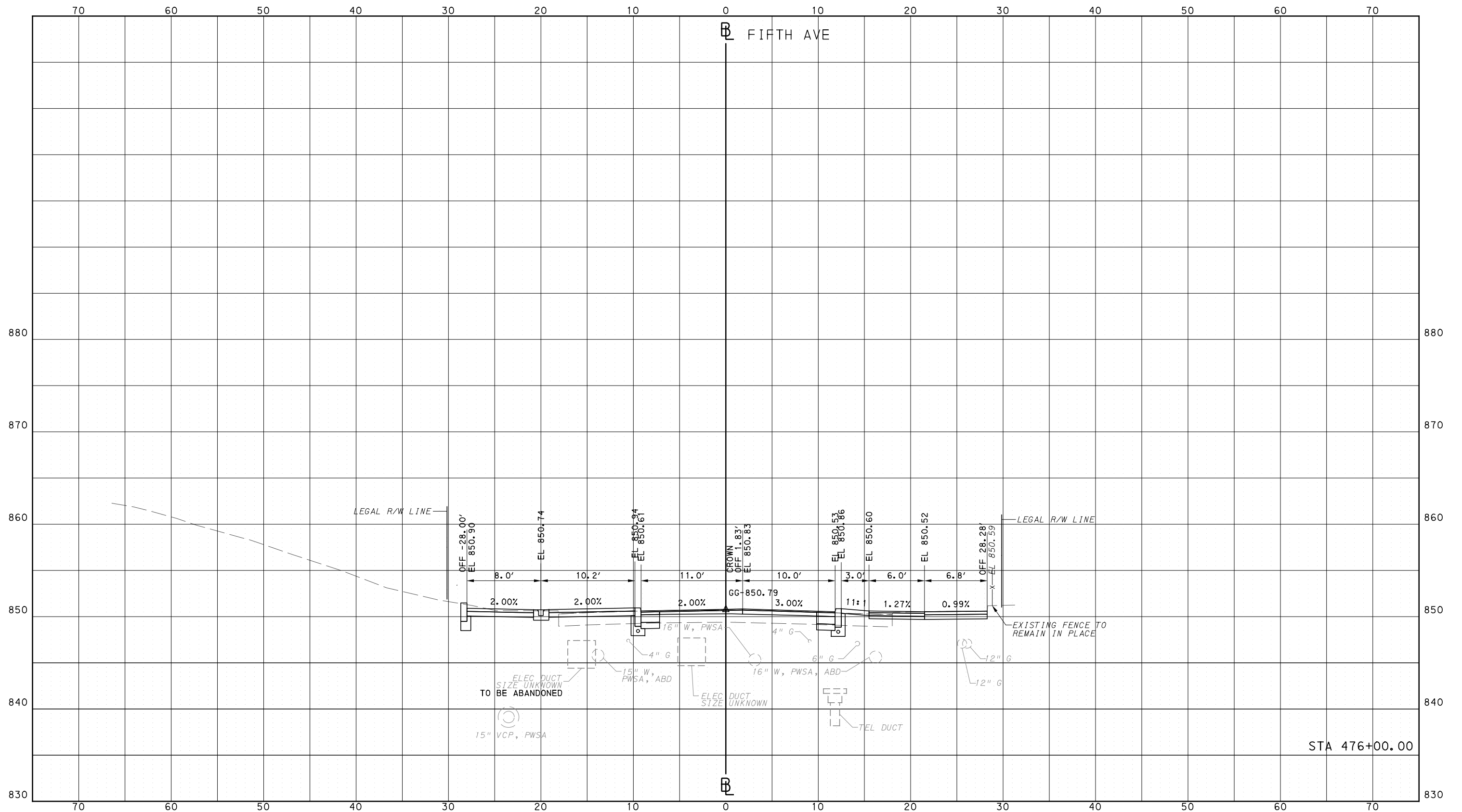
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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT  
CROSS SECTIONS  
FIFTH AVE - STA 476+00.00**

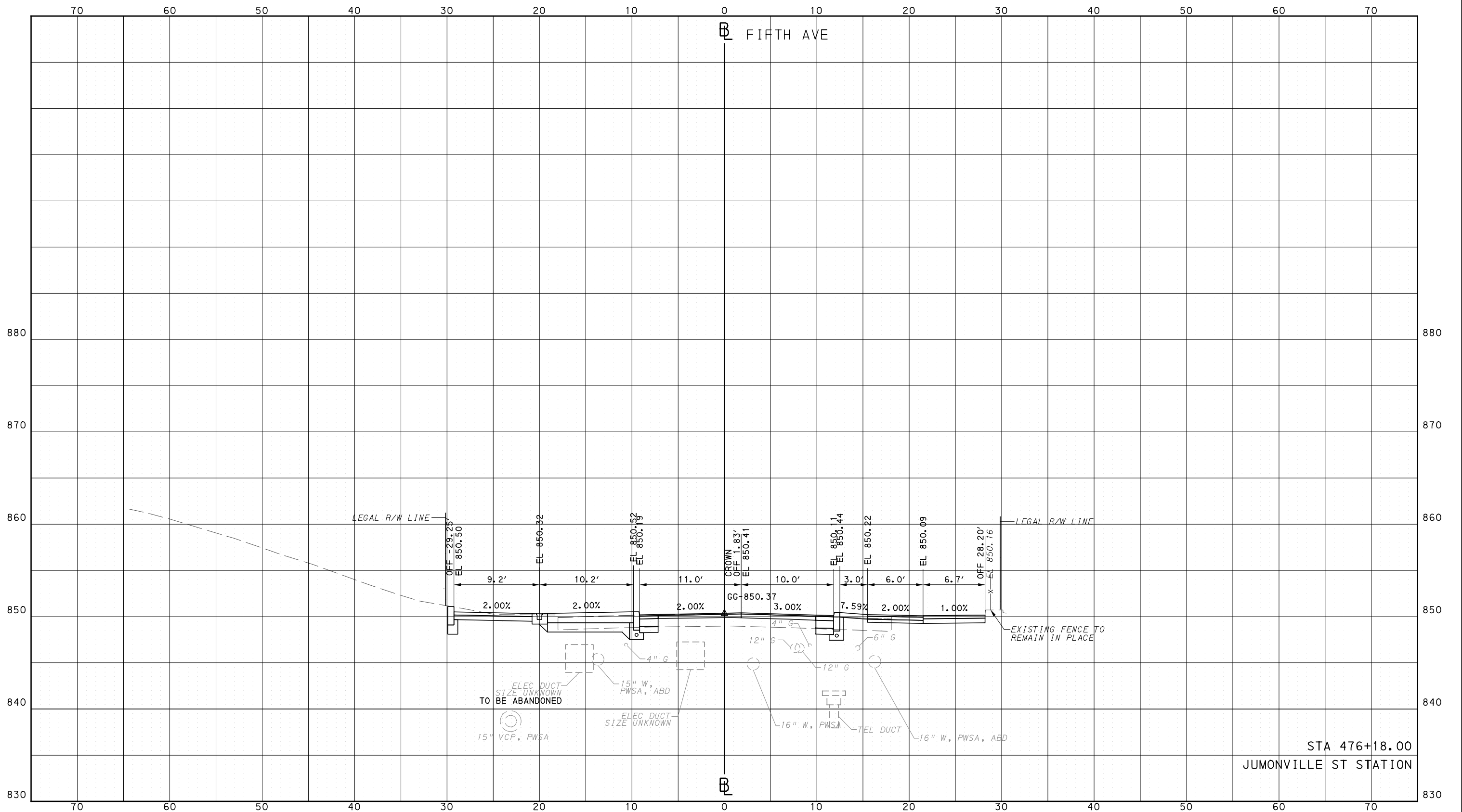
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CONTRACT NO. BRT-001	
DWG. NO. XS58	SHT. 1263

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BUS RAPID TRANSIT  
CROSS SECTIONS  
FIFTH AVE - STA 476+18.00



CONTRACT NO. BRT-001

DWG. NO. XS59 SHT. 1264





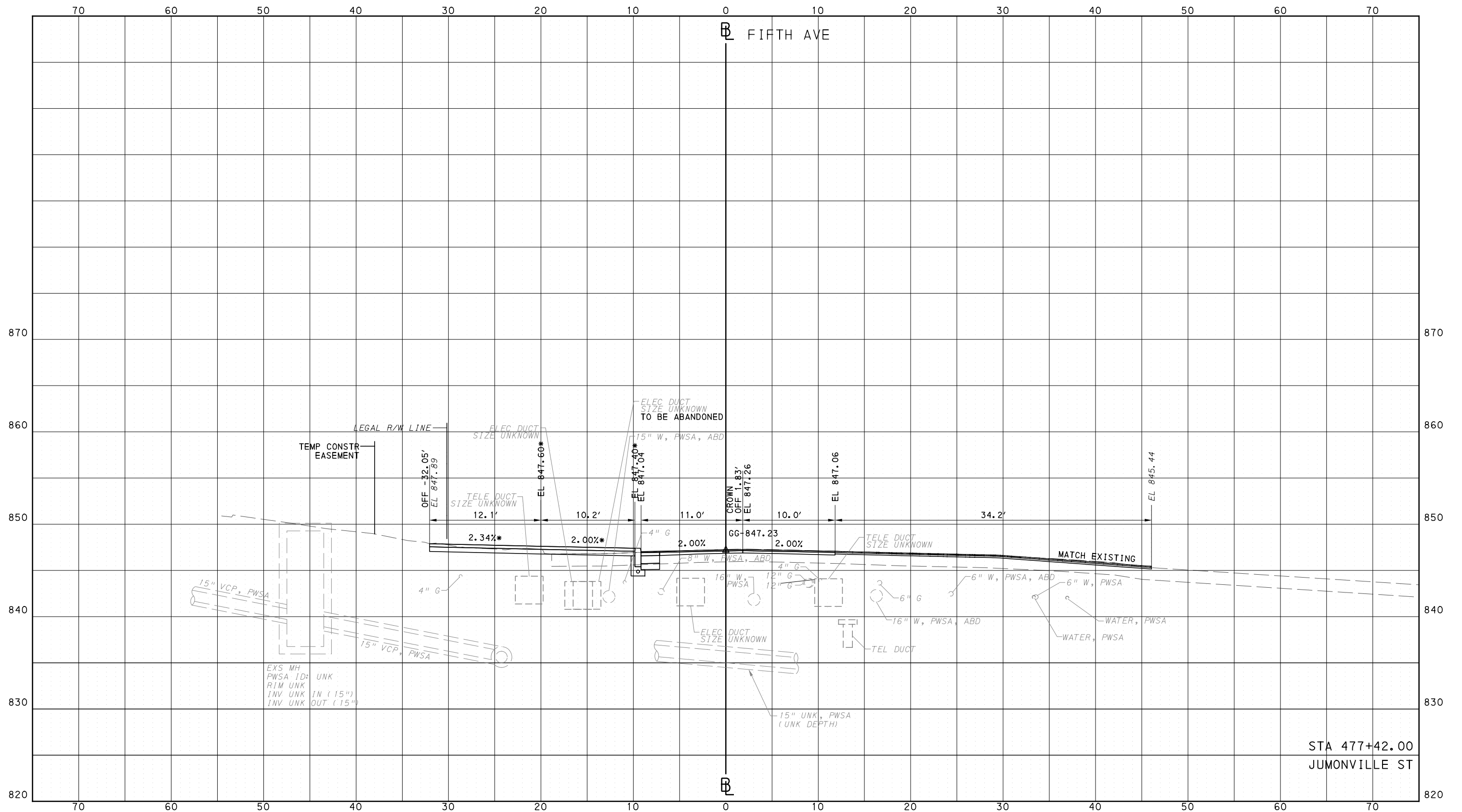


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PORT AUTHORITY OF ALLEGHENY COUNTY  
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\*TOP OF CURB ELEVATION AND SIDEWALK SLOPES TO BE DETERMINED PER ITEM 01900.001 - DESIGN OF CURB RAMPS



STA 477+42.00  
JUMONVILLE ST



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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT**  
CROSS SECTIONS  
FIFTH AVE - STA 477+42.00

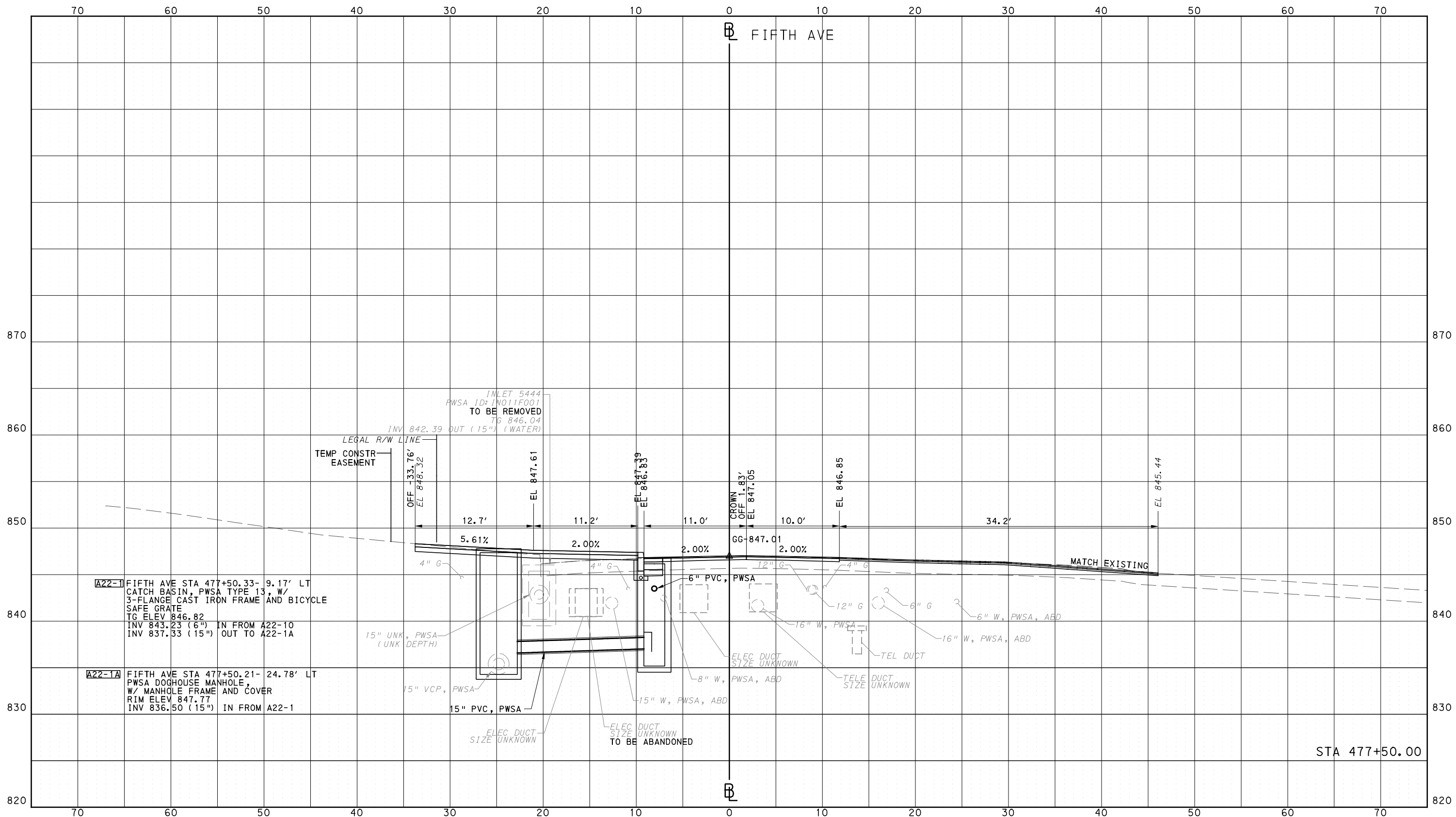
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CONTRACT NO. BRT-001  
DWG. NO. XS62 SHT. 1267

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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS



**A22-1** FIFTH AVE STA 477+50.33- 9.17' LT  
CATCH BASIN, PWSA TYPE 13, W/  
3-FLANGE CAST IRON FRAME AND BICYCLE  
SAFE GRATE  
TG ELEV 846.82  
INV 843.23 (6") IN FROM A22-10  
INV 837.33 (15") OUT TO A22-1A

**A22-1A** FIFTH AVE STA 477+50.21- 24.78' LT  
PWSA DOGHOUSE MANHOLE,  
W/ MANHOLE FRAME AND COVER  
RIM ELEV 847.77  
INV 836.50 (15") IN FROM A22-1

INLET 5444  
PWSA ID: IN011F001  
TO BE REMOVED  
TG 846.04  
INV 842.39 OUT (15") (WATER)

LEGAL R/W LINE  
TEMP CONSTR EASEMENT

OFF -33.76'  
EL 848.32

EL 847.61

EL 847.83

CROWN OFF 1.83'  
EL 847.05

EL 846.85

EL 845.44

12.7'

11.2'

11.0'

10.0'

34.2'

5.61%

2.00%

2.00%

2.00%

4" G

4" G

6" PVC, PWSA

12" G

4" G

6" G

6" W, PWSA, ABD

16" W, PWSA, ABD

16" W, PWSA, ABD

ELEC DUCT  
SIZE UNKNOWN

TEL DUCT

8" W, PWSA, ABD

TELE DUCT  
SIZE UNKNOWN

15" VCP, PWSA

15" W, PWSA, ABD

15" PVC, PWSA

ELEC DUCT  
SIZE UNKNOWN

ELEC DUCT  
SIZE UNKNOWN  
TO BE ABANDONED

15" UNK, PWSA  
(UNK DEPTH)

STA 477+50.00



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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT**  
CROSS SECTIONS  
FIFTH AVE - STA 477+50.00

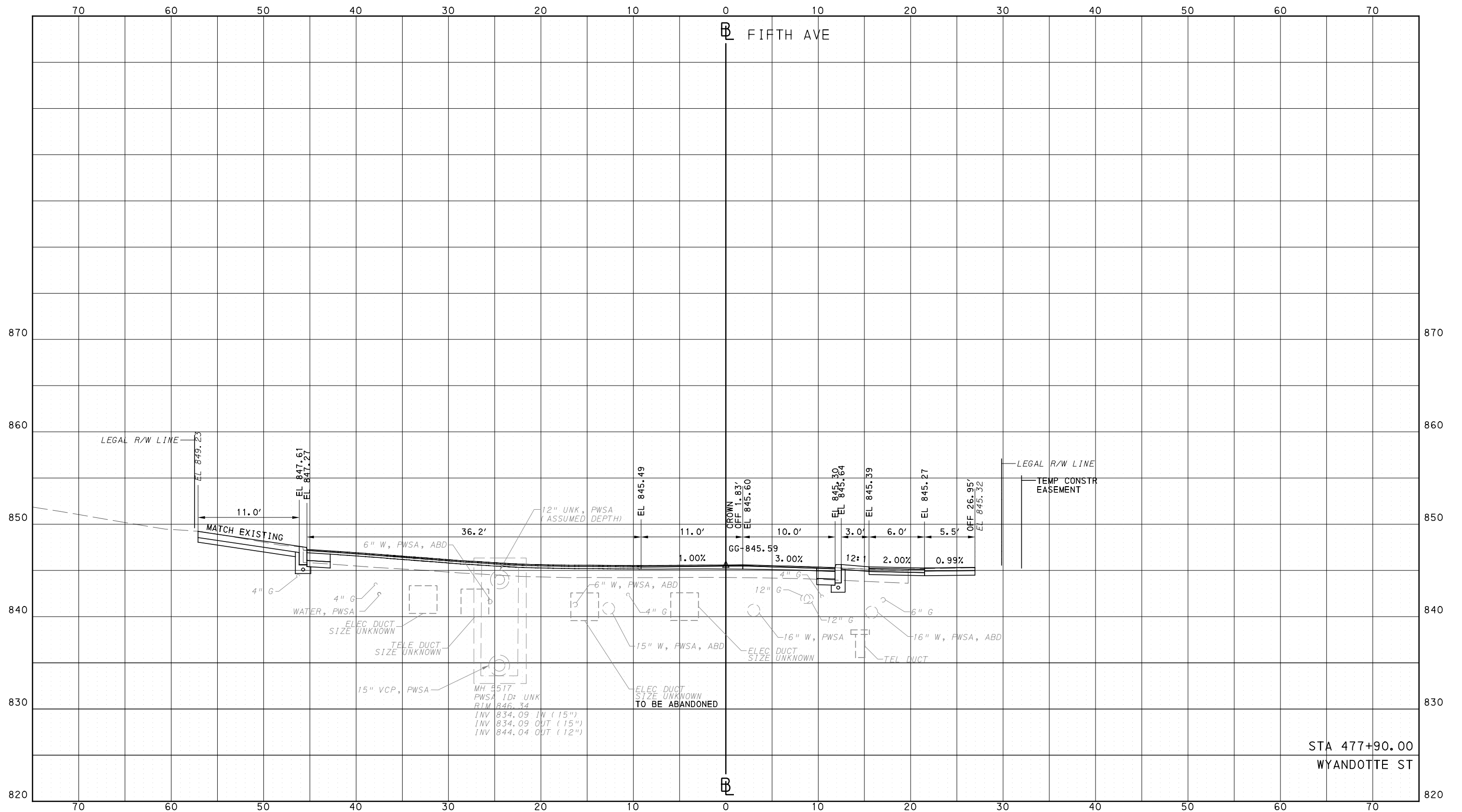
**Port Authority** connecting people to life

CONTRACT NO. BRT-001  
DWG. NO. XS63 SHT. 1268

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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS



STA 477+90.00  
WYANDOTTE ST



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PORT AUTHORITY OF ALLEGHENY COUNTY  
PITTSBURGH PENNSYLVANIA

BUS RAPID TRANSIT  
CROSS SECTIONS  
FIFTH AVE - STA 477+90.00

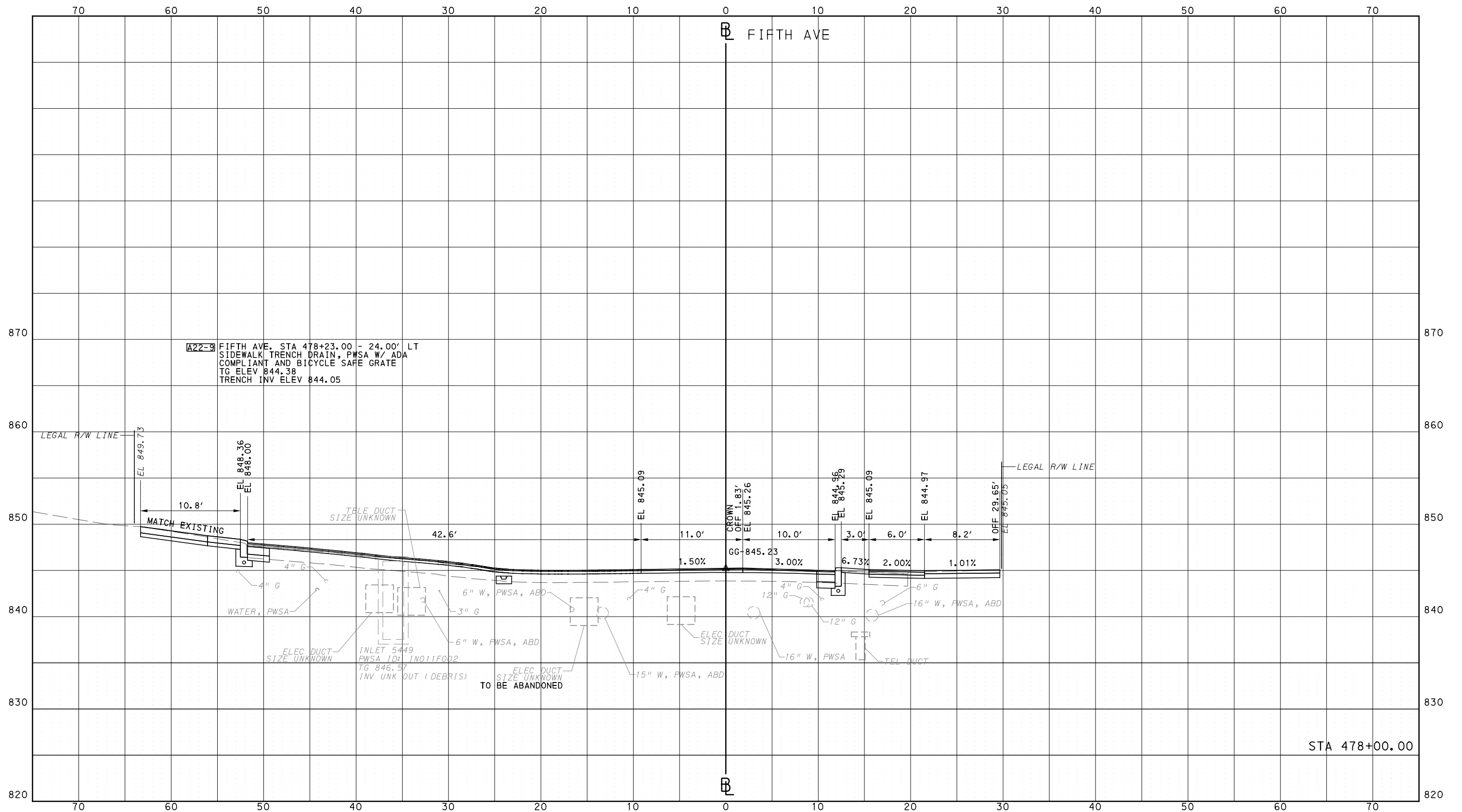


CONTRACT NO. BRT-001  
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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT  
CROSS SECTIONS  
FIFTH AVE - STA 478+00.00**

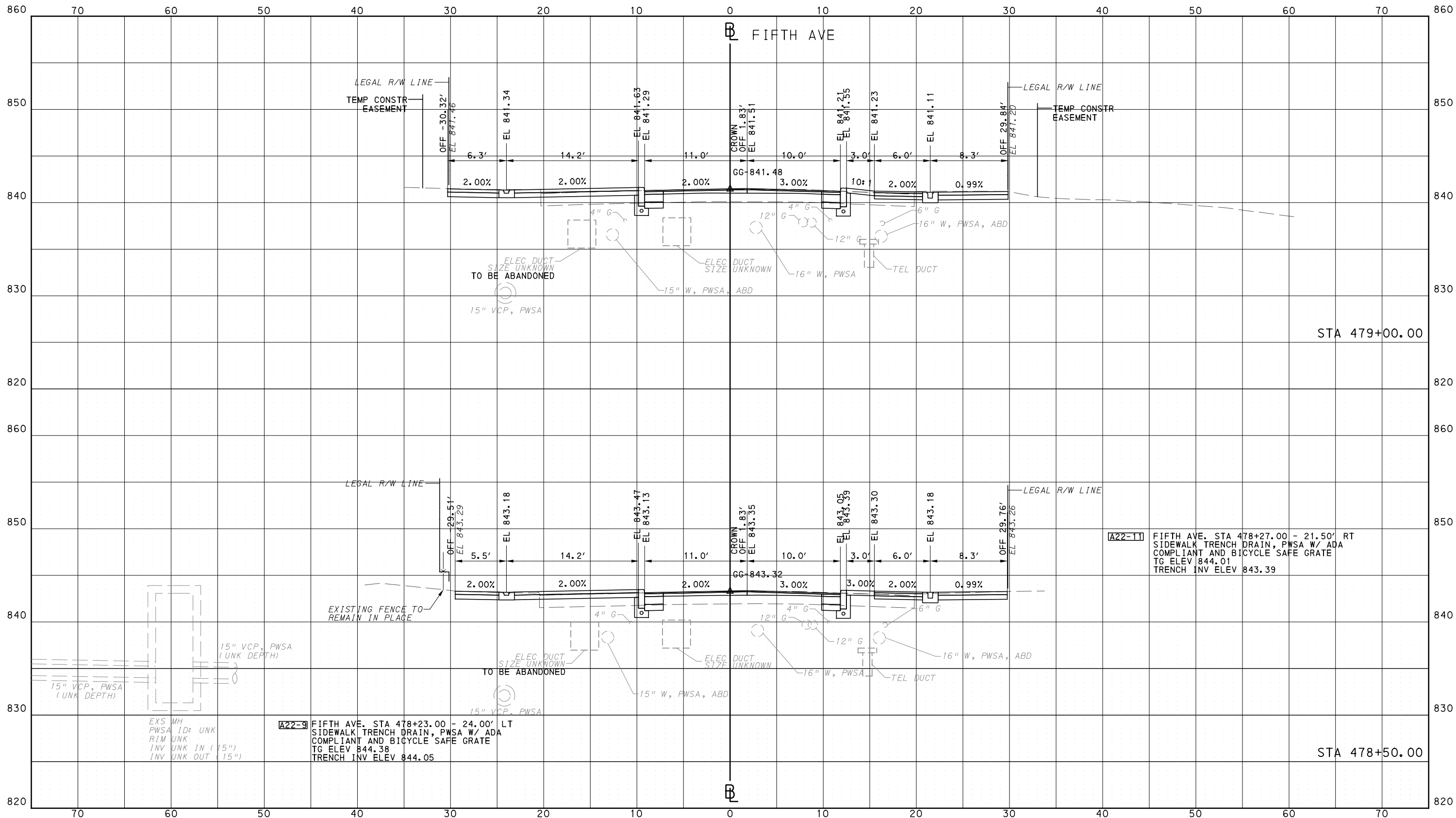
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DWG. NO. XS65	SHT. 1270

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PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT**  
CROSS SECTIONS  
FIFTH AVE - STA 478+50.00 TO STA 479+00.00

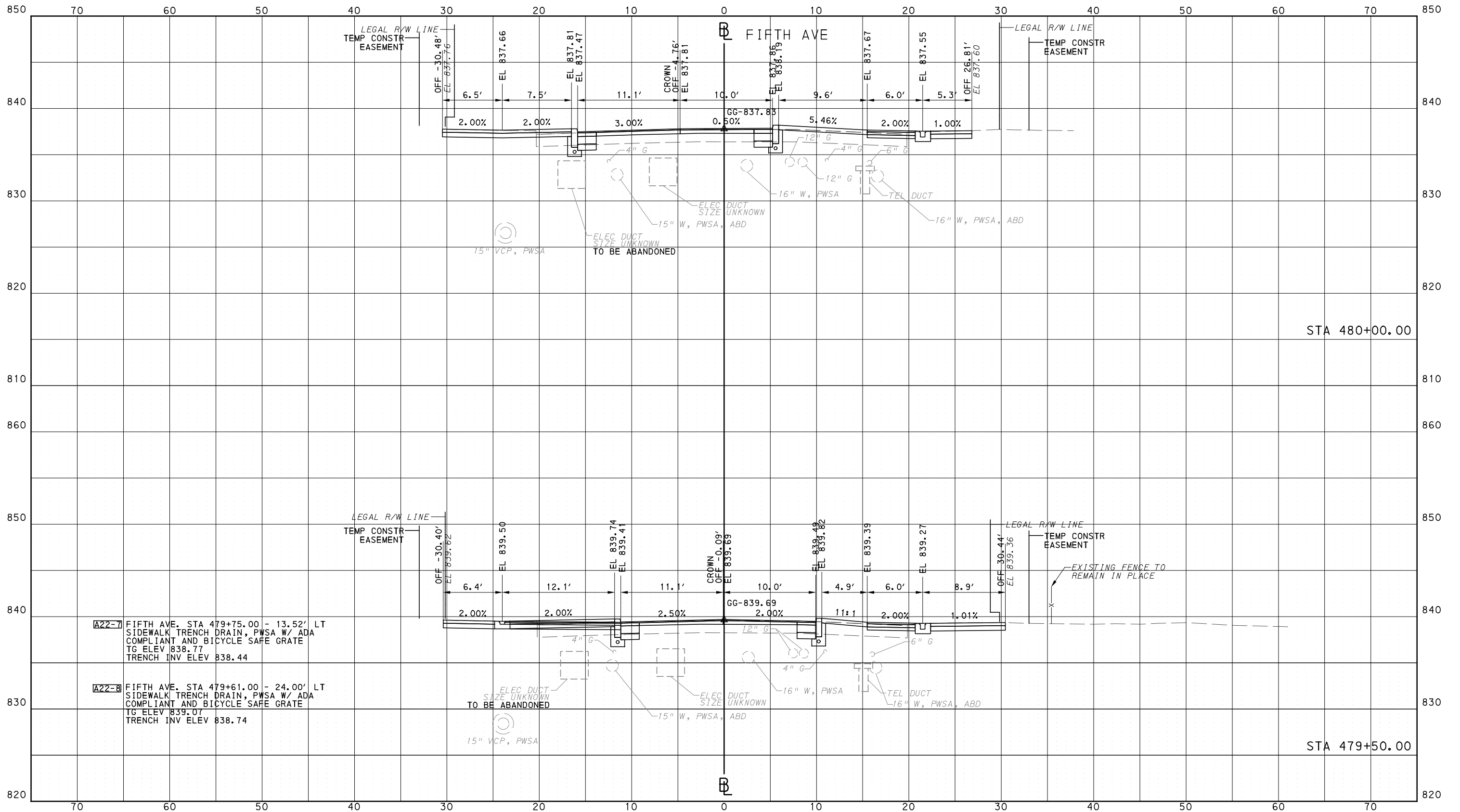
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CONTRACT NO. BRT-001	
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PORT AUTHORITY OF ALLEGHENY COUNTY  
 CROSS SECTIONS



**A22-7** FIFTH AVE. STA 479+75.00 - 13.52' LT  
 SIDEWALK TRENCH DRAIN, PWSA W/ ADA  
 COMPLIANT AND BICYCLE SAFE GRATE  
 TG ELEV 838.77  
 TRENCH INV ELEV 838.44

**A22-8** FIFTH AVE. STA 479+61.00 - 24.00' LT  
 SIDEWALK TRENCH DRAIN, PWSA W/ ADA  
 COMPLIANT AND BICYCLE SAFE GRATE  
 TG ELEV 839.07  
 TRENCH INV ELEV 838.74



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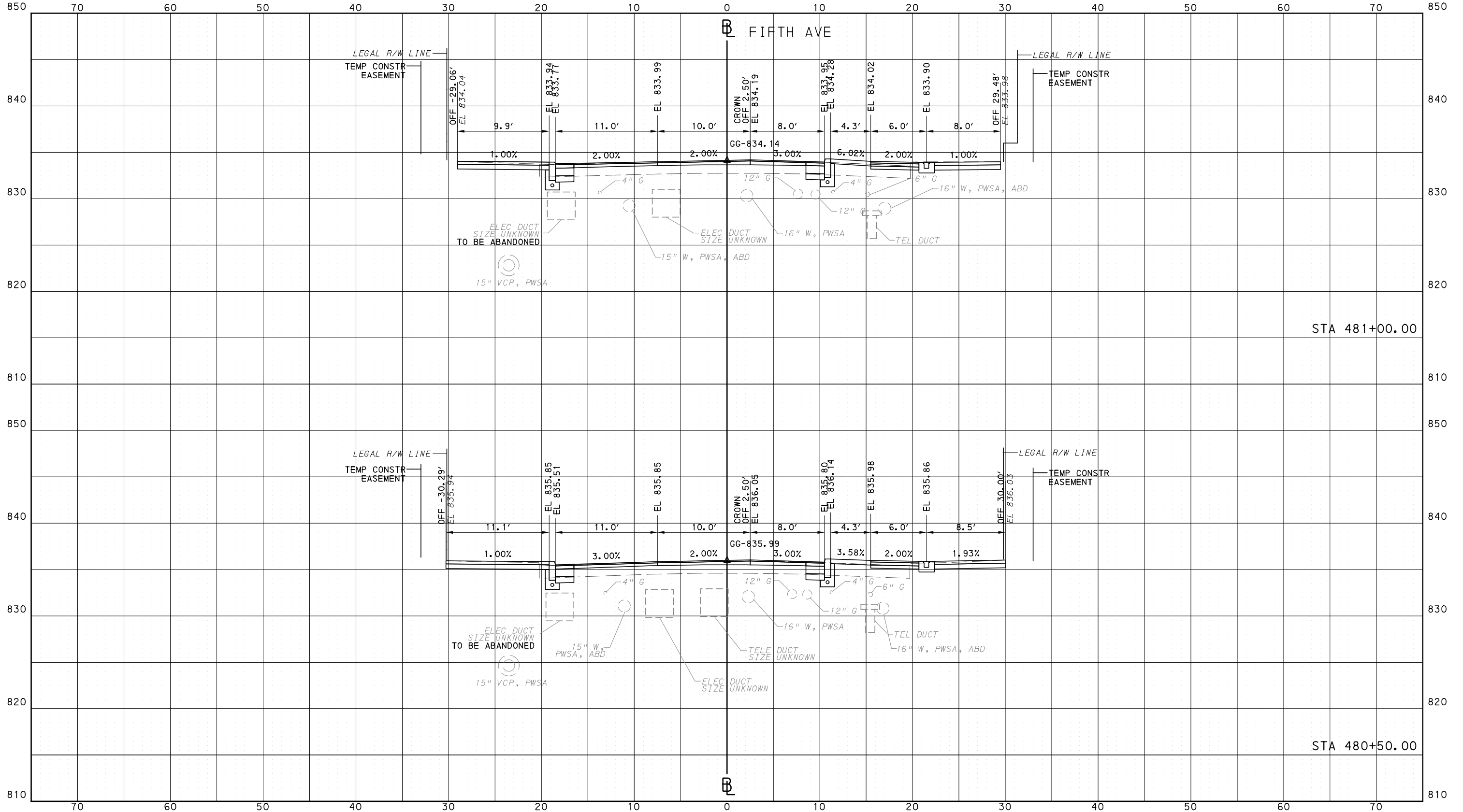
**BUS RAPID TRANSIT**  
 CROSS SECTIONS  
 FIFTH AVE - STA 479+50.00 TO STA 480+00.00

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**BUS RAPID TRANSIT CROSS SECTIONS**  
FIFTH AVE - STA 480+50.00 TO STA 481+00.00

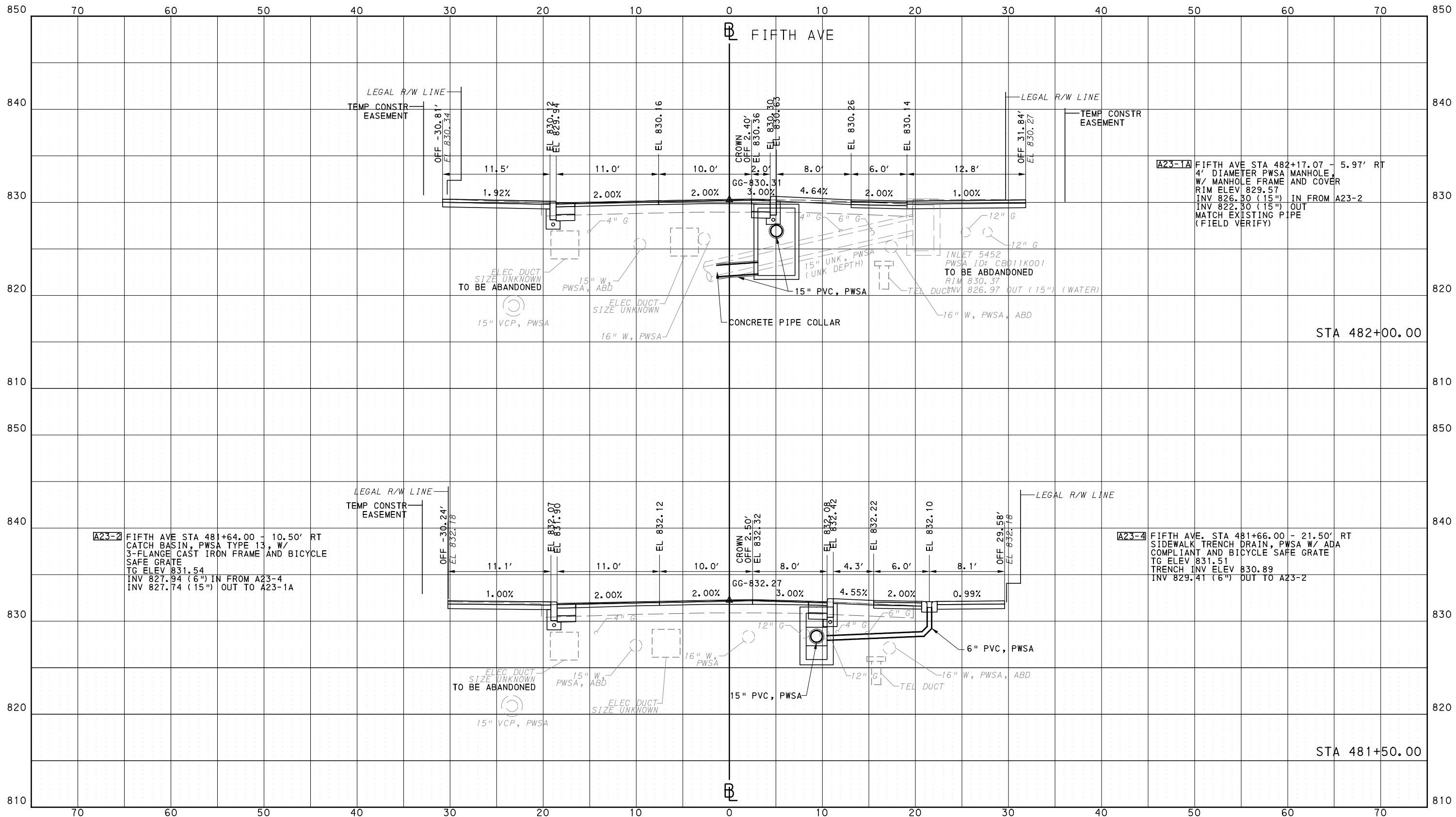
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BUS RAPID TRANSIT  
CROSS SECTIONS  
FIFTH AVE - STA 481+50.00 TO STA 482+00.00

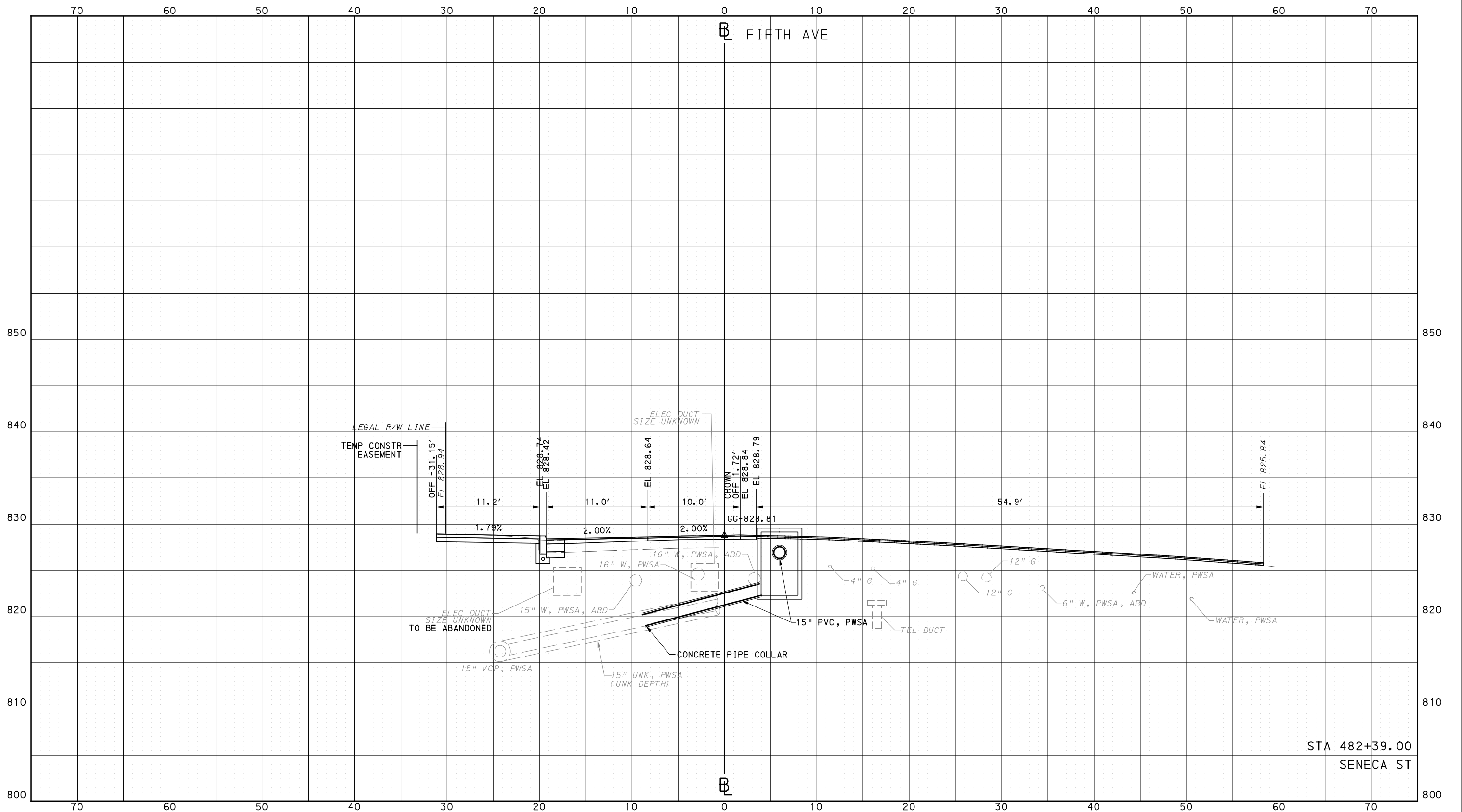


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PORT AUTHORITY OF ALLEGHENY COUNTY  
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STA 482+39.00  
SENECA ST



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**BUS RAPID TRANSIT**  
CROSS SECTIONS  
FIFTH AVE - STA 482+39.00

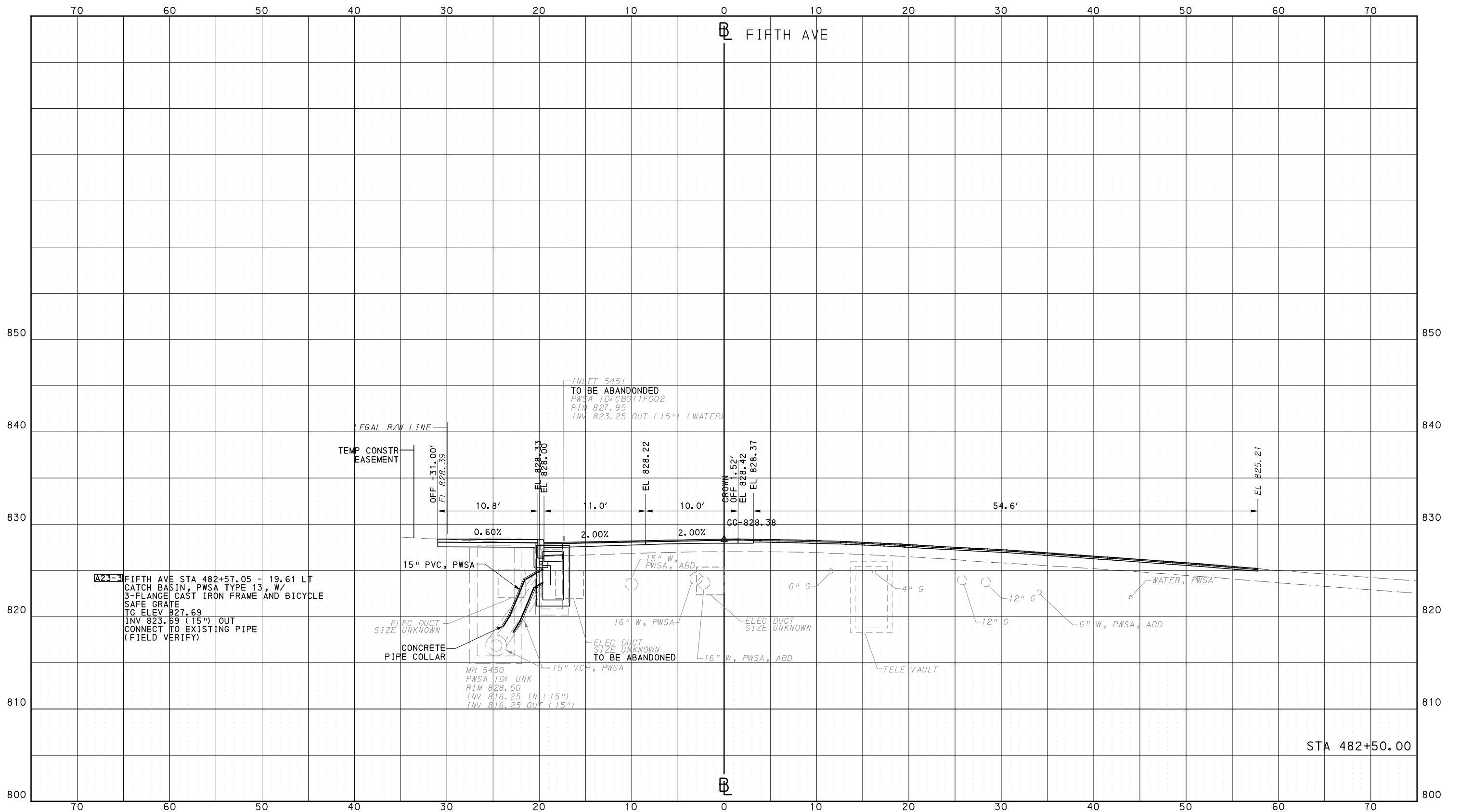
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DWG. NO. XS70 SHT. 1275

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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT  
CROSS SECTIONS  
FIFTH AVE - STA 482+50.00**

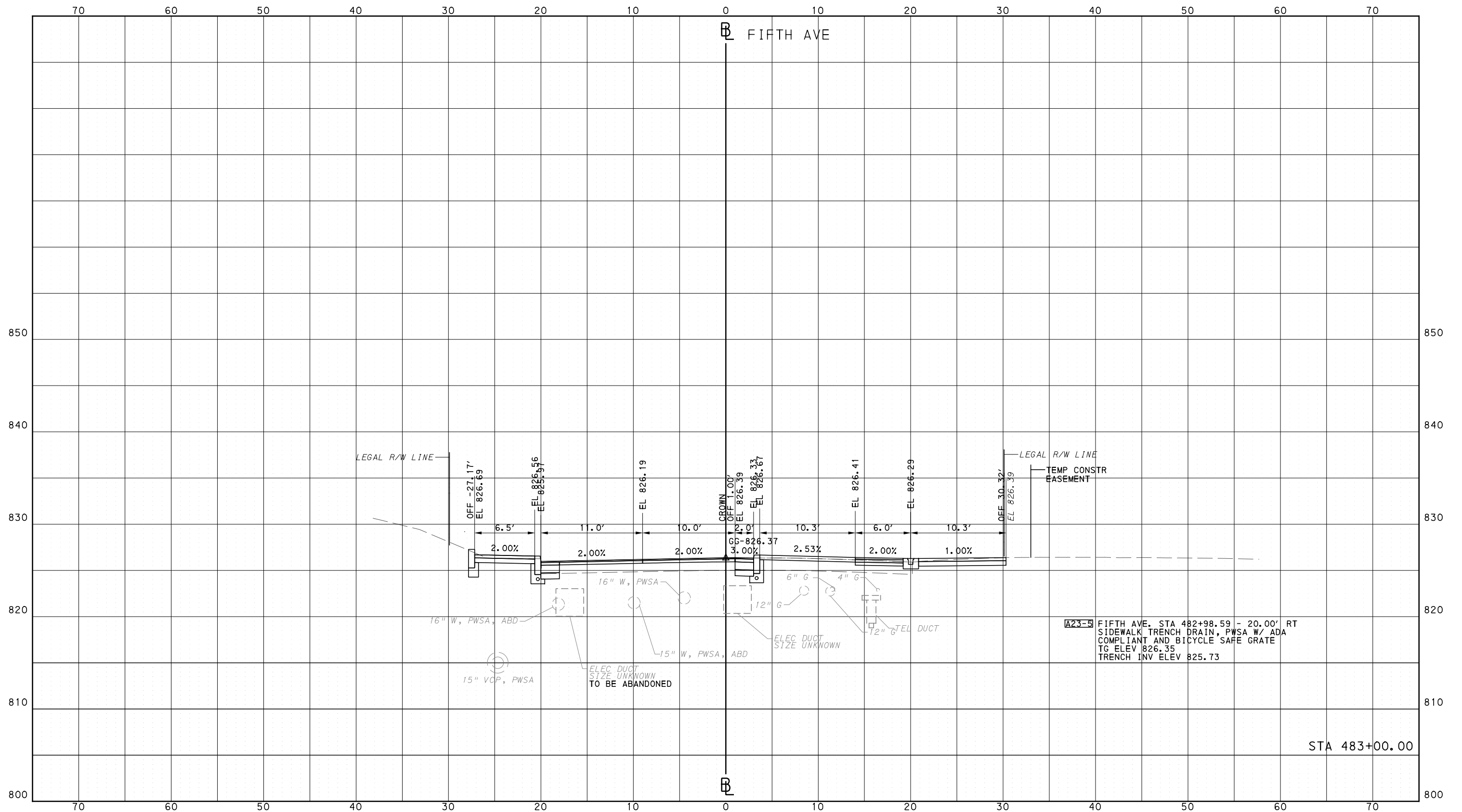
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DWG. NO. XS71 SHT. 1276

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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS



**A23-5** FIFTH AVE. STA 482+98.59 - 20.00' RT  
SIDEWALK TRENCH DRAIN, PWSA W/ ADA  
COMPLIANT AND BICYCLE SAFE GRATE  
TG ELEV 826.35  
TRENCH INV ELEV 825.73

STA 483+00.00

**AECOM**  
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**BUS RAPID TRANSIT CROSS SECTIONS**  
FIFTH AVE - STA 483+00.00

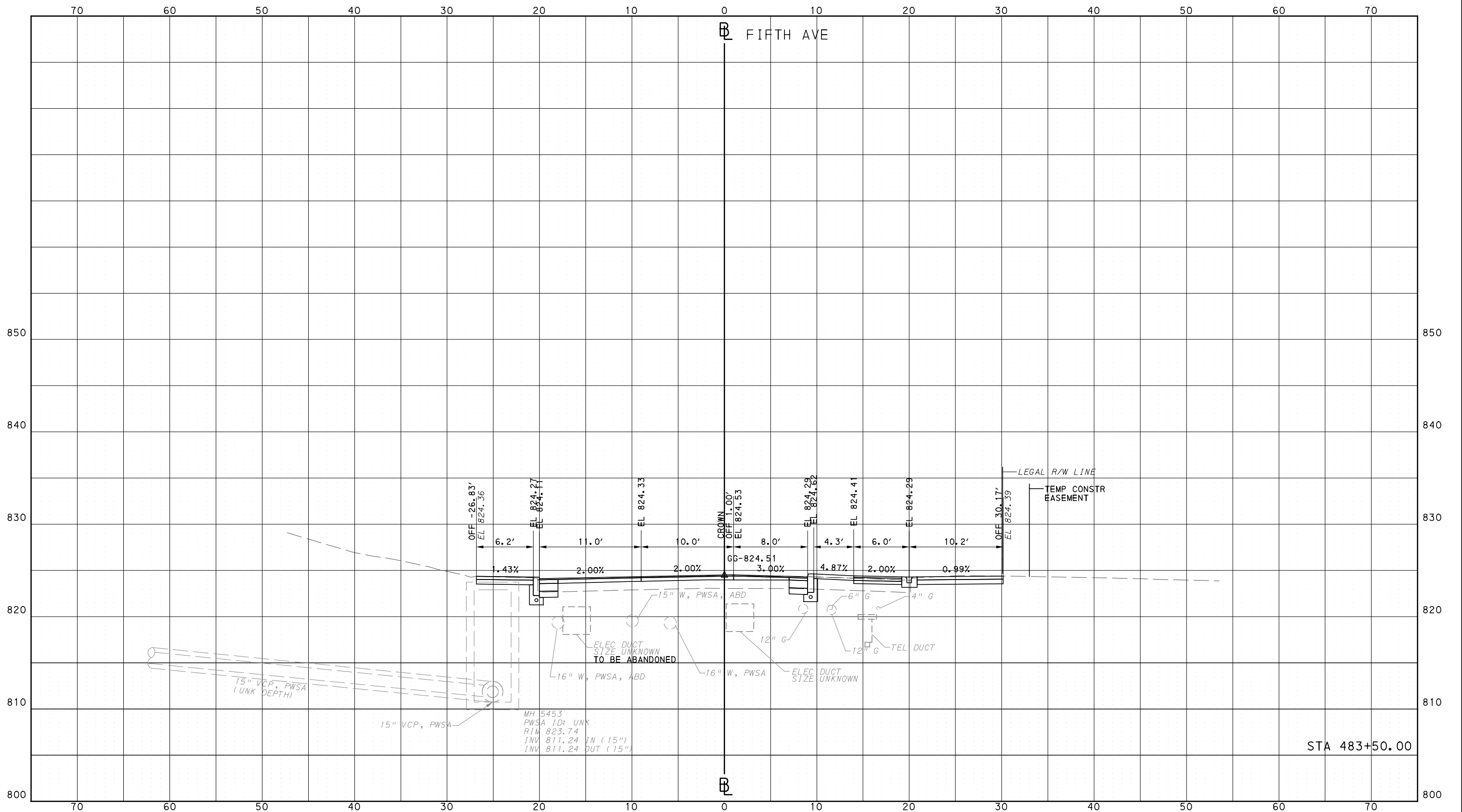
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PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT  
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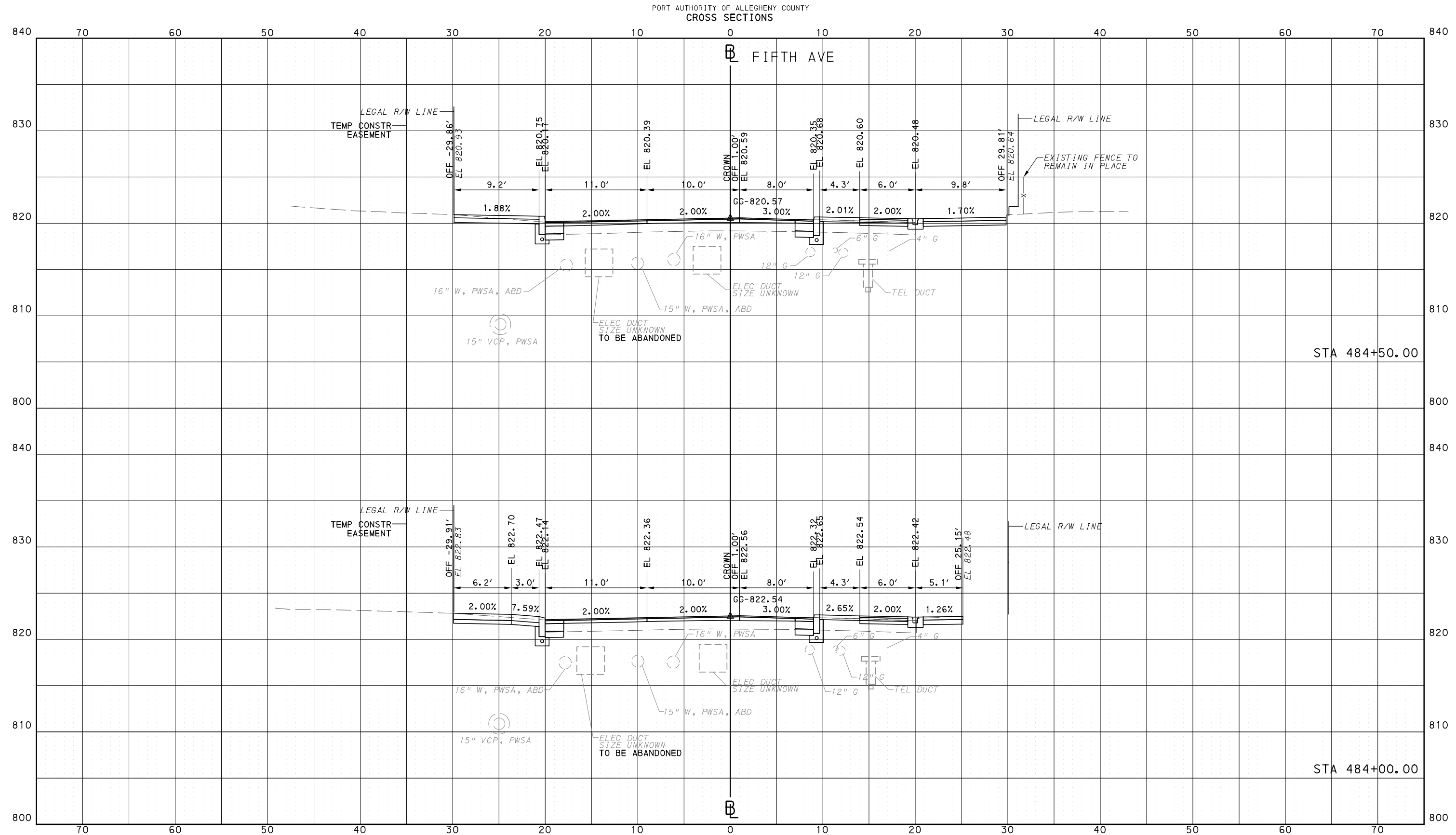


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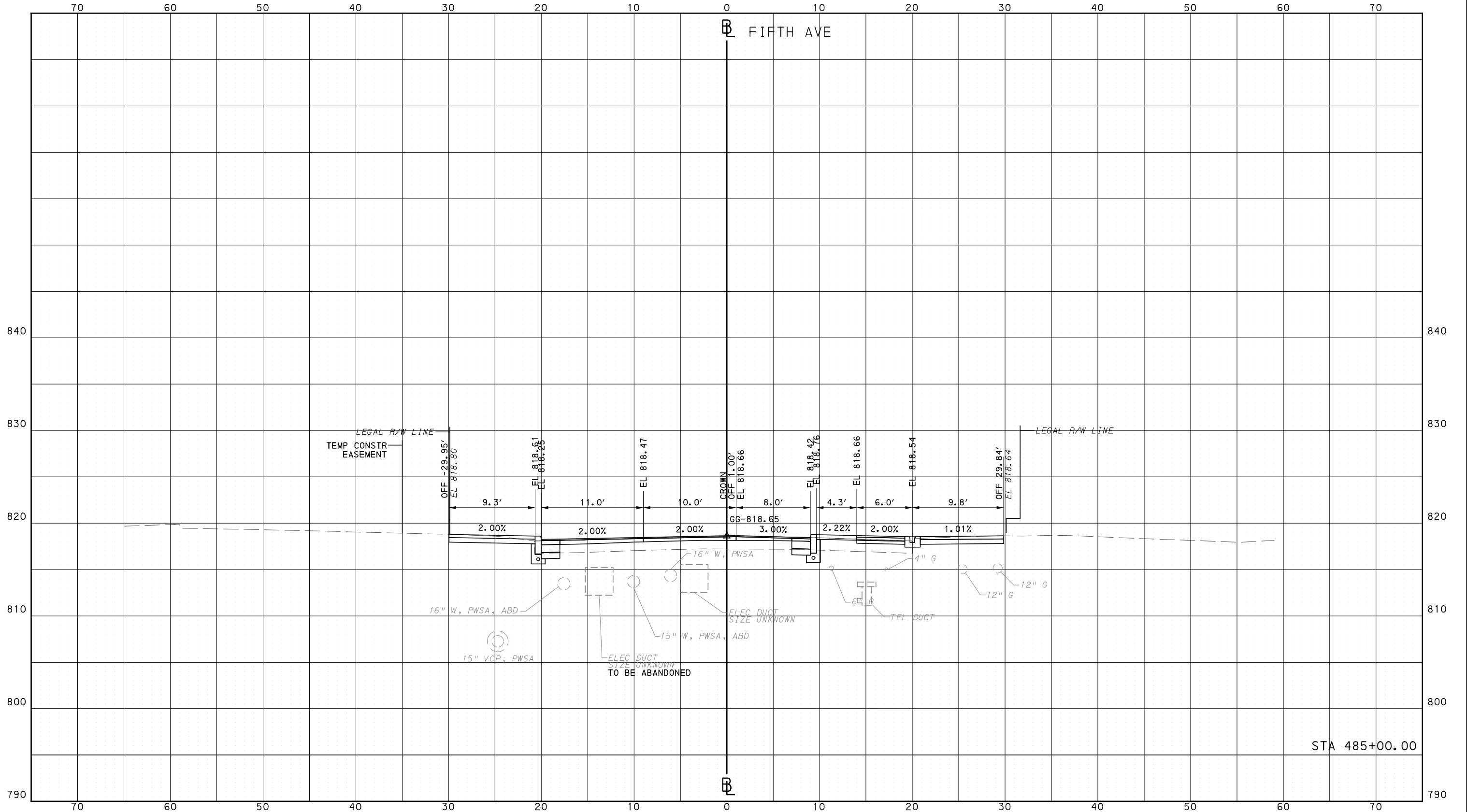
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<b>PORT AUTHORITY OF ALLEGHENY COUNTY</b> PITTSBURGH PENNSYLVANIA		
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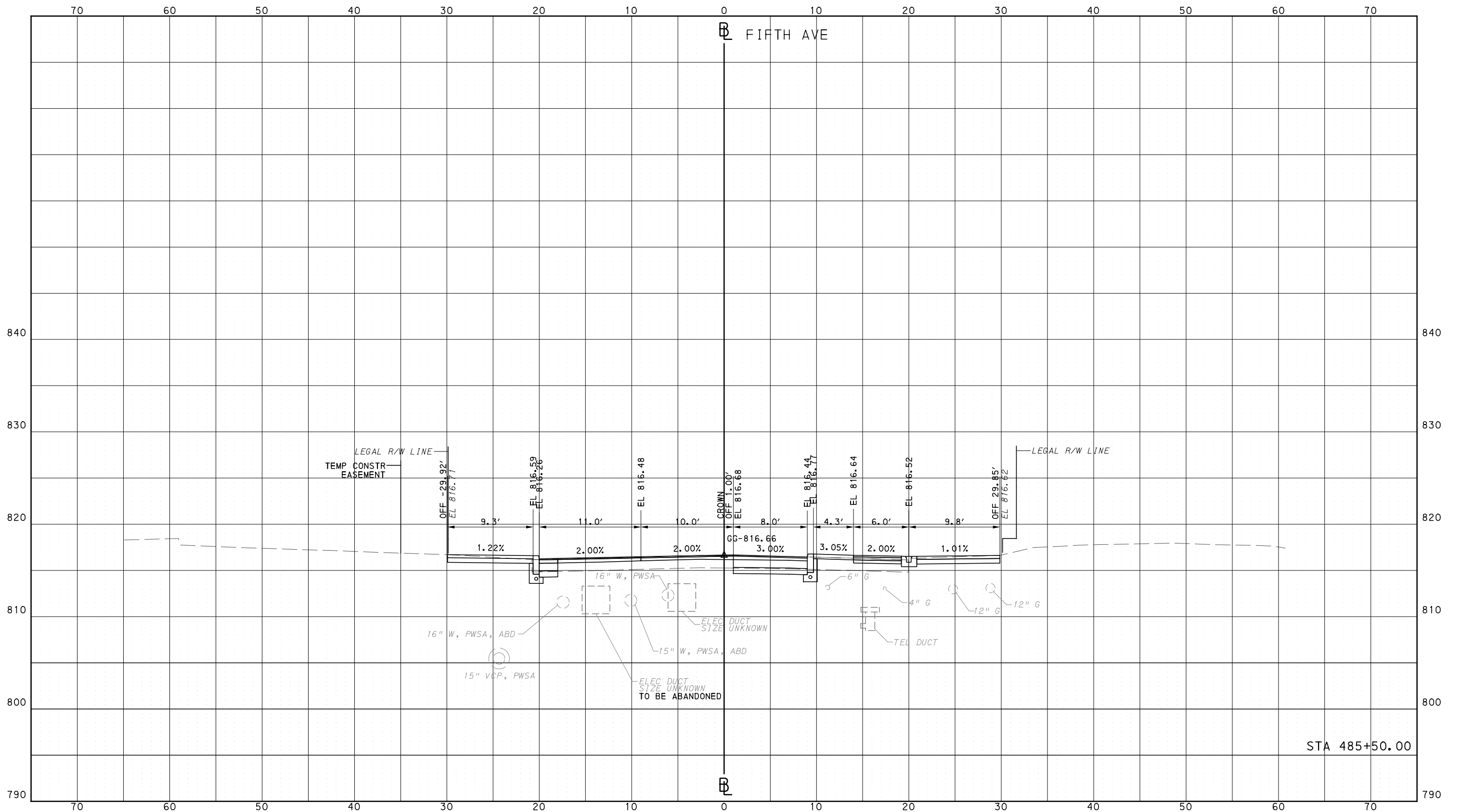
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<b>PORT AUTHORITY OF ALLEGHENY COUNTY</b> PITTSBURGH PENNSYLVANIA	
<b>BUS RAPID TRANSIT CROSS SECTIONS FIFTH AVE - STA 485+00.00</b>	
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BUS RAPID TRANSIT  
CROSS SECTIONS  
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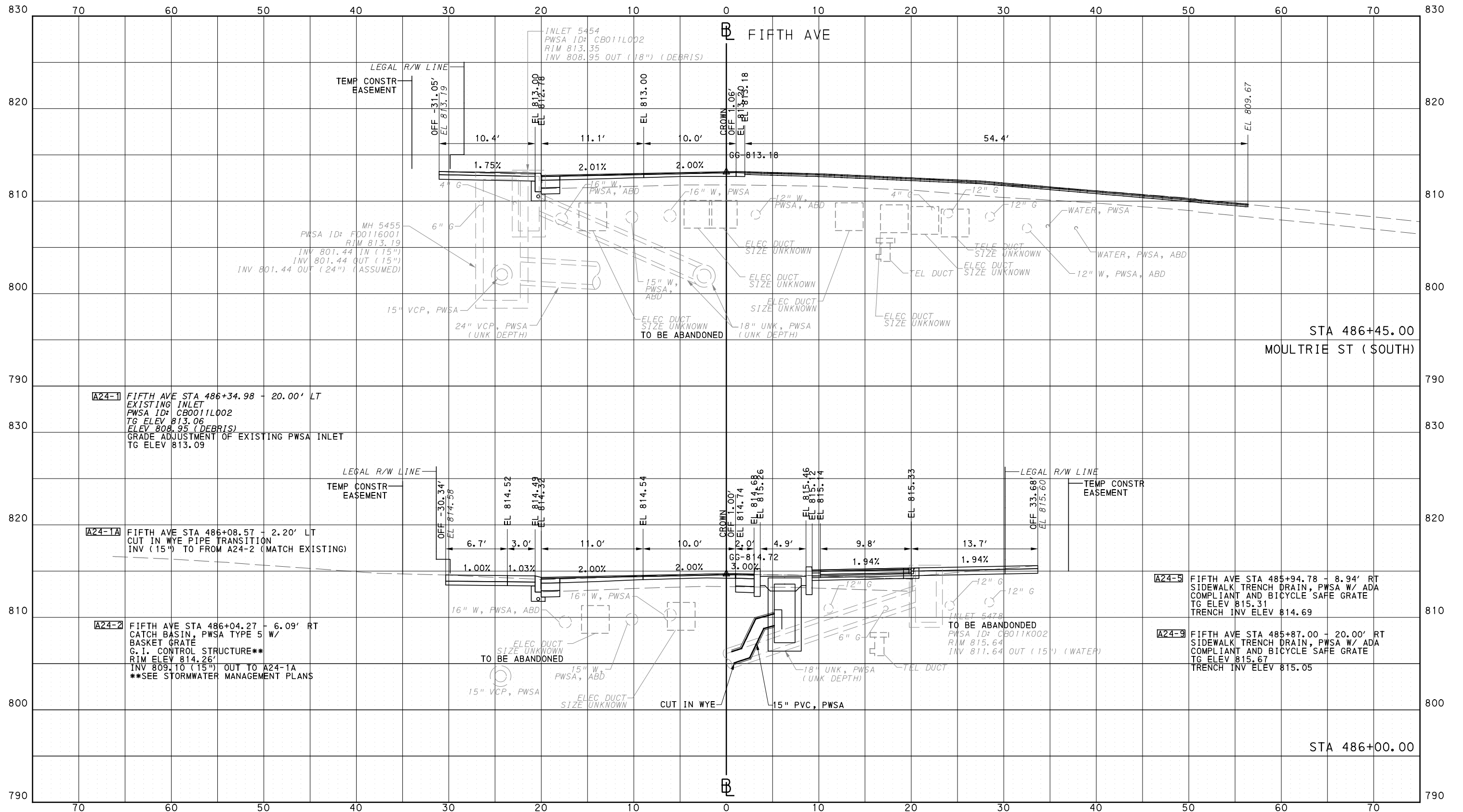


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CROSS SECTIONS  
FIFTH AVE - STA 486+00.00 TO STA 486+45.00

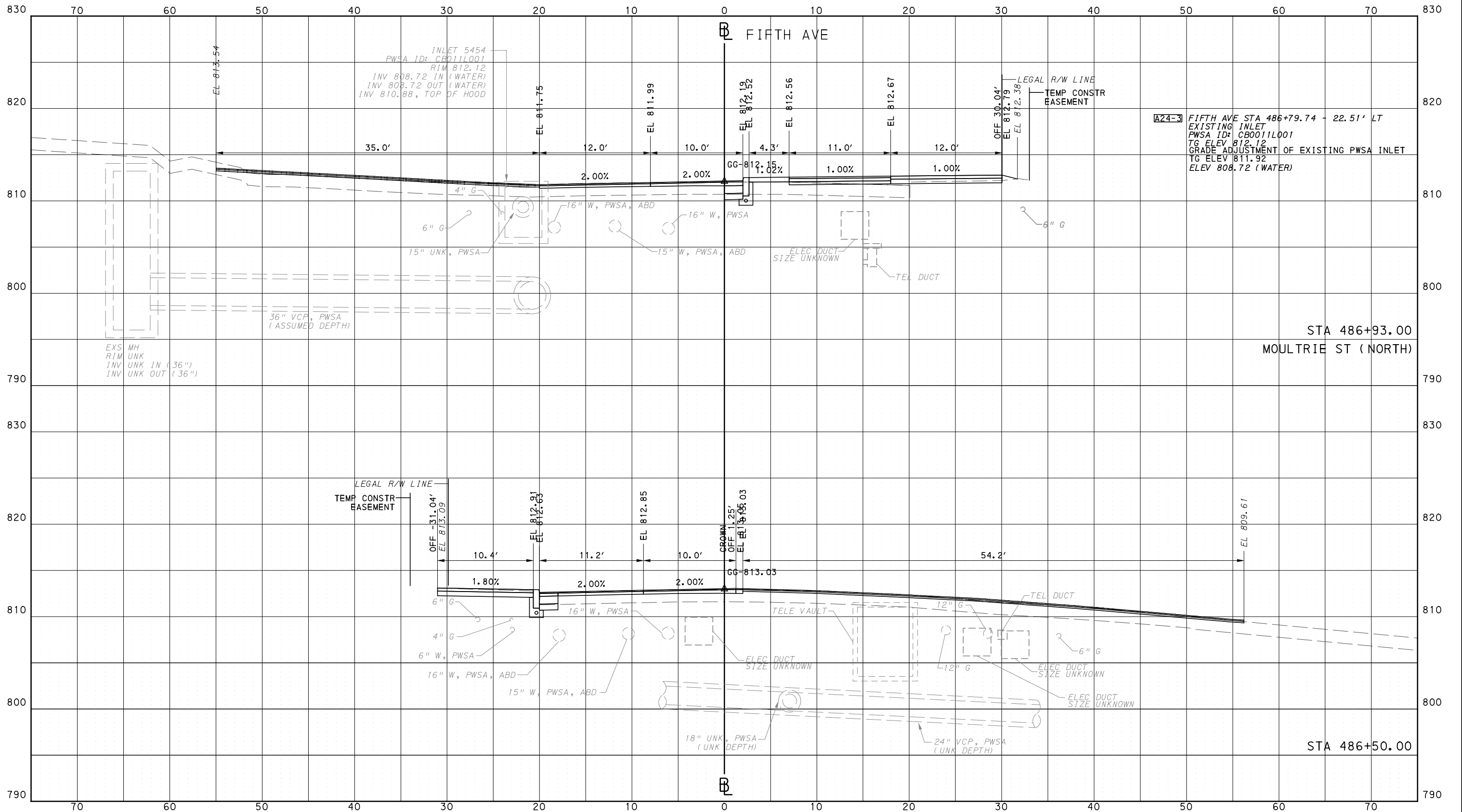
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**BUS RAPID TRANSIT**  
CROSS SECTIONS  
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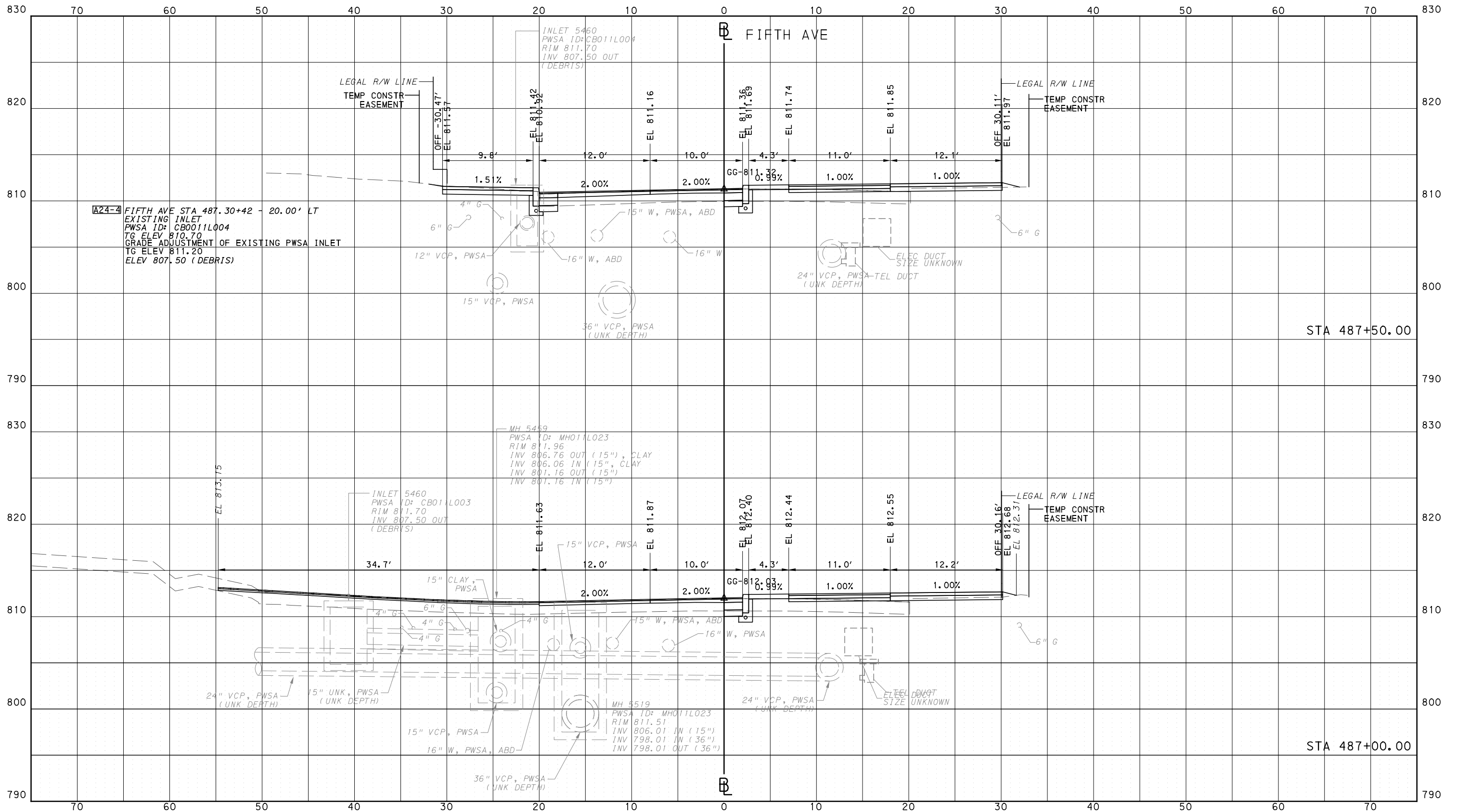
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**BUS RAPID TRANSIT**  
CROSS SECTIONS  
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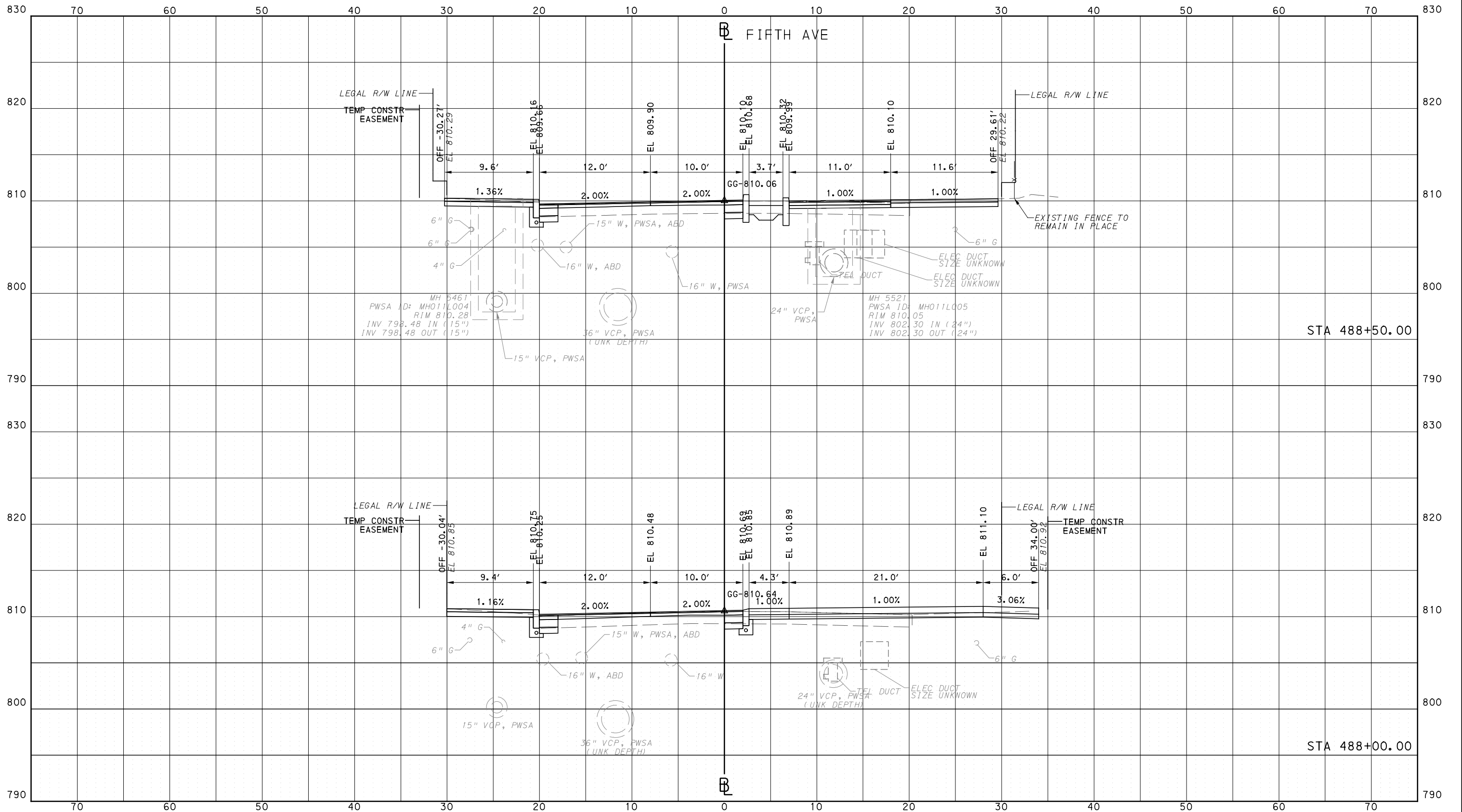
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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT**  
CROSS SECTIONS  
FIFTH AVE - STA 488+00.00 TO STA 488+50.00

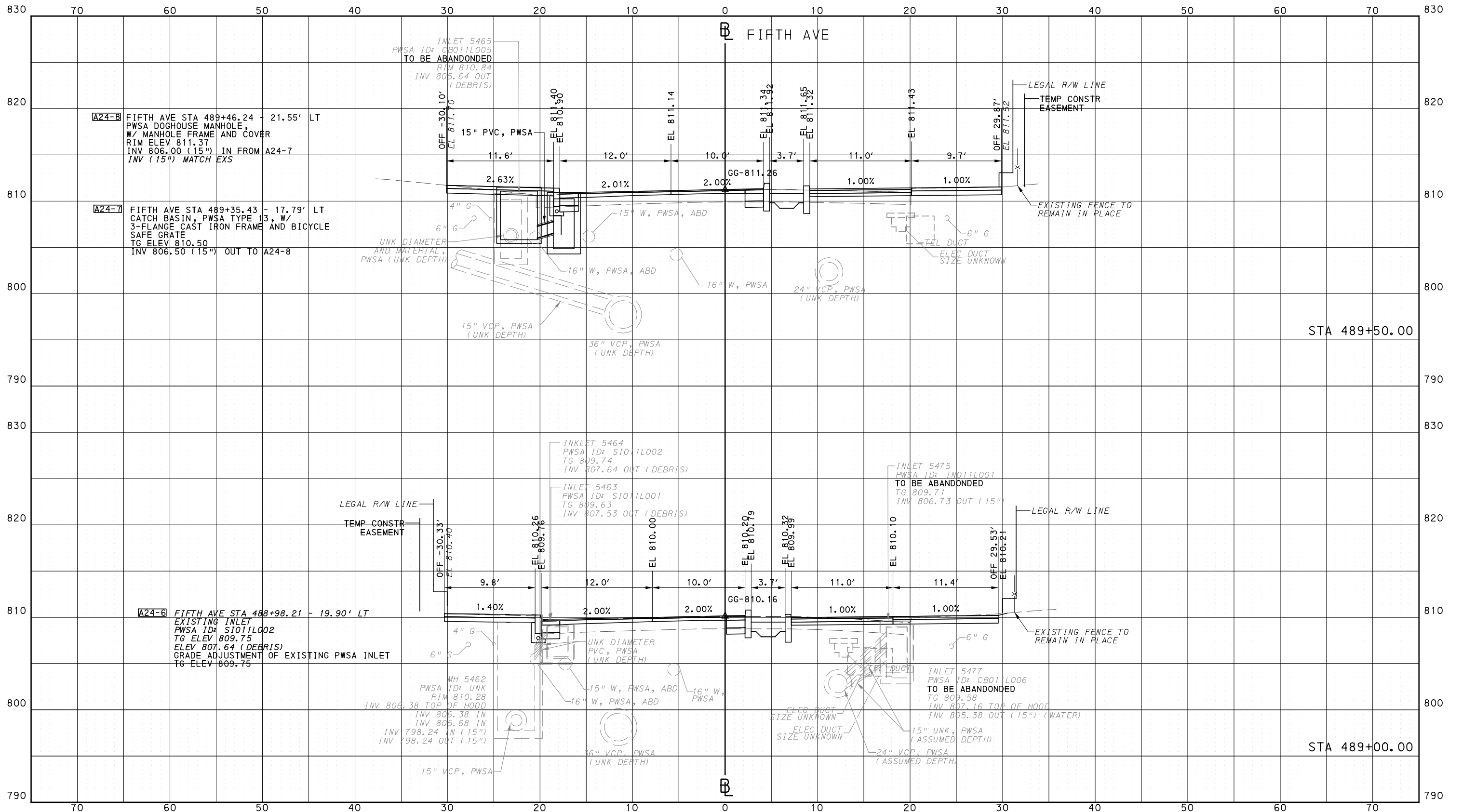
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PITTSBURGH PENNSYLVANIA

BUS RAPID TRANSIT  
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FIFTH AVE - STA 489+00.00 TO STA 489+50.00



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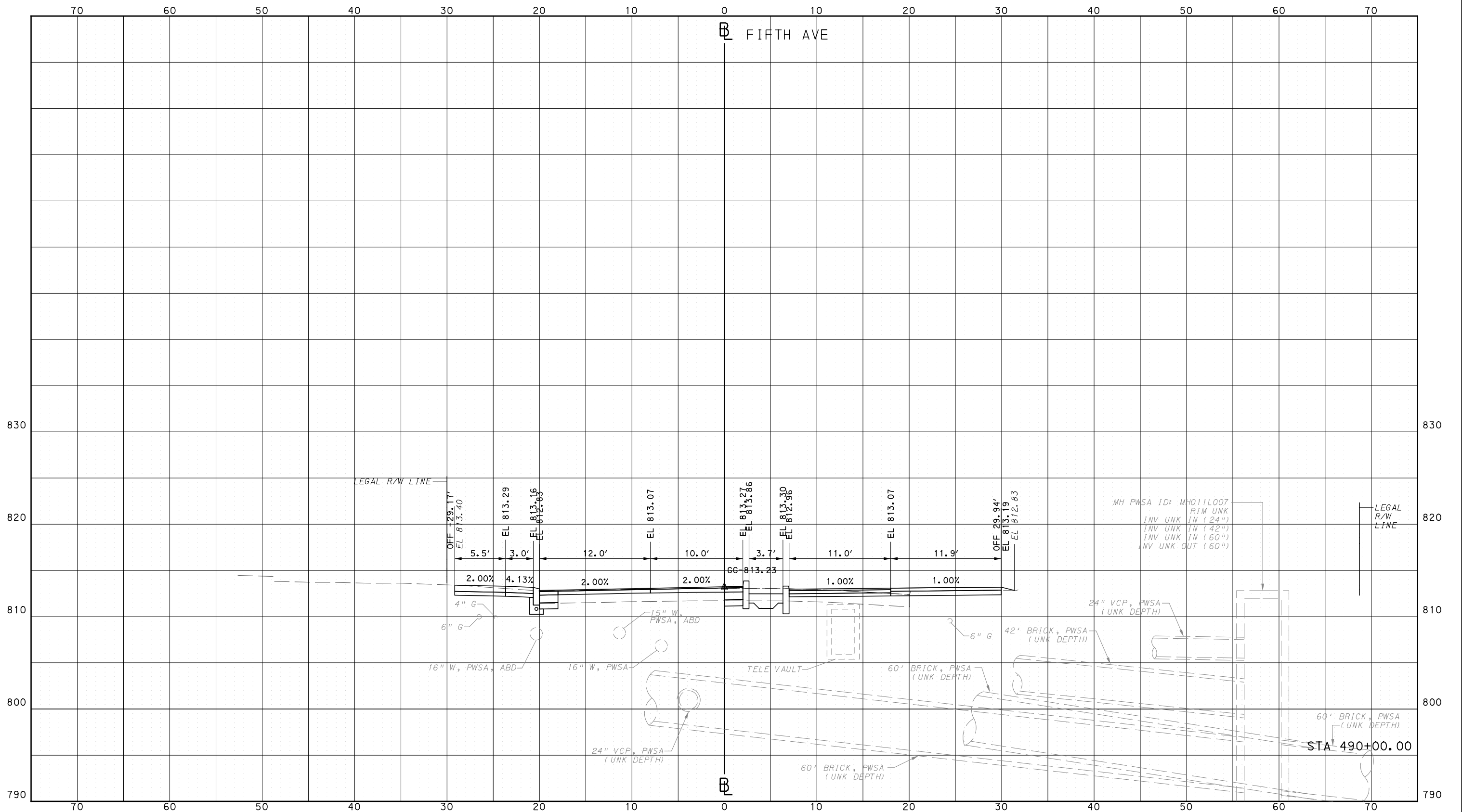
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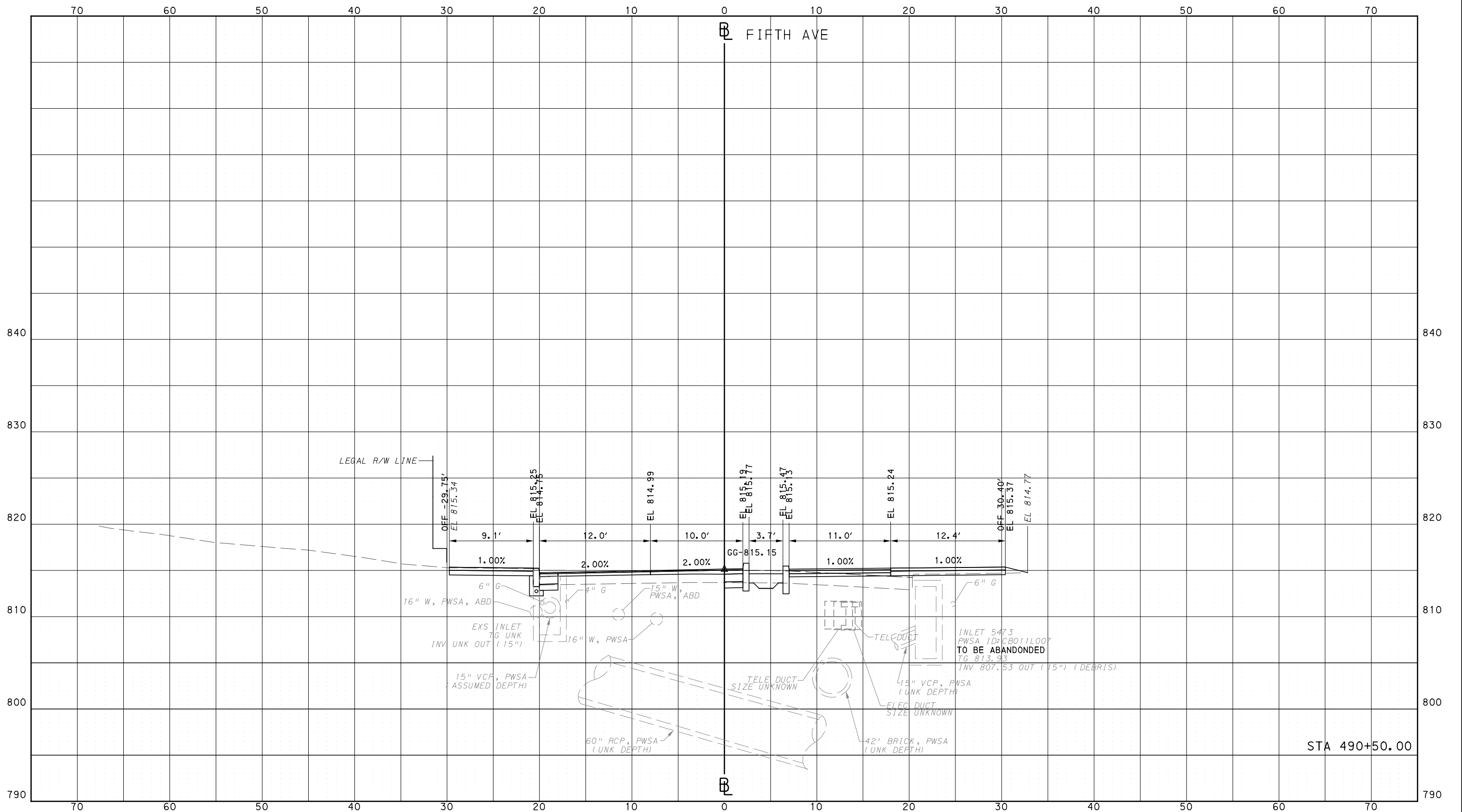
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**BUS RAPID TRANSIT  
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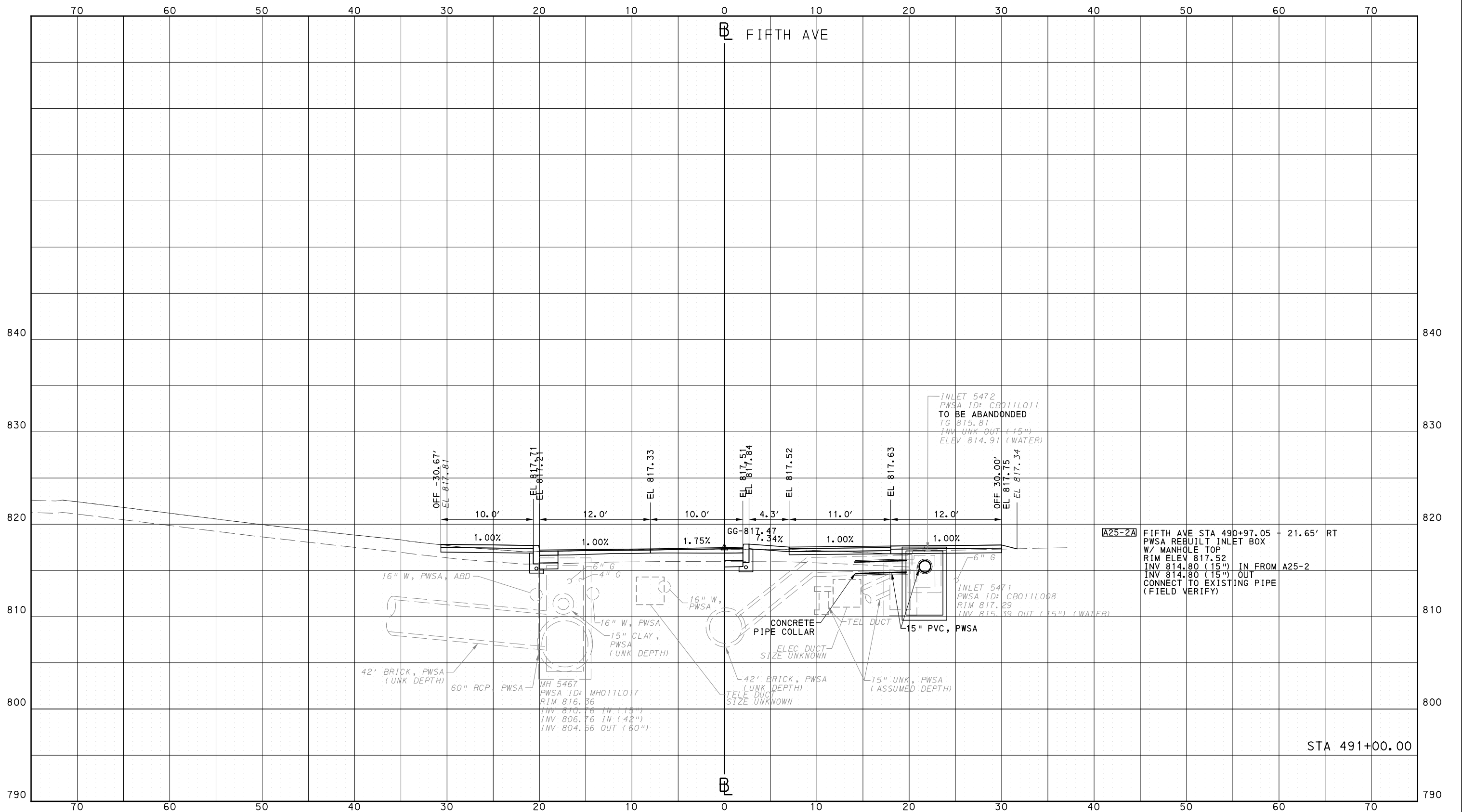
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**BUS RAPID TRANSIT  
CROSS SECTIONS  
FIFTH AVE - STA 491+00.00**

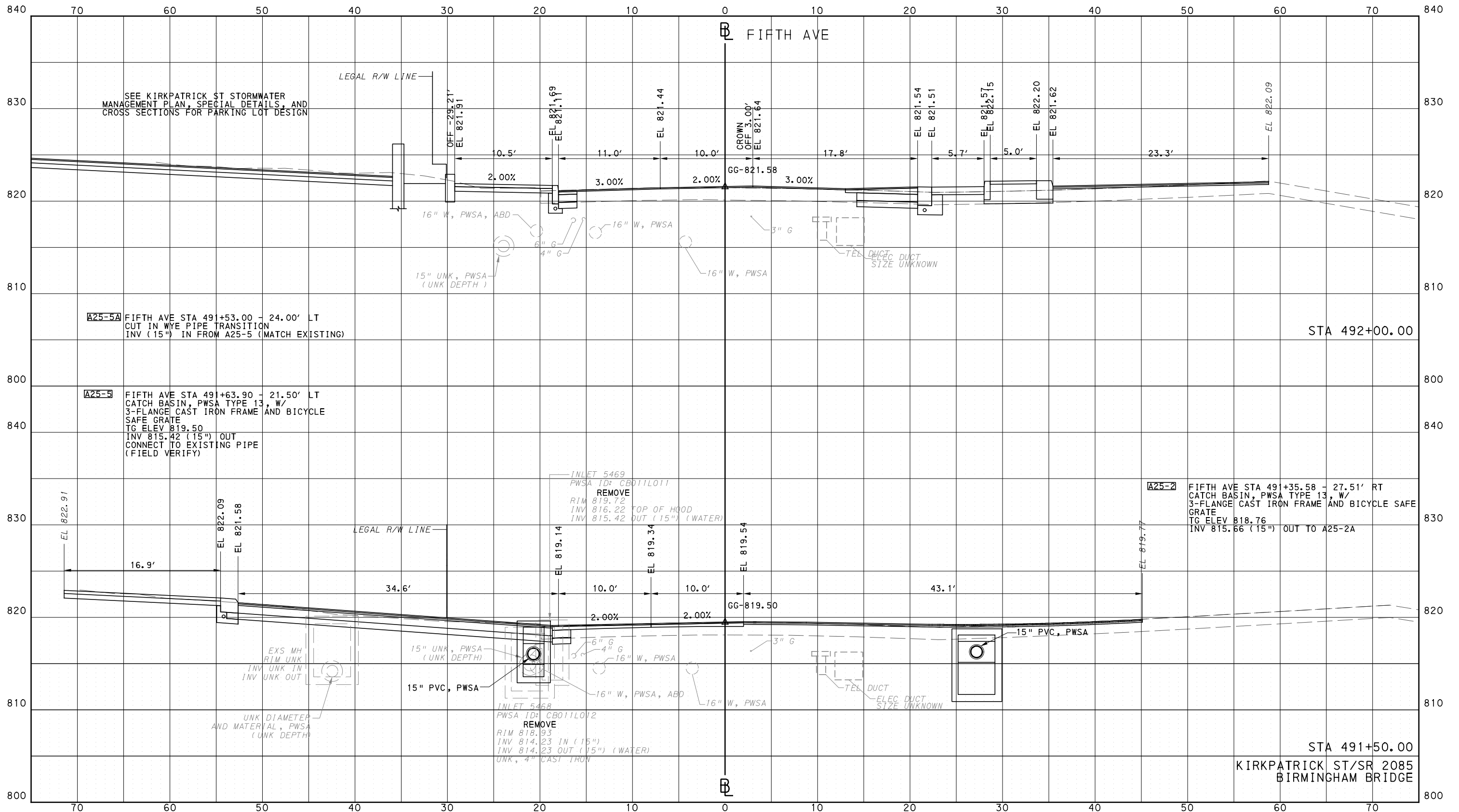
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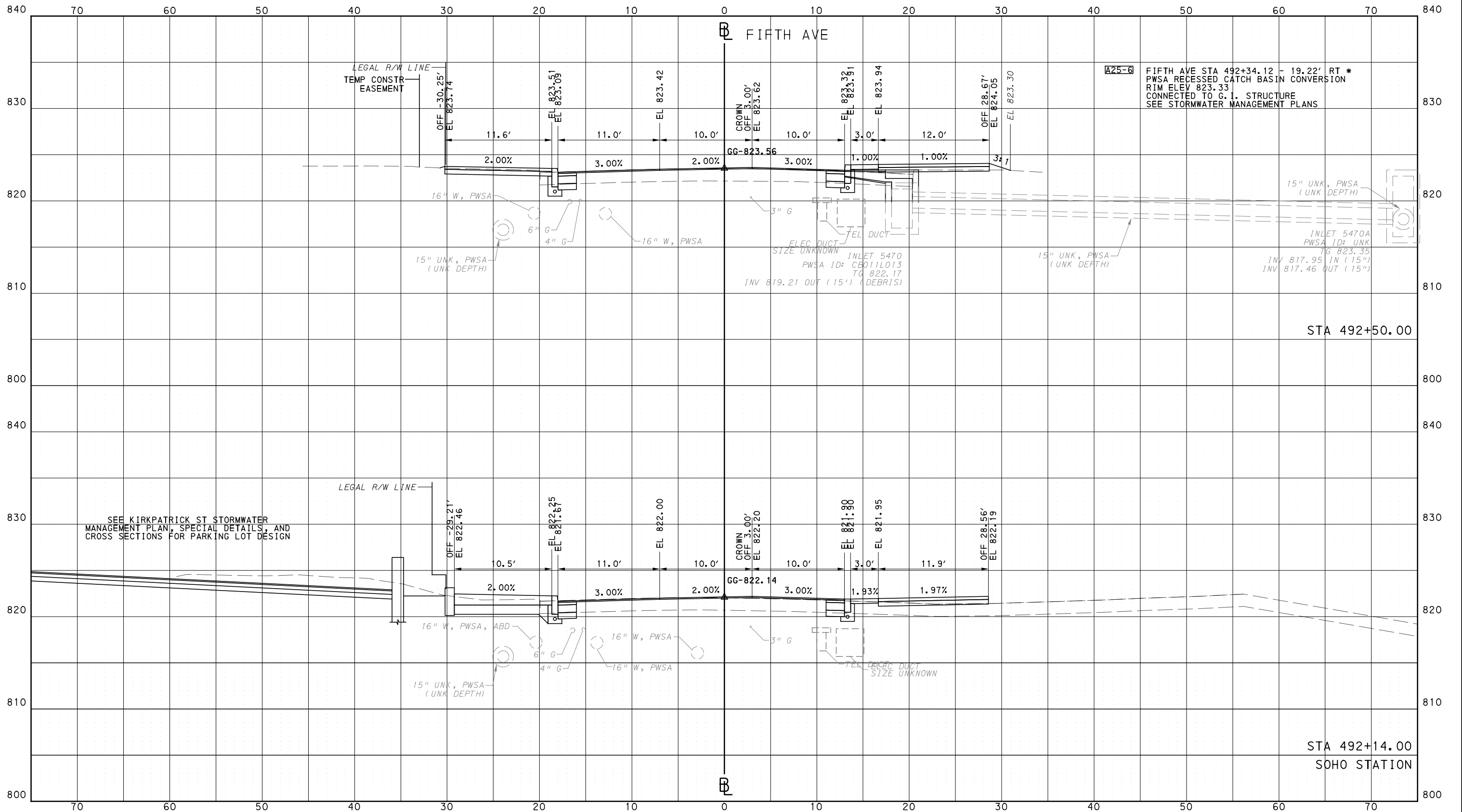
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CROSS SECTIONS  
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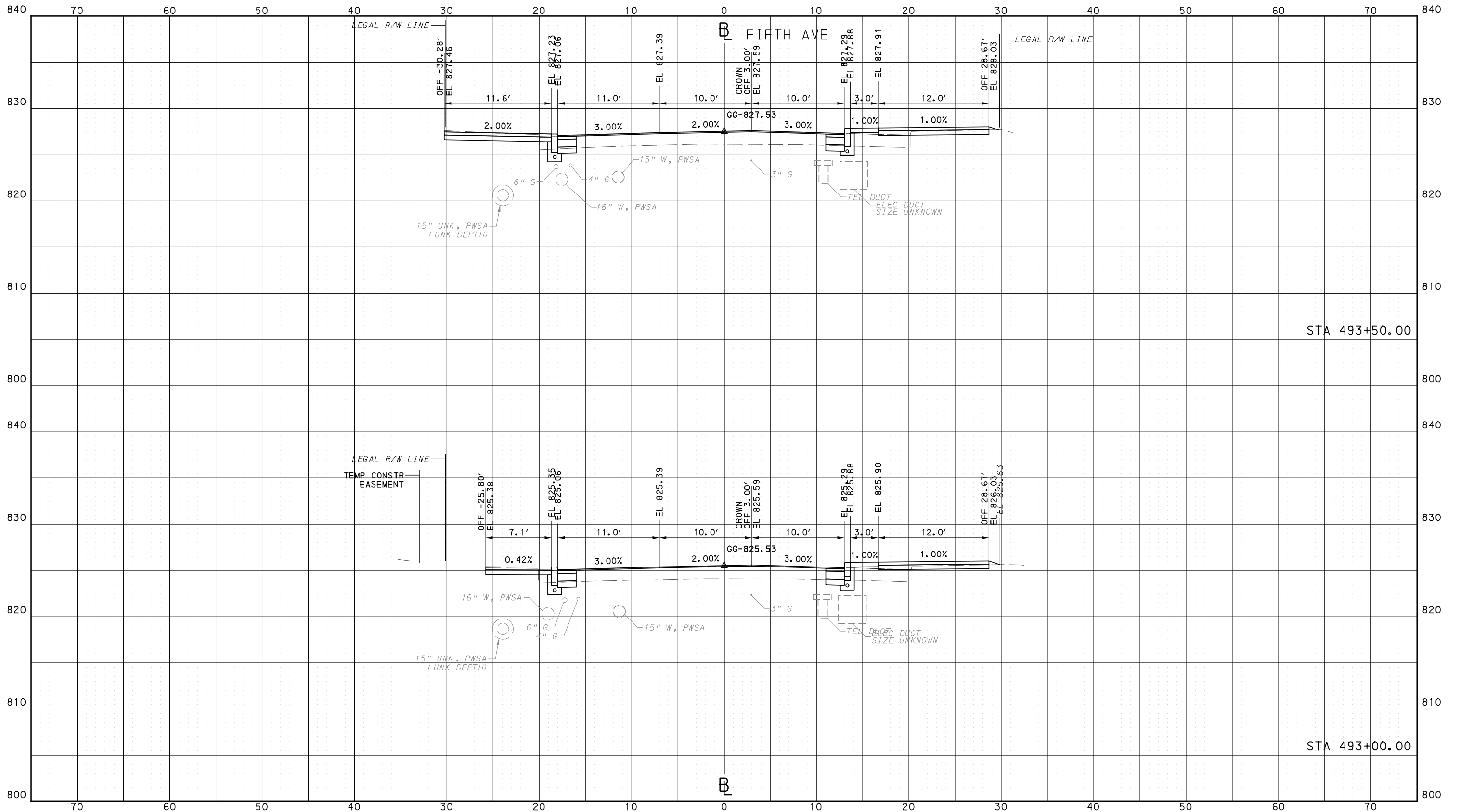
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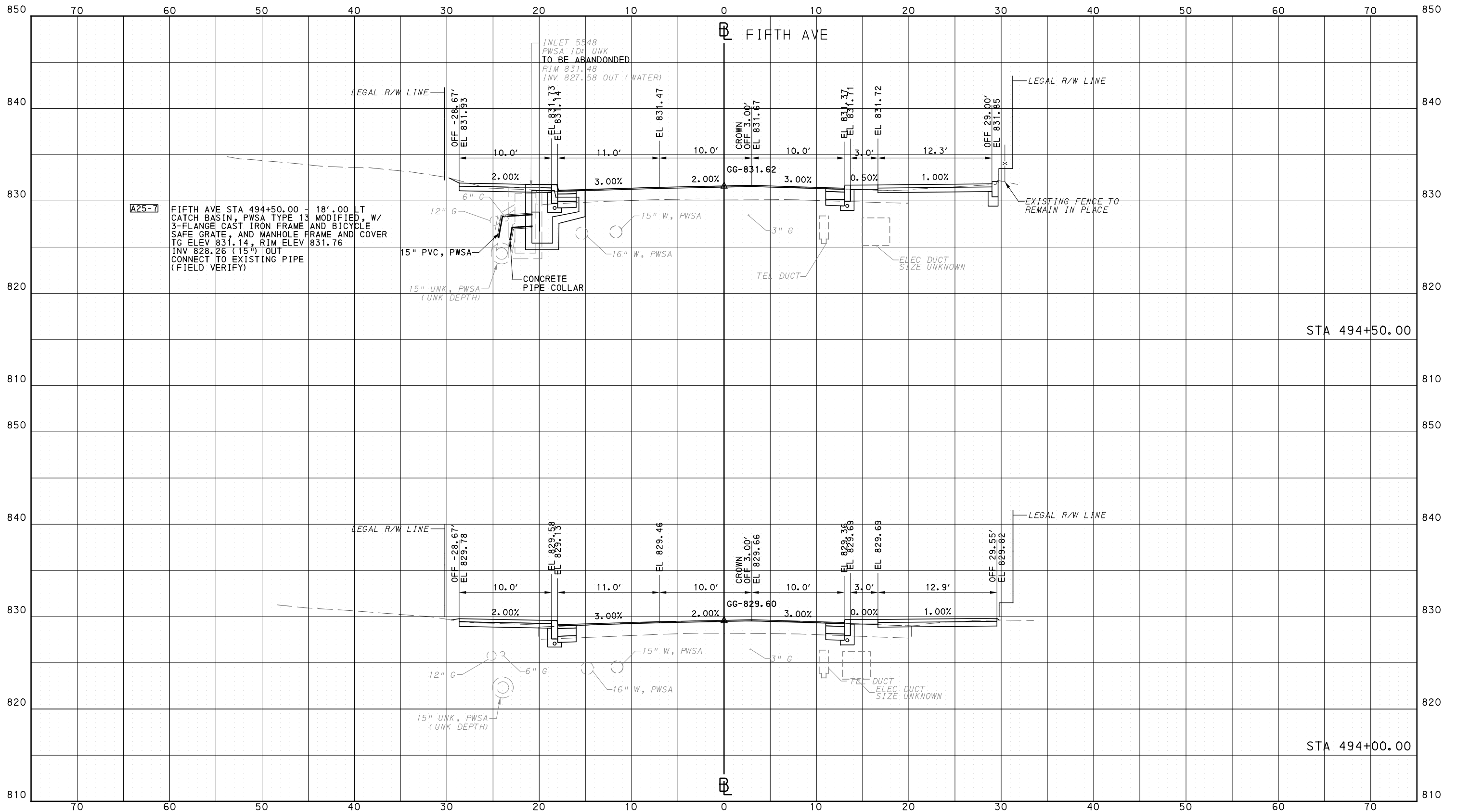
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DESIGNED	DRS
DRAWN	DRS
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DATE	05/01/24
SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT**  
CROSS SECTIONS  
FIFTH AVE - STA 494+00.00 TO STA 494+50.00

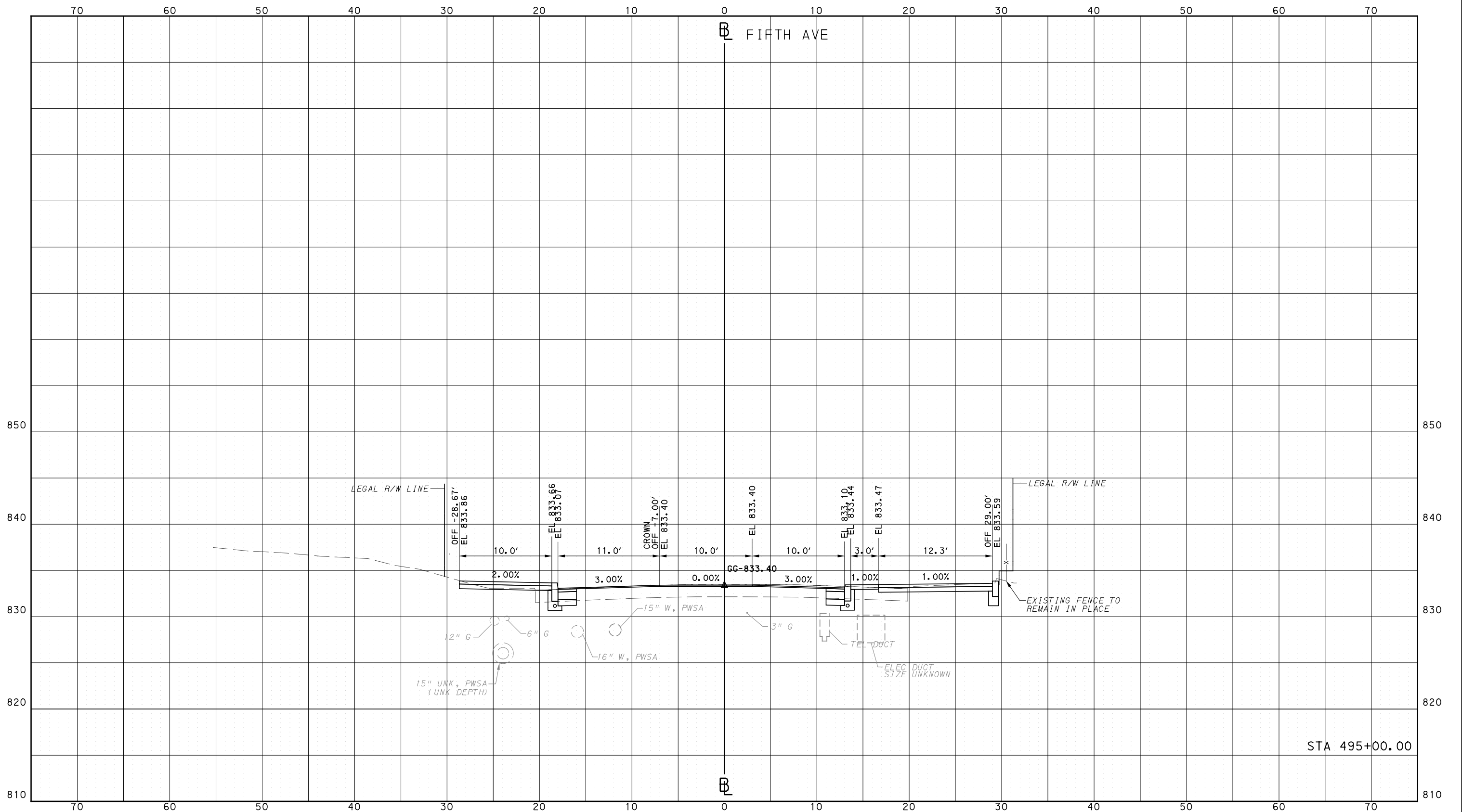
**Port Authority** connecting people to life

CONTRACT NO. BRT-001  
DWG. NO. XS88 SHT. 1293

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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT  
CROSS SECTIONS  
FIFTH AVE - STA 495+00.00**

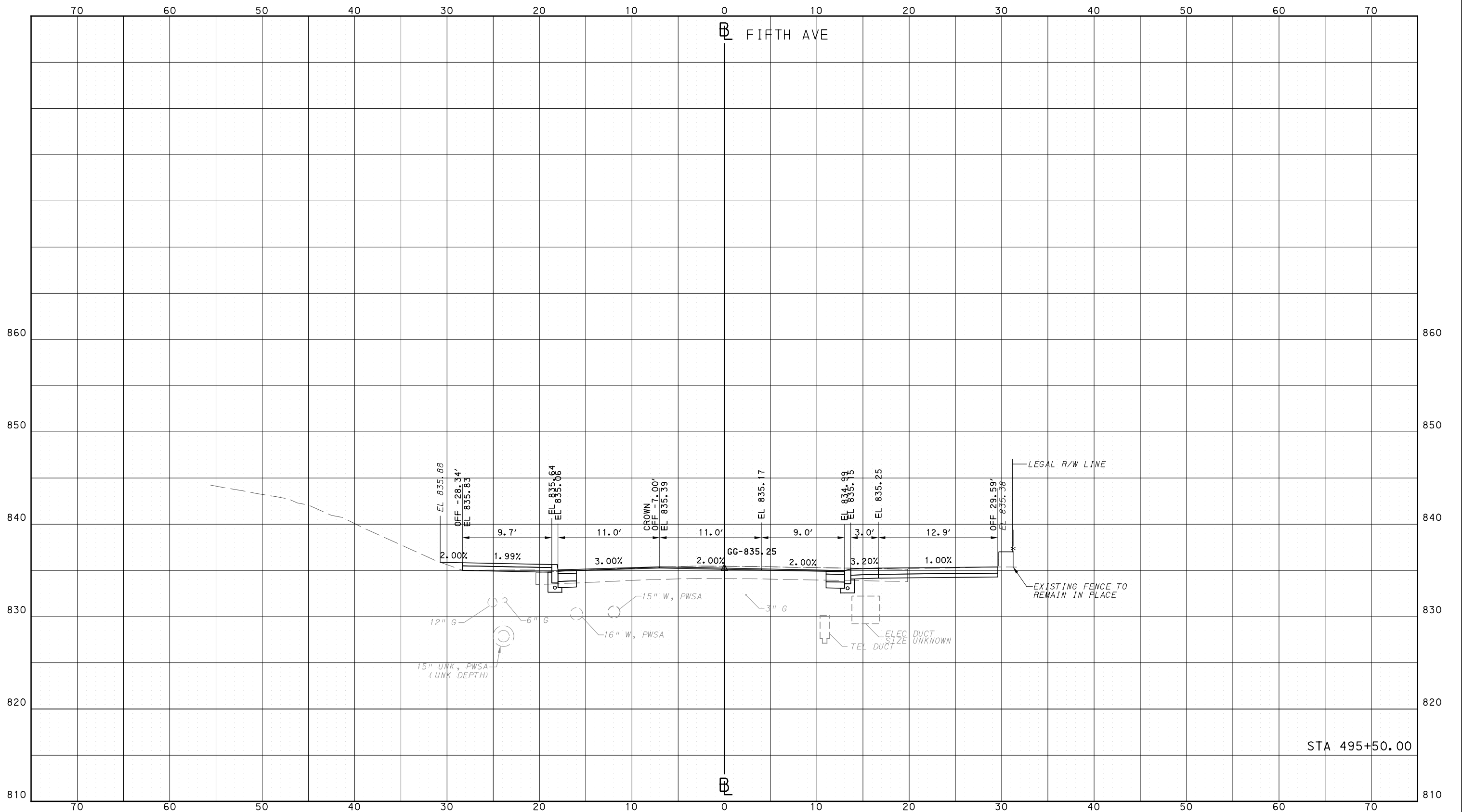
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PORT AUTHORITY OF ALLEGHENY COUNTY  
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**AECOM**  
 Gulf Tower  
 707 Grant Street  
 5th Floor  
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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT  
CROSS SECTIONS  
FIFTH AVE - STA 495+50.00**

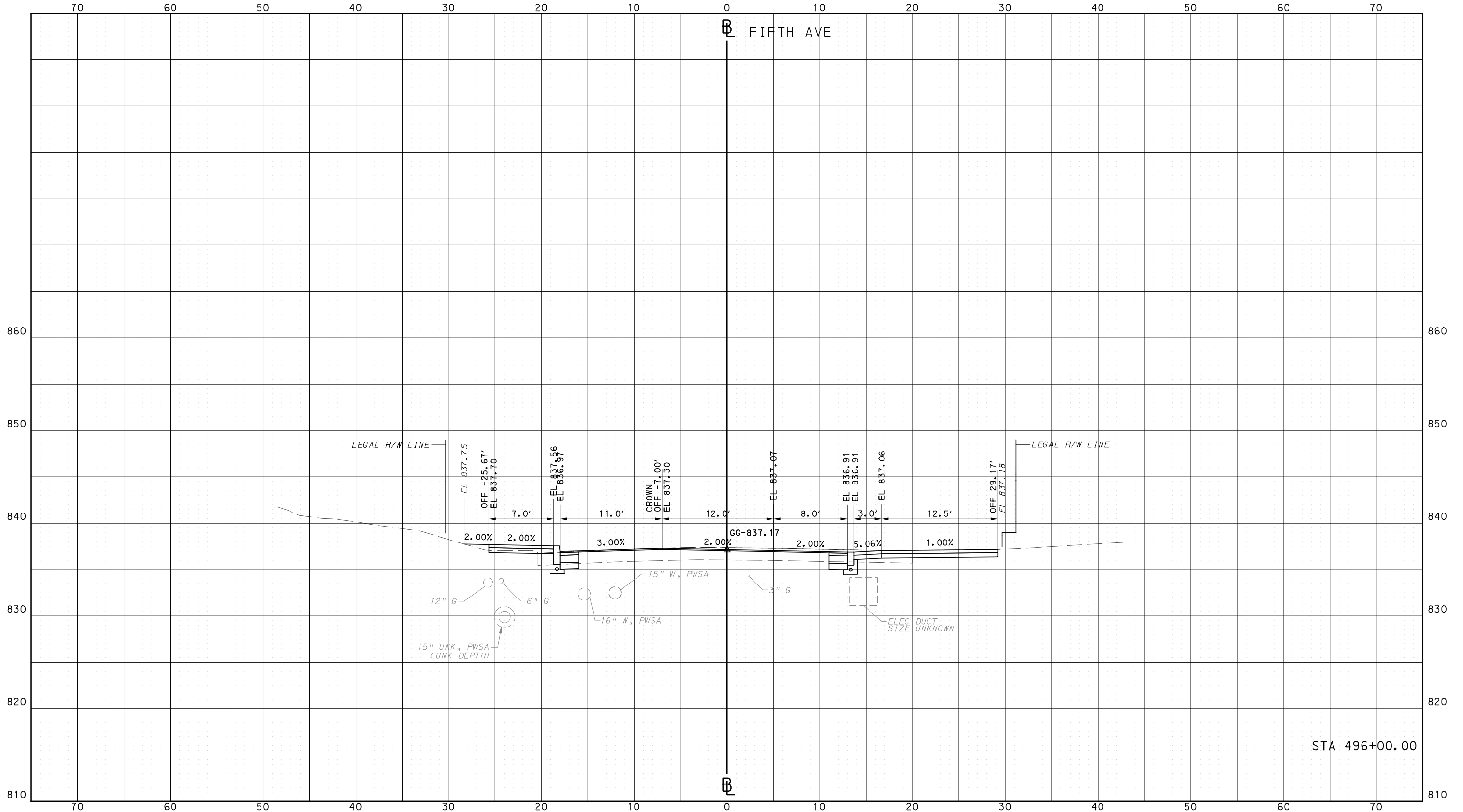
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**BUS RAPID TRANSIT  
CROSS SECTIONS  
FIFTH AVE - STA 496+00.00**

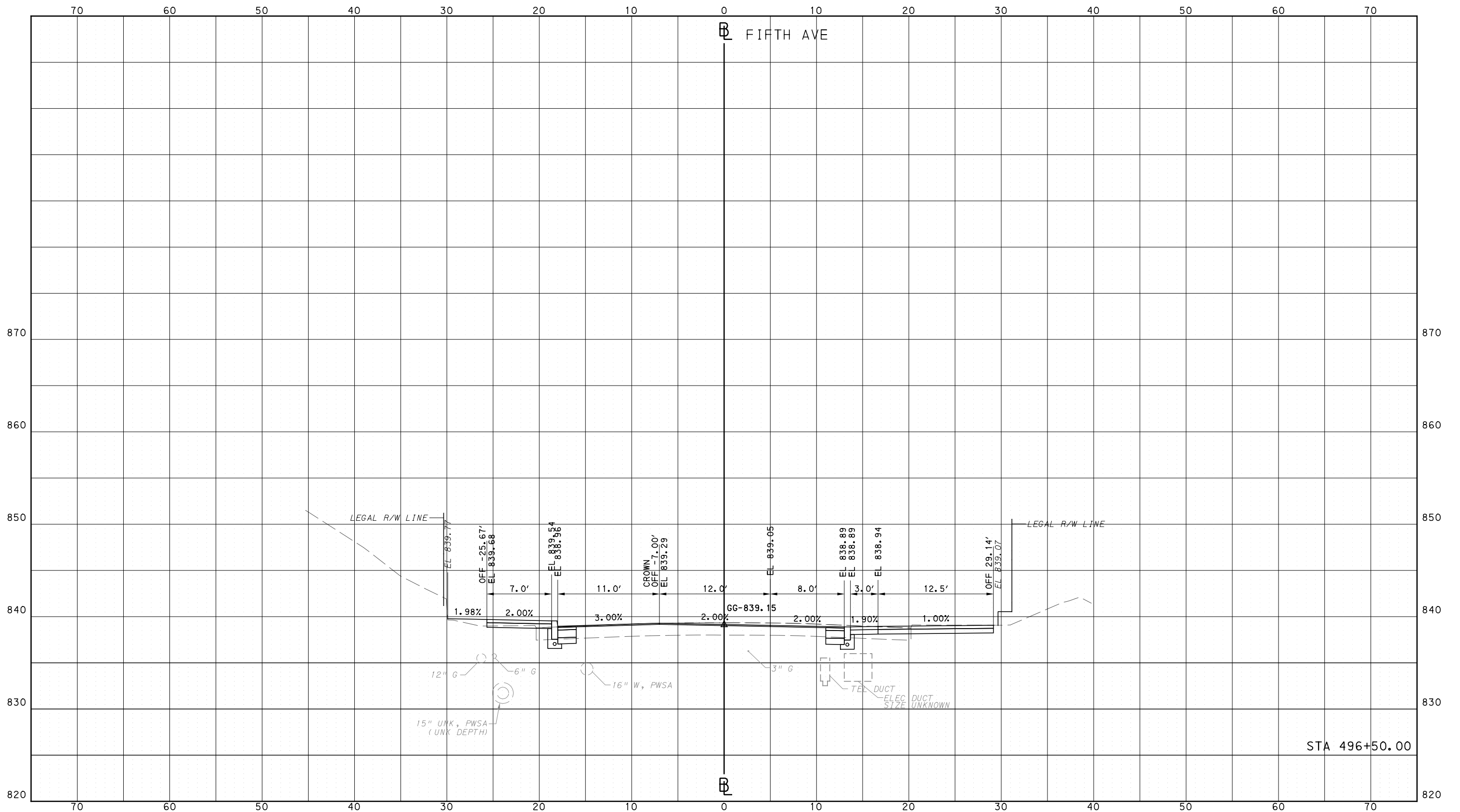
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PORT AUTHORITY OF ALLEGHENY COUNTY  
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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
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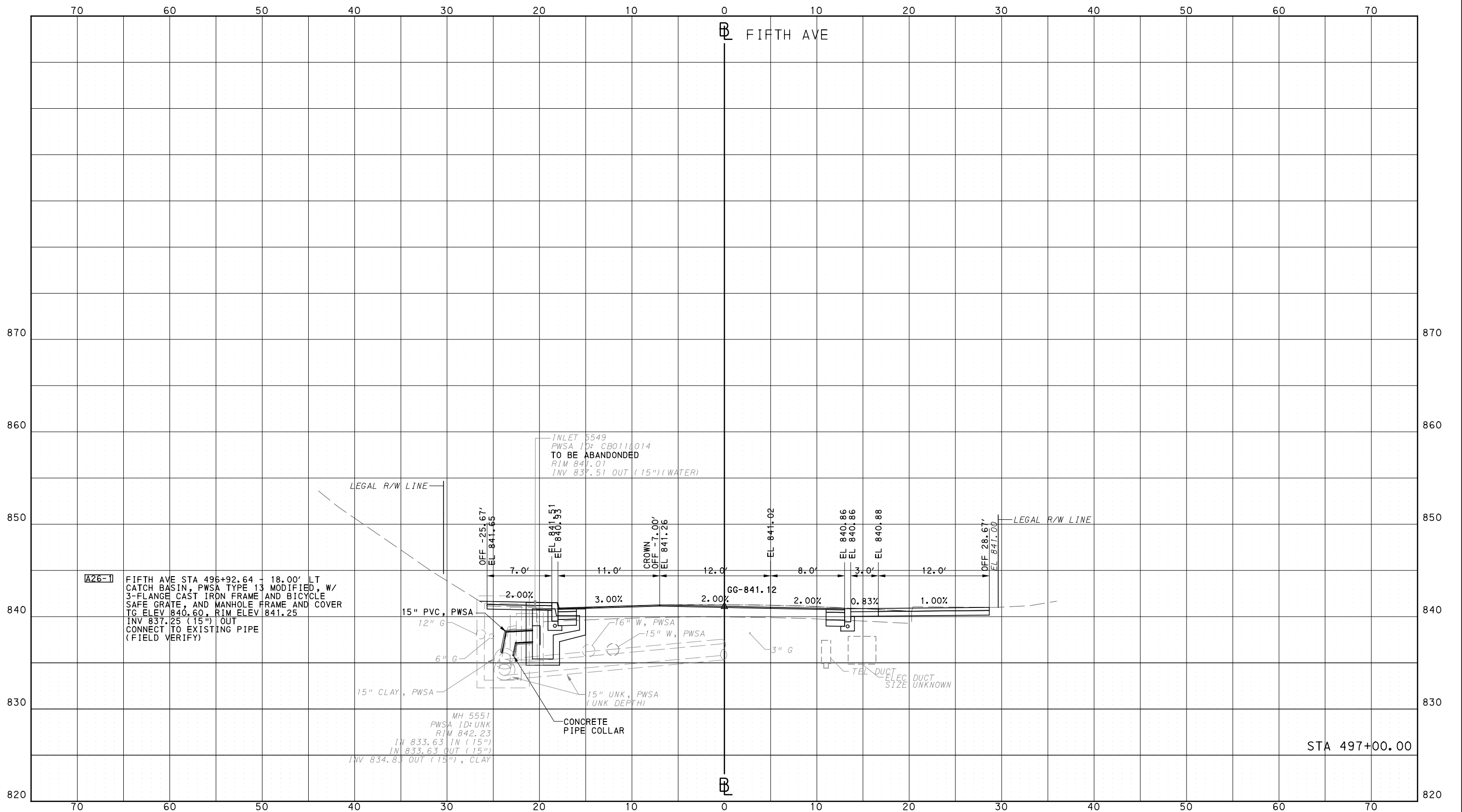
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CONTRACT NO. BRT-001

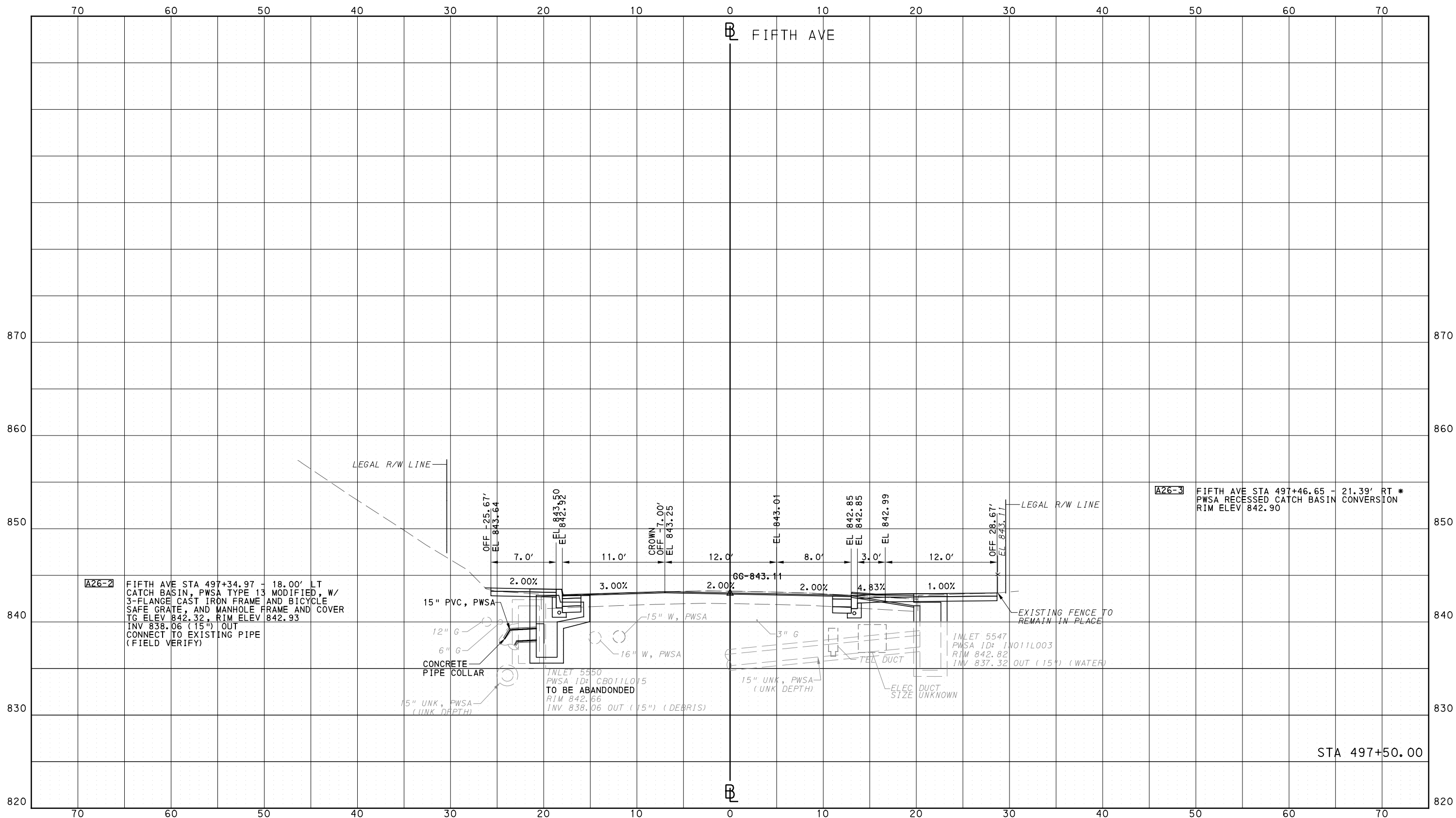
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PORT AUTHORITY OF ALLEGHENY COUNTY  
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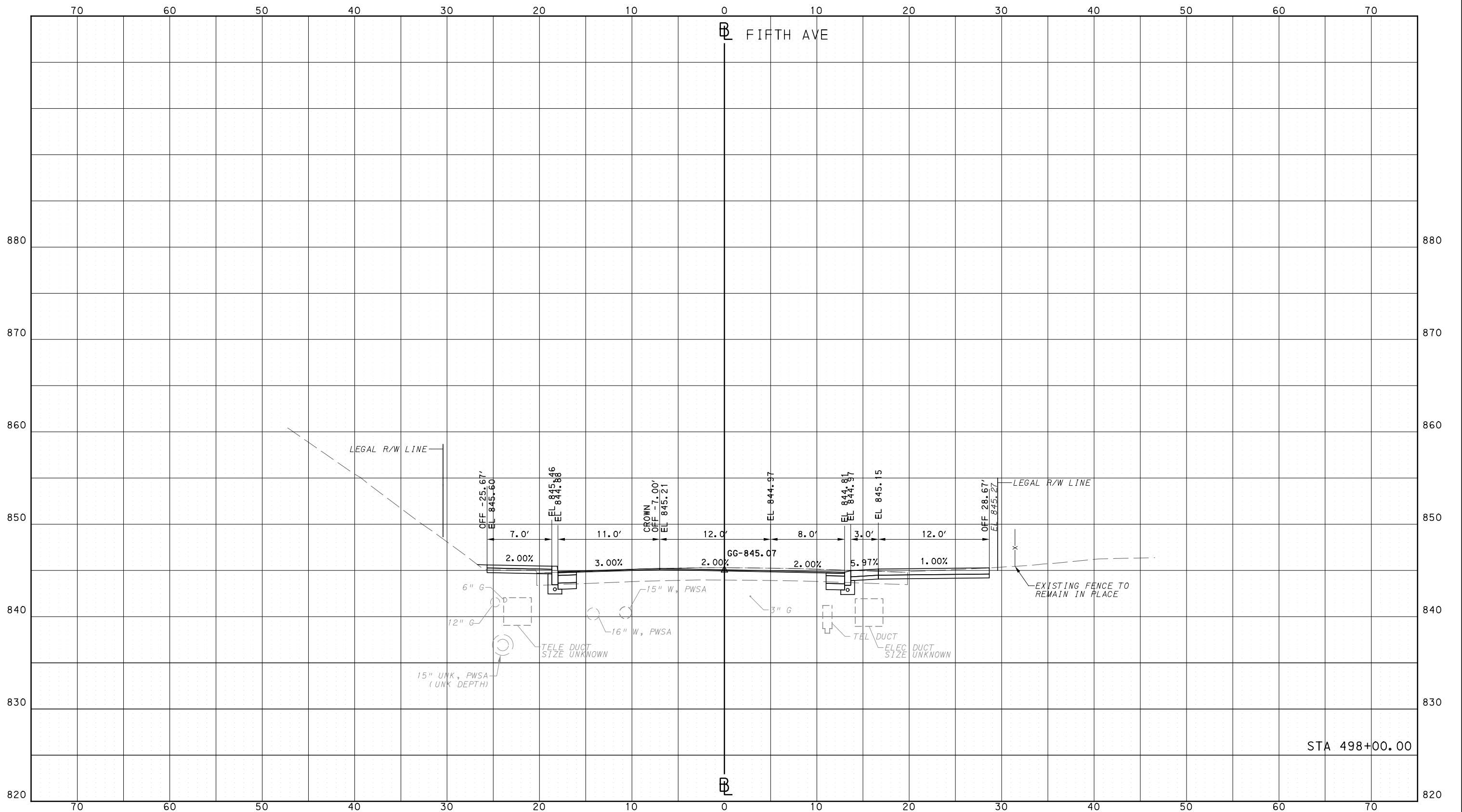
BUS RAPID TRANSIT  
CROSS SECTIONS  
FIFTH AVE - STA 497+50.00



CONTRACT NO. BRT-001  
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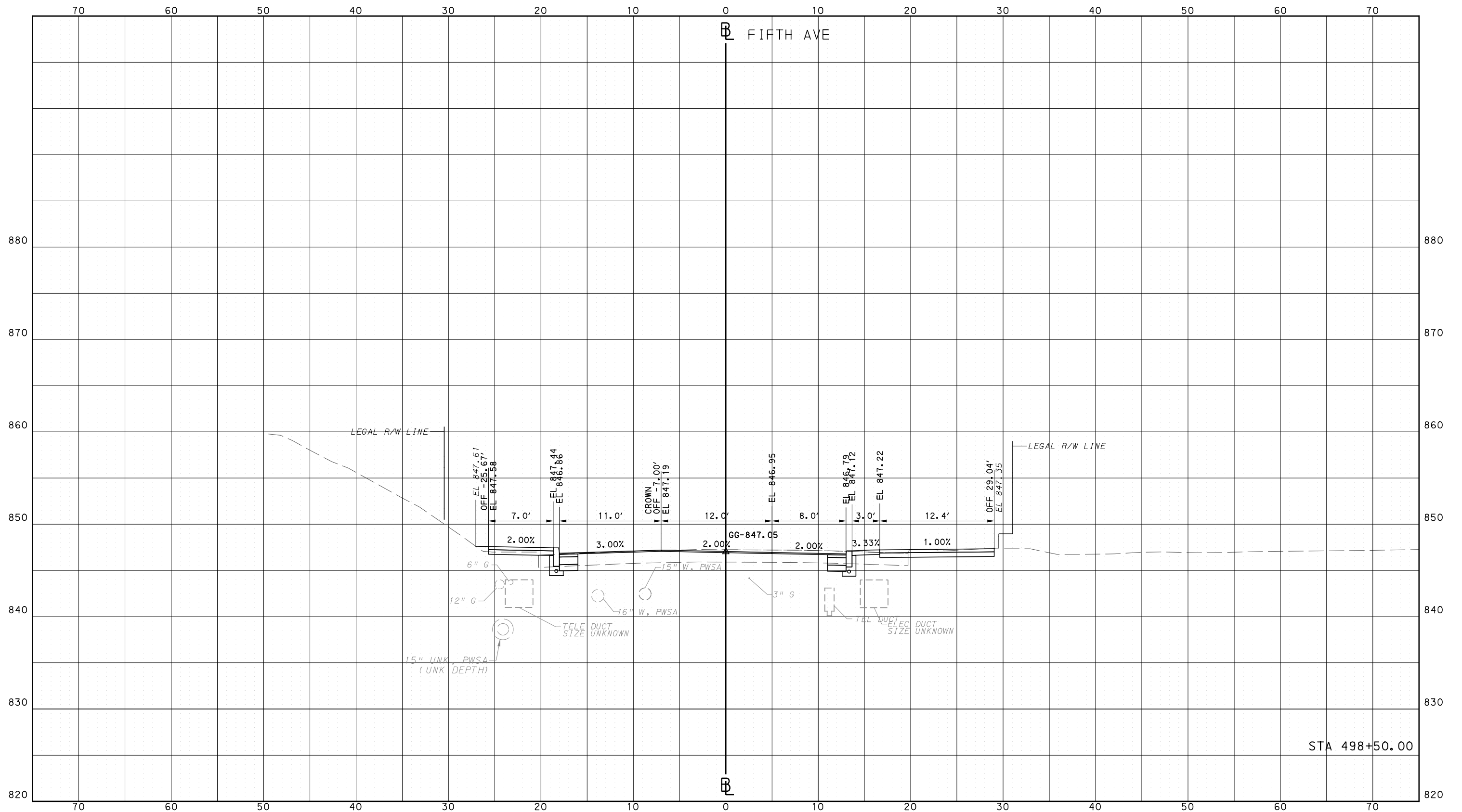
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DATE	05/01/24
SCALE	0 5 10 FEET

<b>PORT AUTHORITY OF ALLEGHENY COUNTY</b> PITTSBURGH PENNSYLVANIA		
<b>BUS RAPID TRANSIT</b> <b>CROSS SECTIONS</b> <b>FIFTH AVE - STA 498+00.00</b>		
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PORT AUTHORITY OF ALLEGHENY COUNTY  
PITTSBURGH PENNSYLVANIA

BUS RAPID TRANSIT  
CROSS SECTIONS  
FIFTH AVE - STA 498+50.00

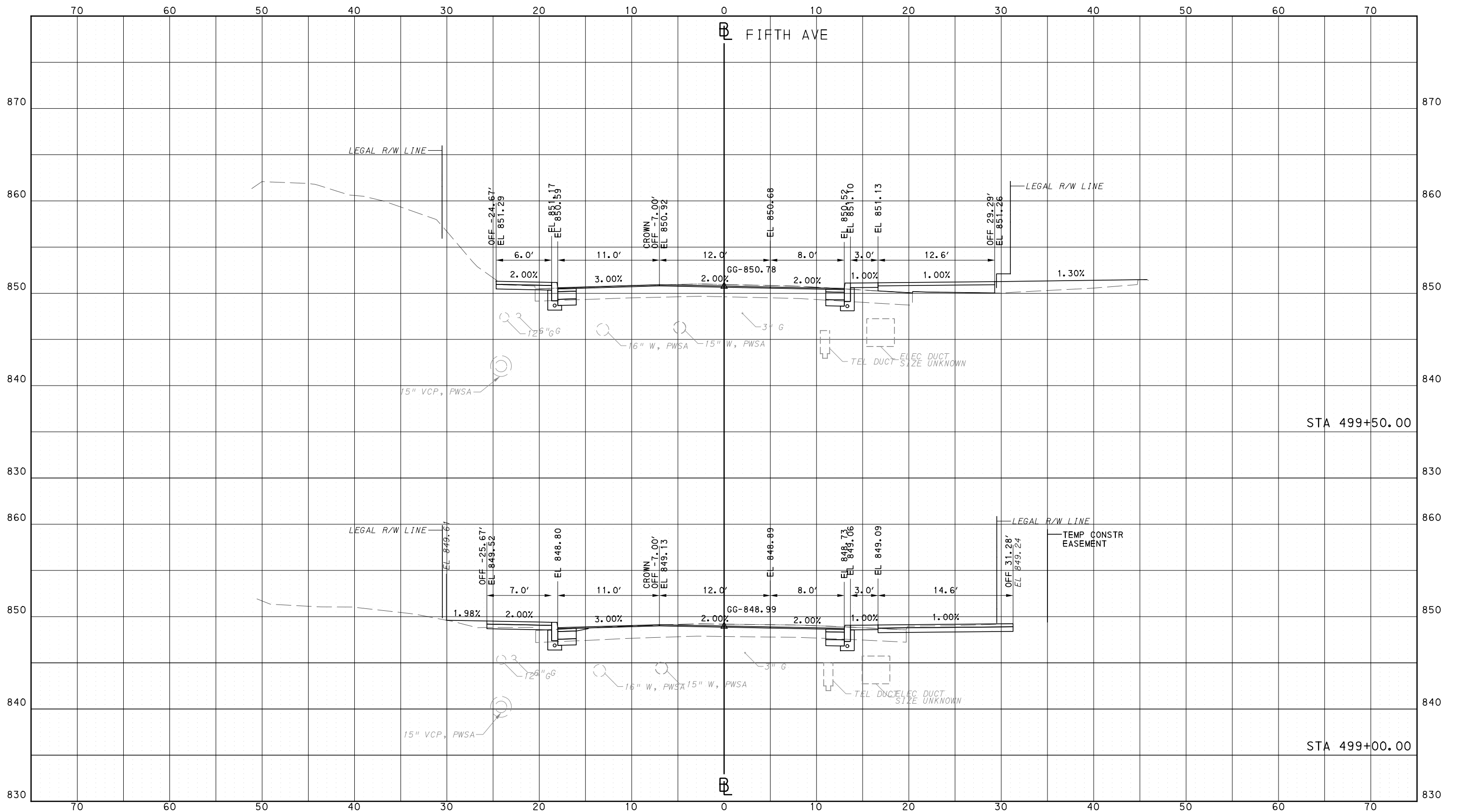


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DATE	05/01/24
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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT**  
CROSS SECTIONS  
FIFTH AVE - STA 499+00.00 TO STA 499+50.00

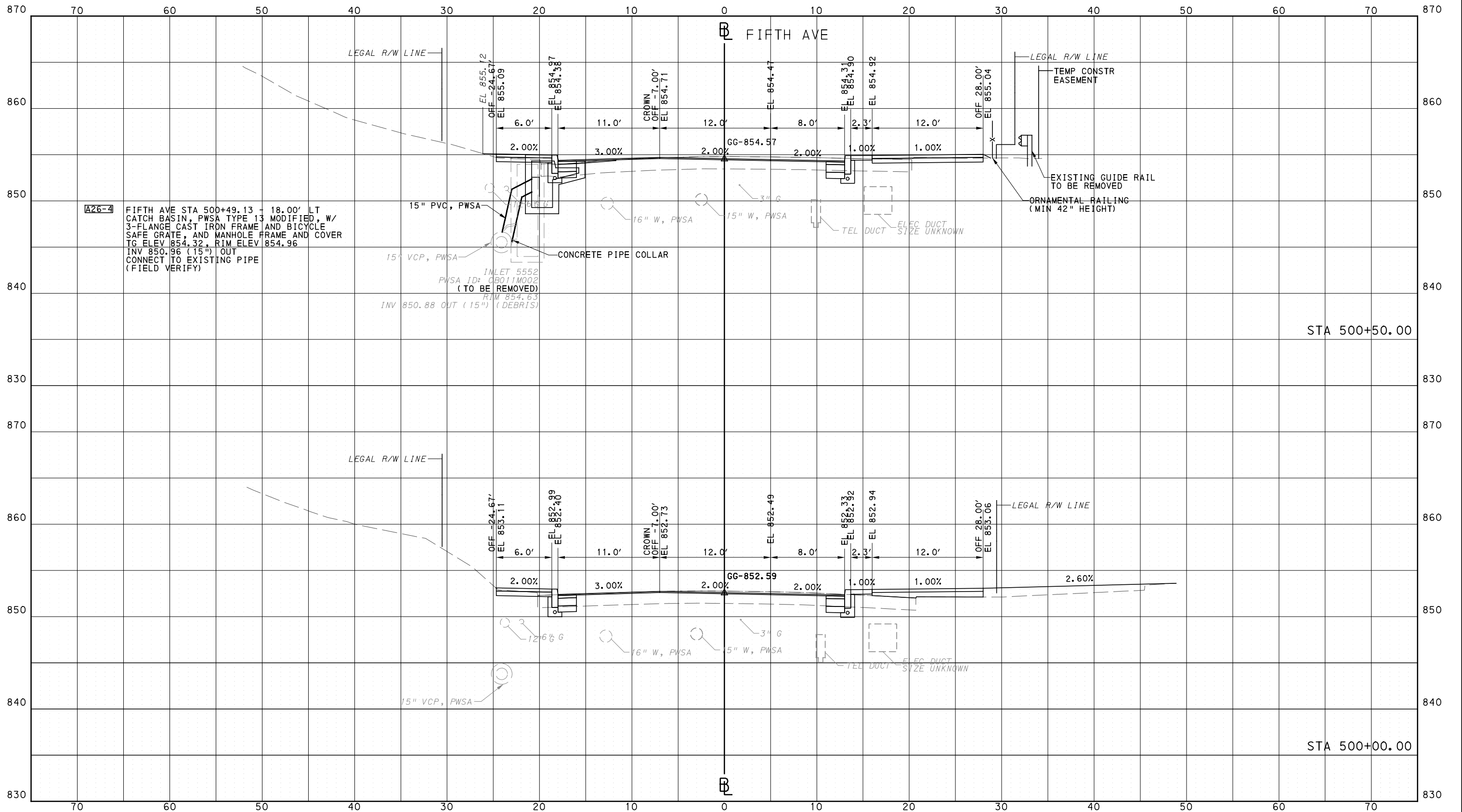
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PORT AUTHORITY OF ALLEGHENY COUNTY  
PITTSBURGH PENNSYLVANIA

BUS RAPID TRANSIT  
CROSS SECTIONS  
FIFTH AVE - STA 500+00.00 TO STA 500+50.00

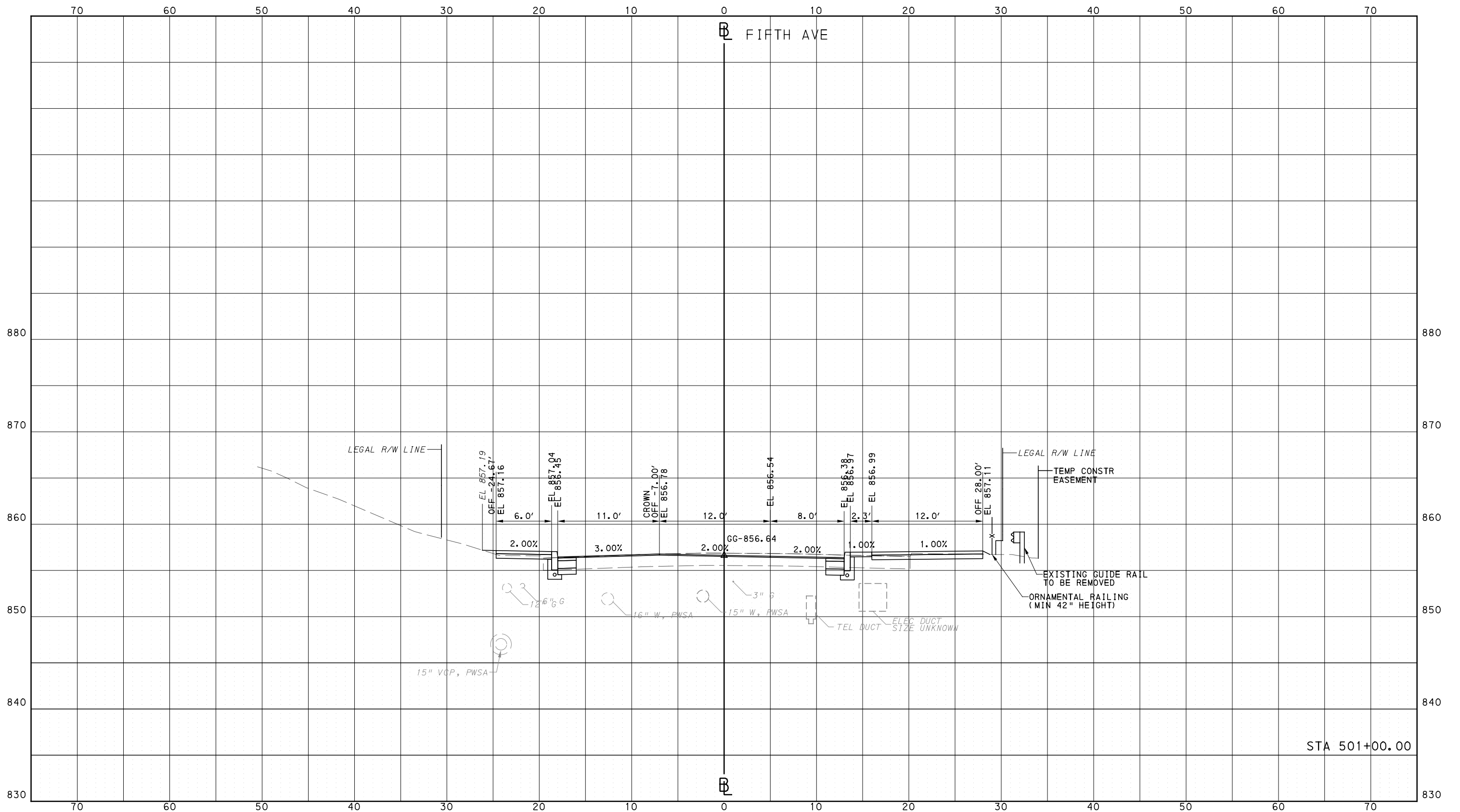


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PITTSBURGH PENNSYLVANIA

BUS RAPID TRANSIT  
CROSS SECTIONS  
FIFTH AVE - STA 501+00.00



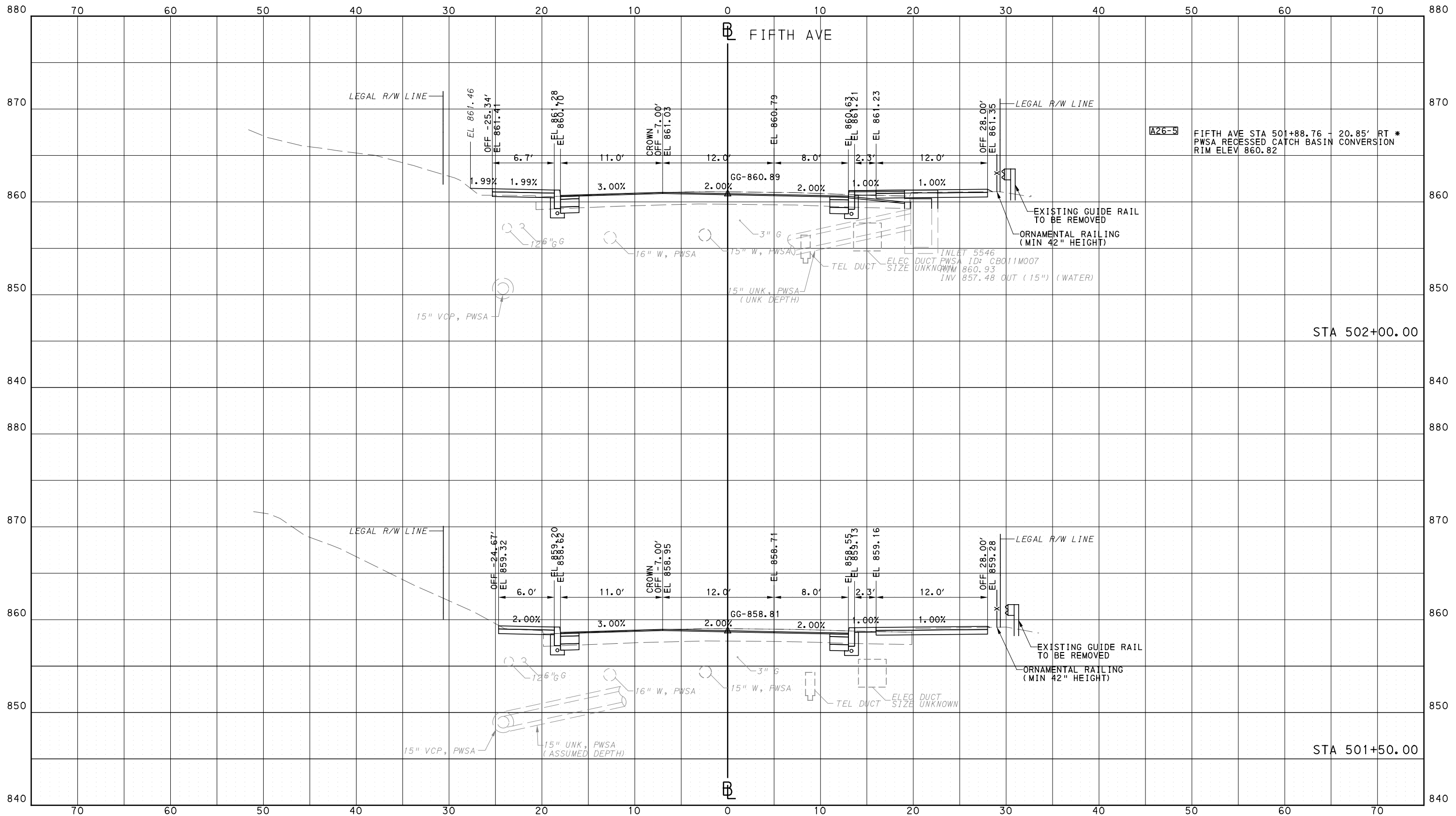
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### PORT AUTHORITY OF ALLEGHENY COUNTY CROSS SECTIONS



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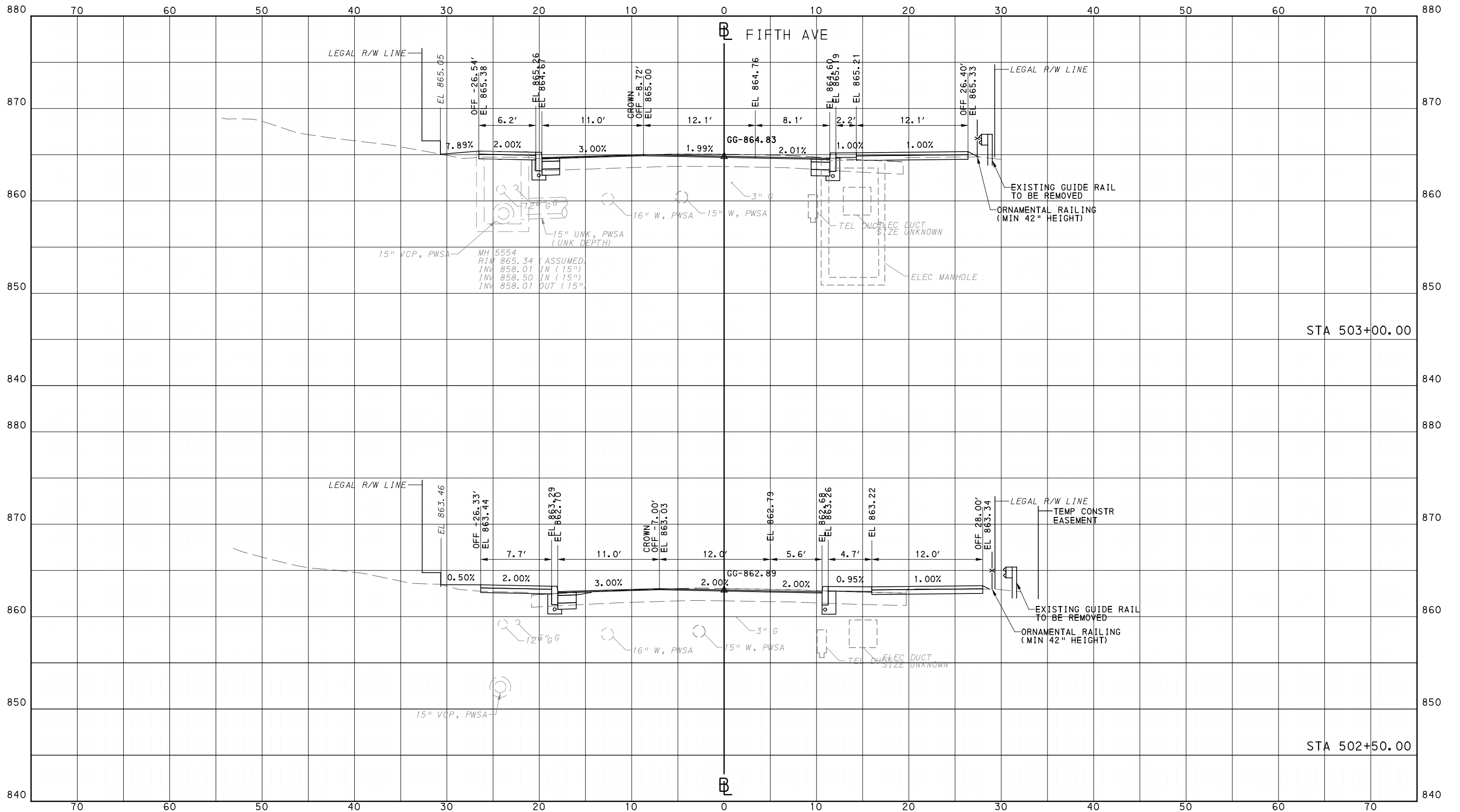
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PORT AUTHORITY OF ALLEGHENY COUNTY PITTSBURGH PENNSYLVANIA		
BUS RAPID TRANSIT CROSS SECTIONS FIFTH AVE - STA 501+50.00 TO STA 502+00.00		
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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT**  
CROSS SECTIONS  
FIFTH AVE - STA 502+50.00 TO STA 503+00.00

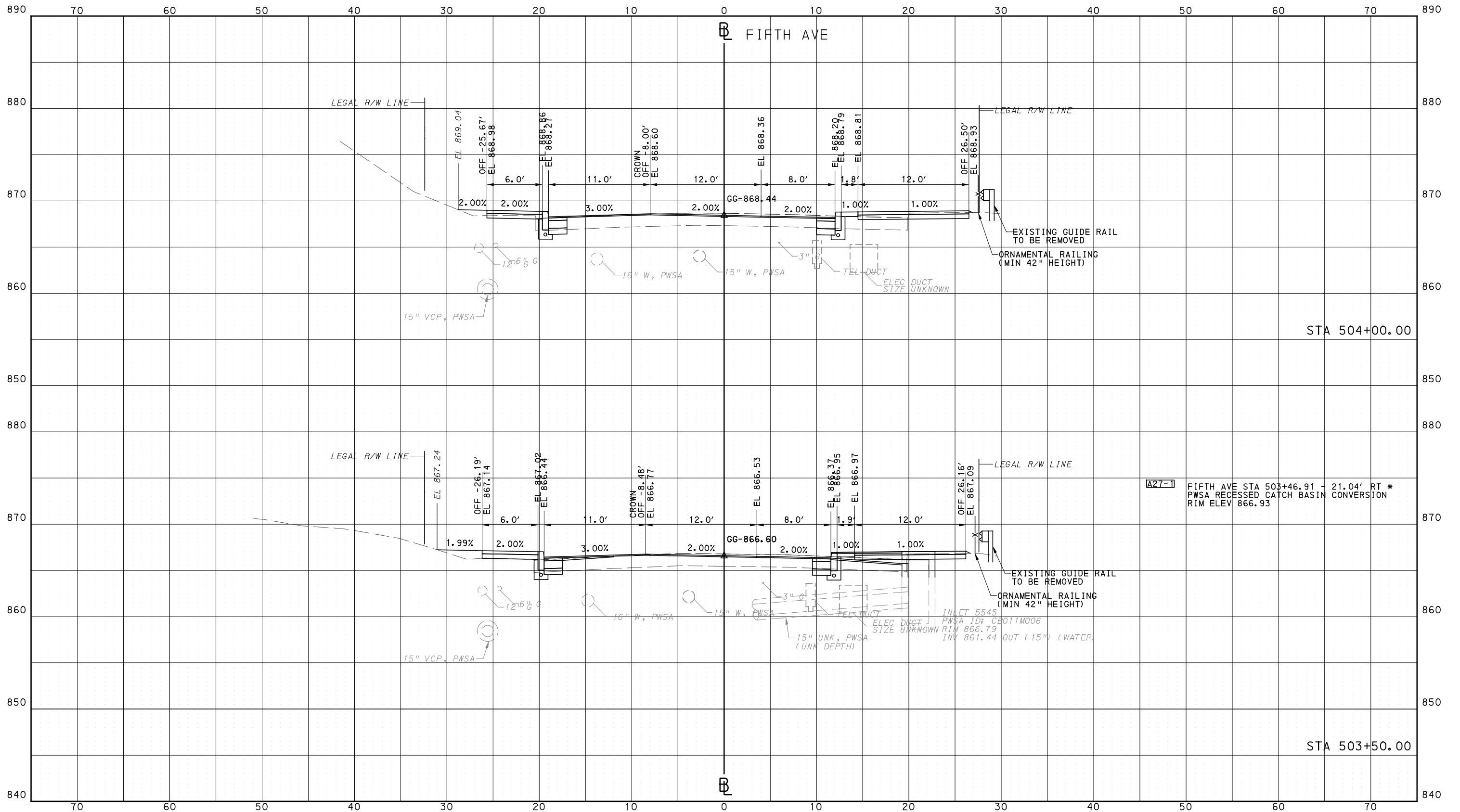
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PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT**  
CROSS SECTIONS  
FIFTH AVE - STA 503+50.00 TO STA 504+00.00

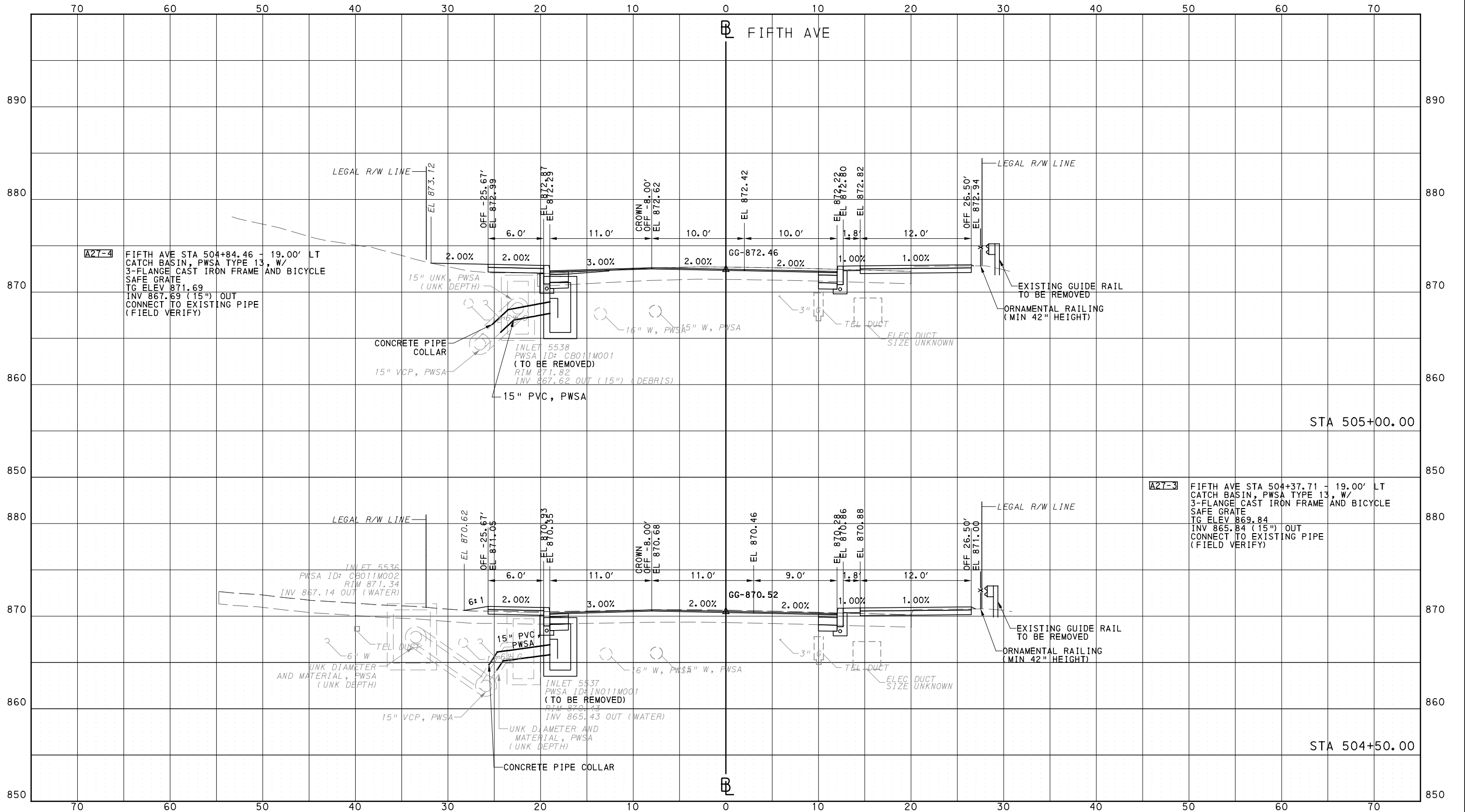
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BUS RAPID TRANSIT  
CROSS SECTIONS  
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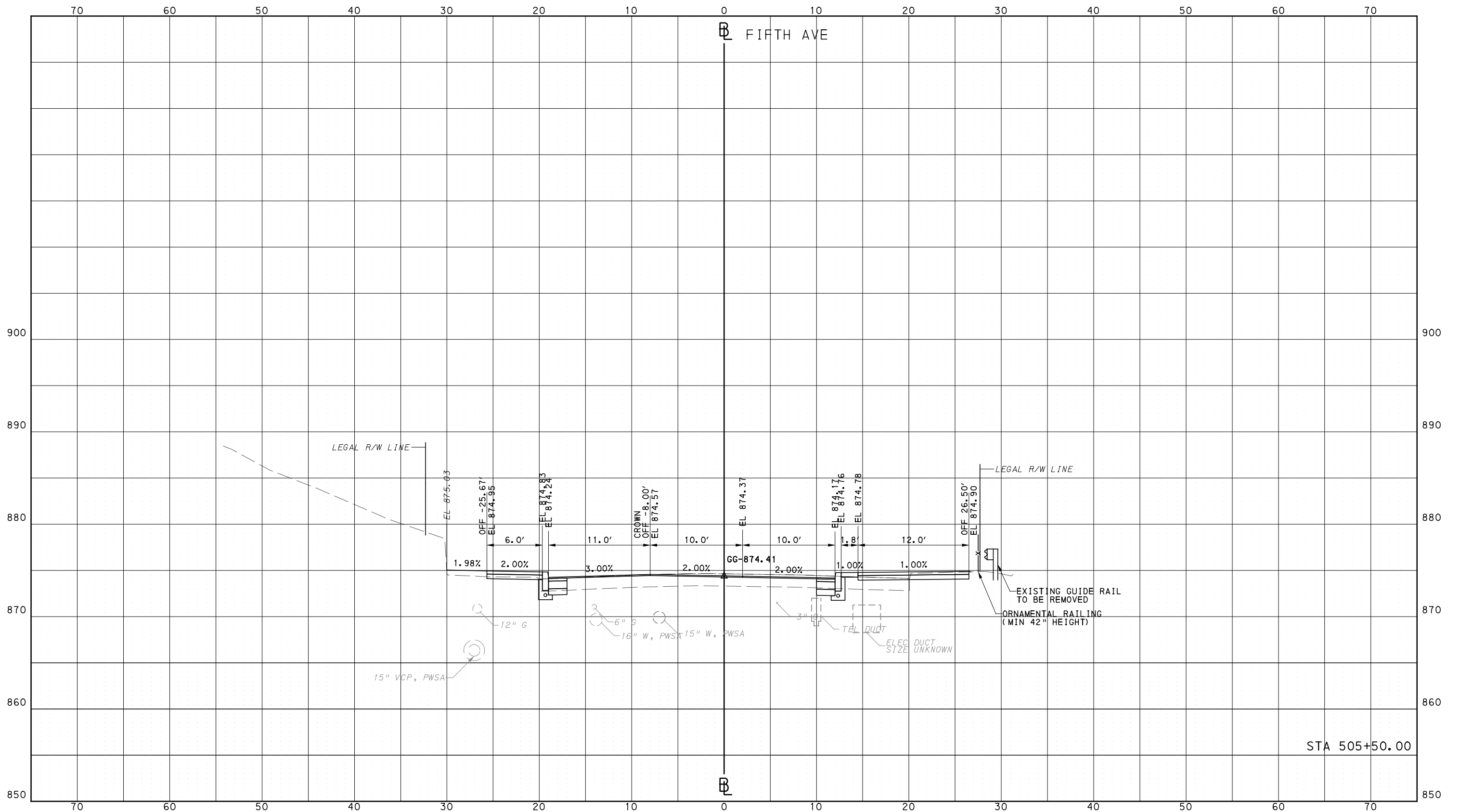
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PITTSBURGH PENNSYLVANIA

BUS RAPID TRANSIT  
CROSS SECTIONS  
FIFTH AVE - STA 505+50.00



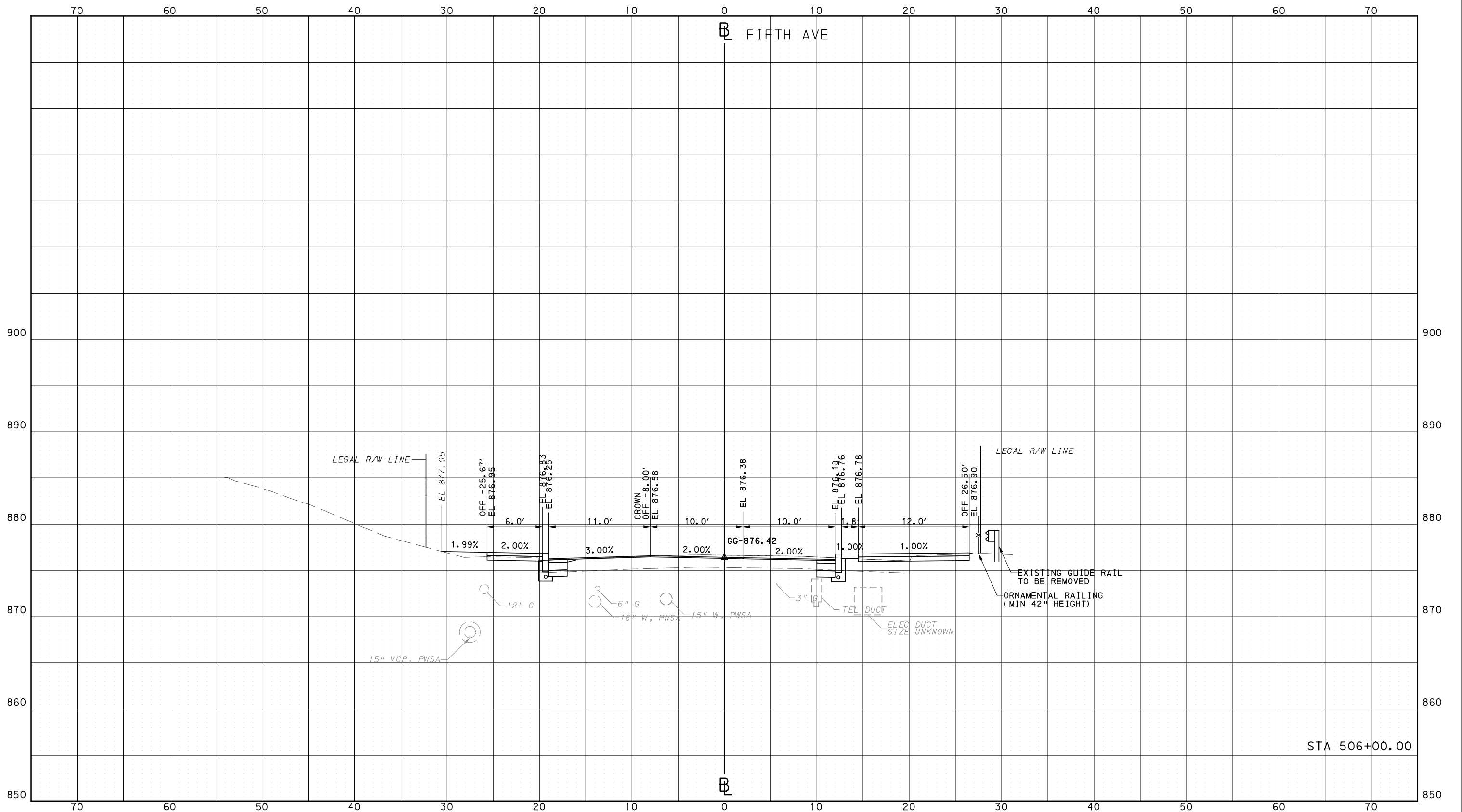
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DATE	05/01/24
SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT  
CROSS SECTIONS  
FIFTH AVE - STA 506+00.00**

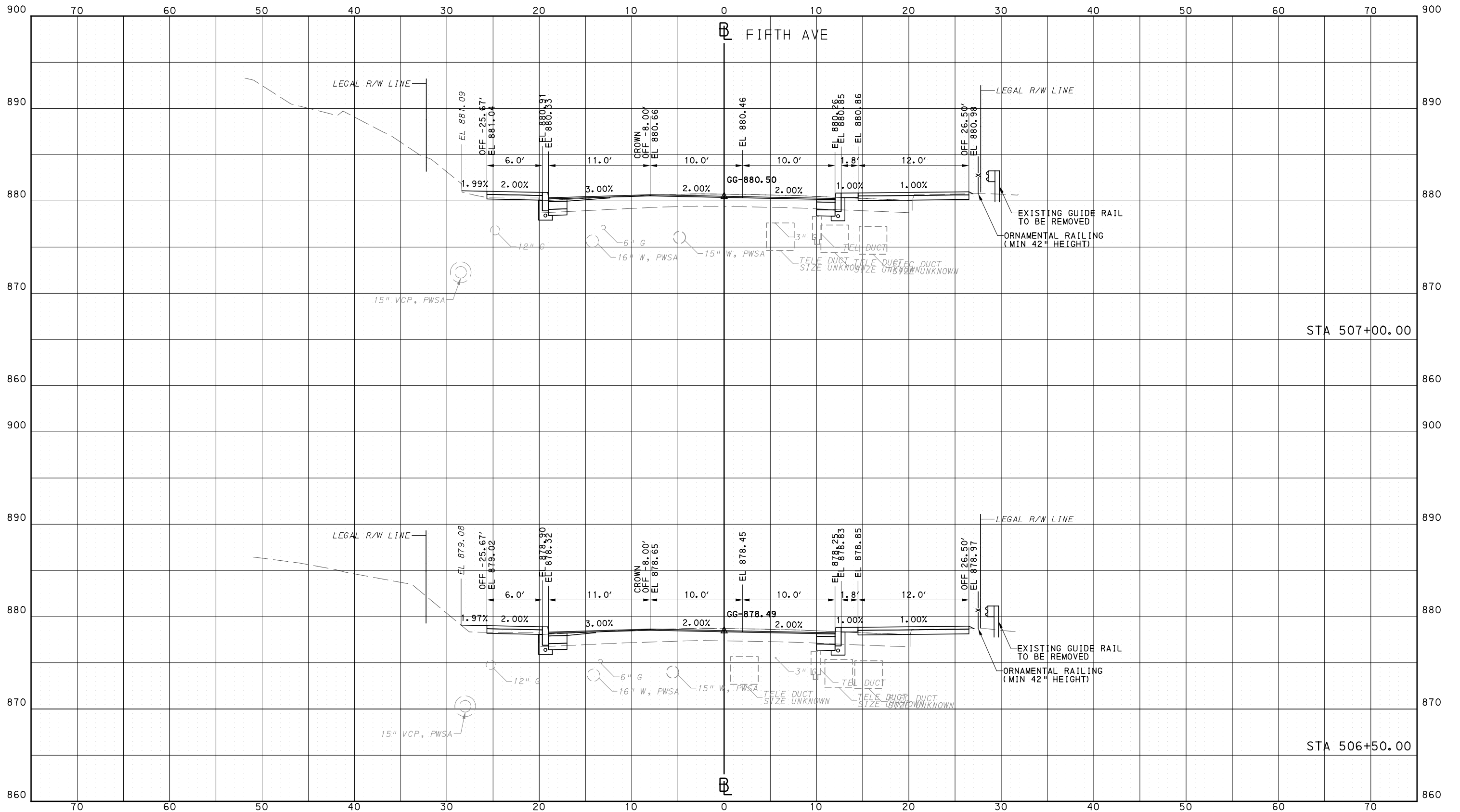
**Port Authority**  
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CONTRACT NO. BRT-001  
DWG. NO. XS105 SHT. 1310

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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS



Gulf Tower  
707 Grant Street  
5th Floor  
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REVISIONS		

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(NOT FOR CONSTRUCTION)

DESIGNED	DRS
DRAWN	DRS
CHECKED	BFS
IN CHARGE	LAR
DATE	05/01/24
SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT**  
CROSS SECTIONS  
FIFTH AVE - STA 506+50.00 TO STA 507+00.00

**Port Authority** connecting people to life

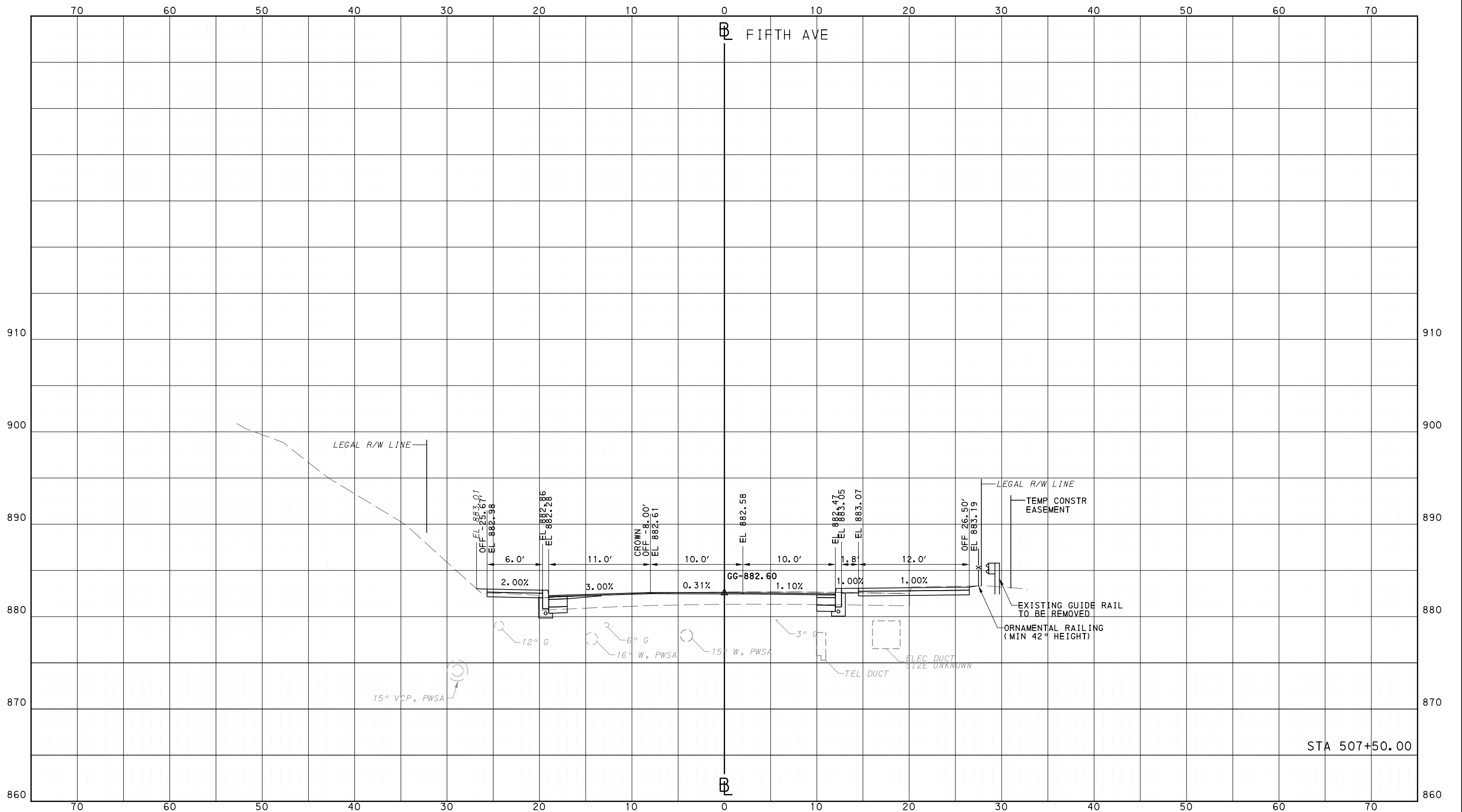
CONTRACT NO. BRT-001  
DWG. NO. XS106 SHT. 1311



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PORT AUTHORITY OF ALLEGHENY COUNTY  
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STA 507+50.00



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**(NOT FOR CONSTRUCTION)**

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DRAWN	DRS
CHECKED	BFS
IN CHARGE	LAR
DATE	05/01/24
SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT  
CROSS SECTIONS  
FIFTH AVE - STA 507+50.00**

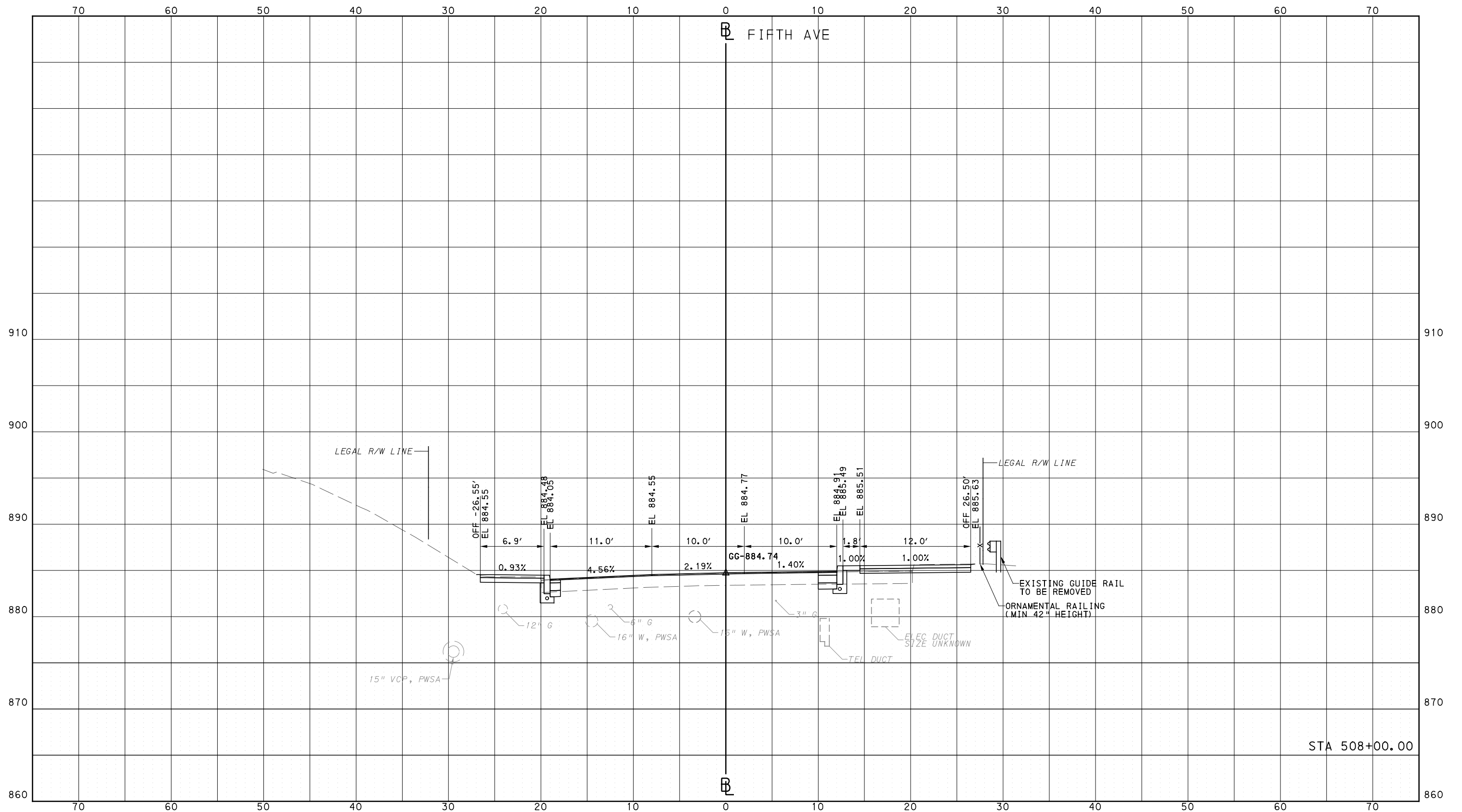
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CONTRACT NO. BRT-001  
DWG. NO. XS107 SHT. 1312

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PORT AUTHORITY OF ALLEGHENY COUNTY  
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DATE	05/01/24
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PORT AUTHORITY OF ALLEGHENY COUNTY  
PITTSBURGH PENNSYLVANIA

BUS RAPID TRANSIT  
CROSS SECTIONS  
FIFTH AVE - STA 508+00.00

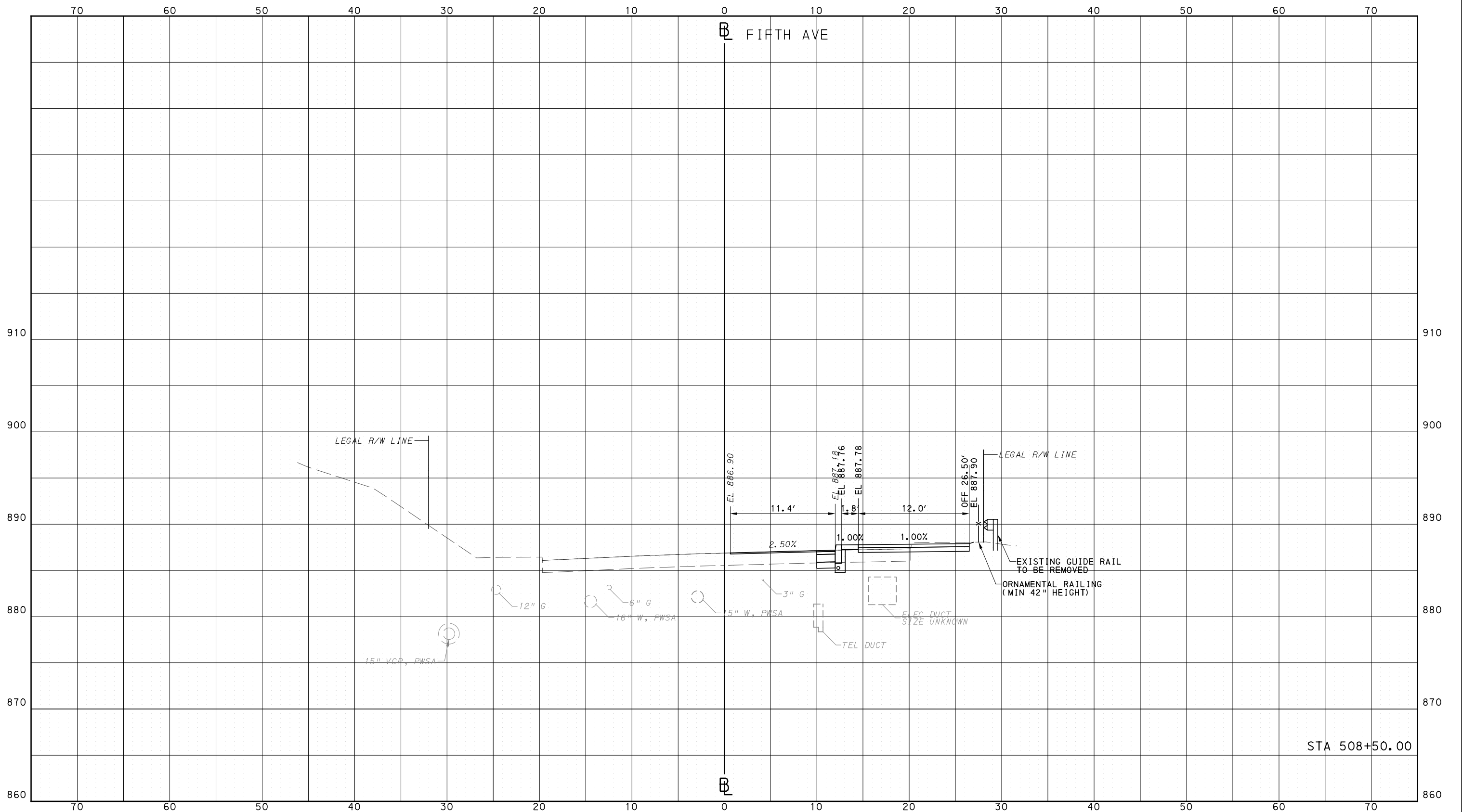


CONTRACT NO. BRT-001  
DWG. NO. XS108 SHT. 1313

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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT**  
CROSS SECTIONS  
FIFTH AVE - STA 508+50.00

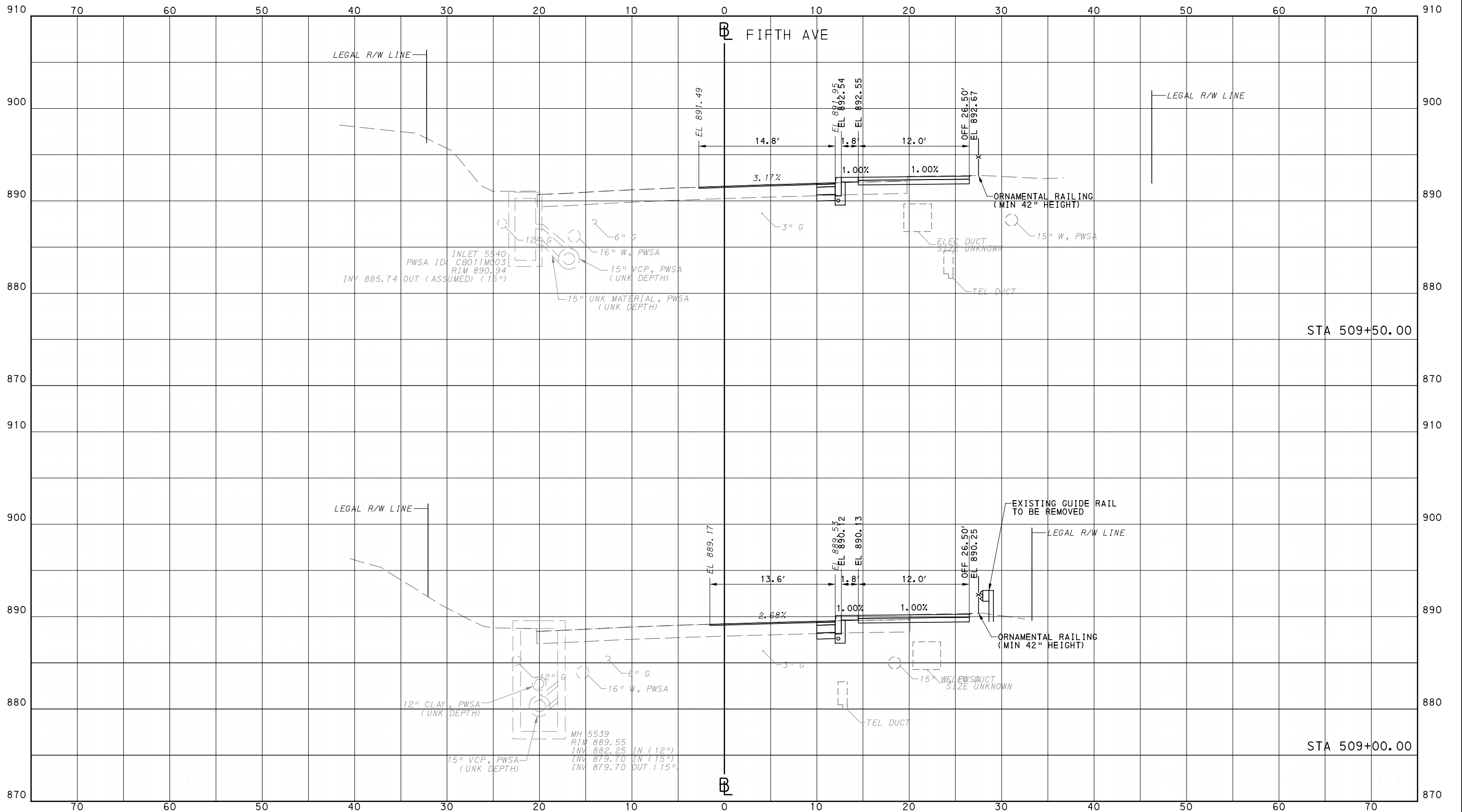
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CONTRACT NO. BRT-001  
DWG. NO. XS109 SHT. 1314

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DRAWN	DRS
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SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT**  
CROSS SECTIONS  
FIFTH AVE - STA 509+00.00 TO STA 509+50.00

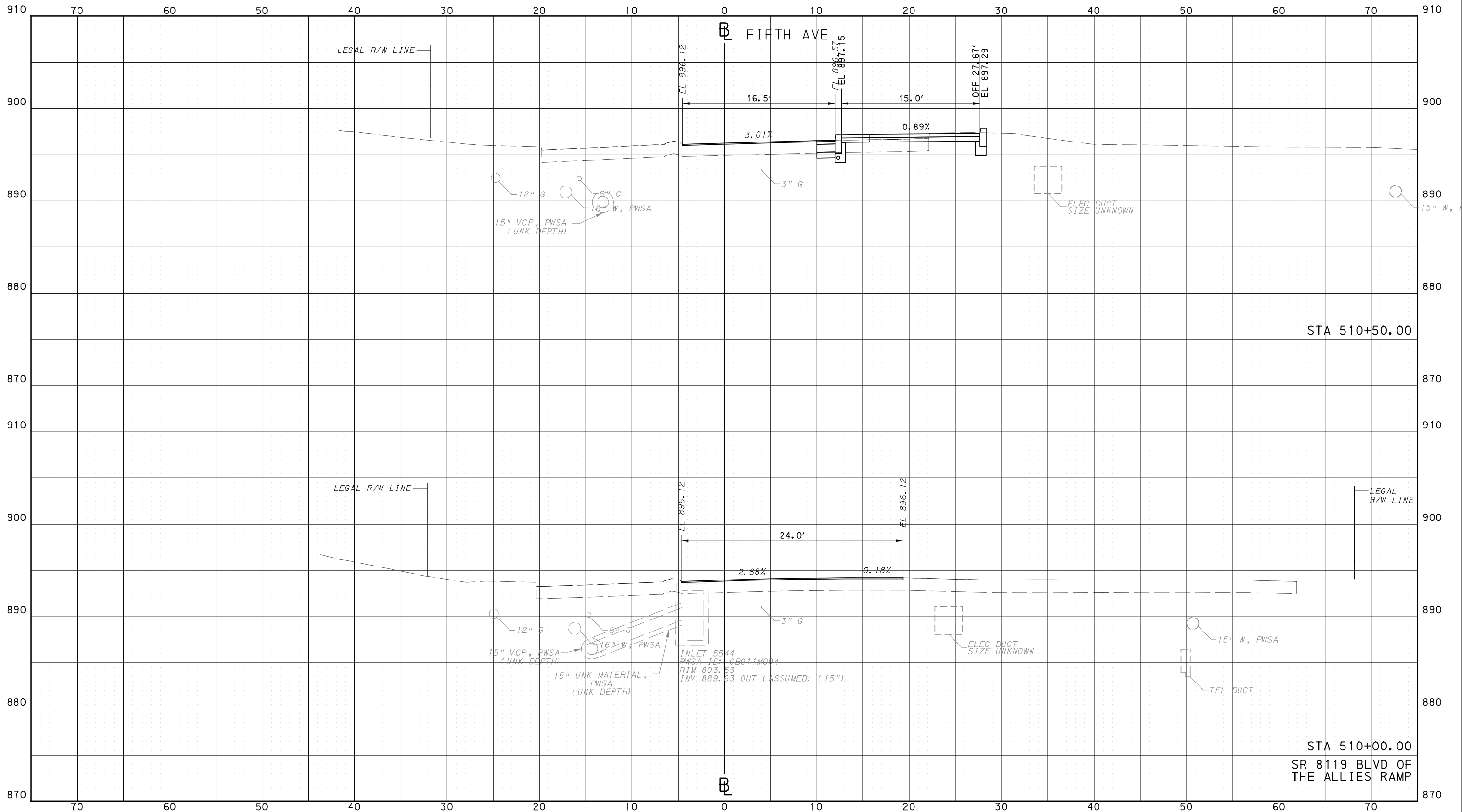
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CONTRACT NO. BRT-001  
DWG. NO. XS110 SHT. 1315

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PORT AUTHORITY OF ALLEGHENY COUNTY  
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DATE	05/01/24
SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT**  
CROSS SECTIONS  
FIFTH AVE - STA 510+00.00 TO STA 510+50.00

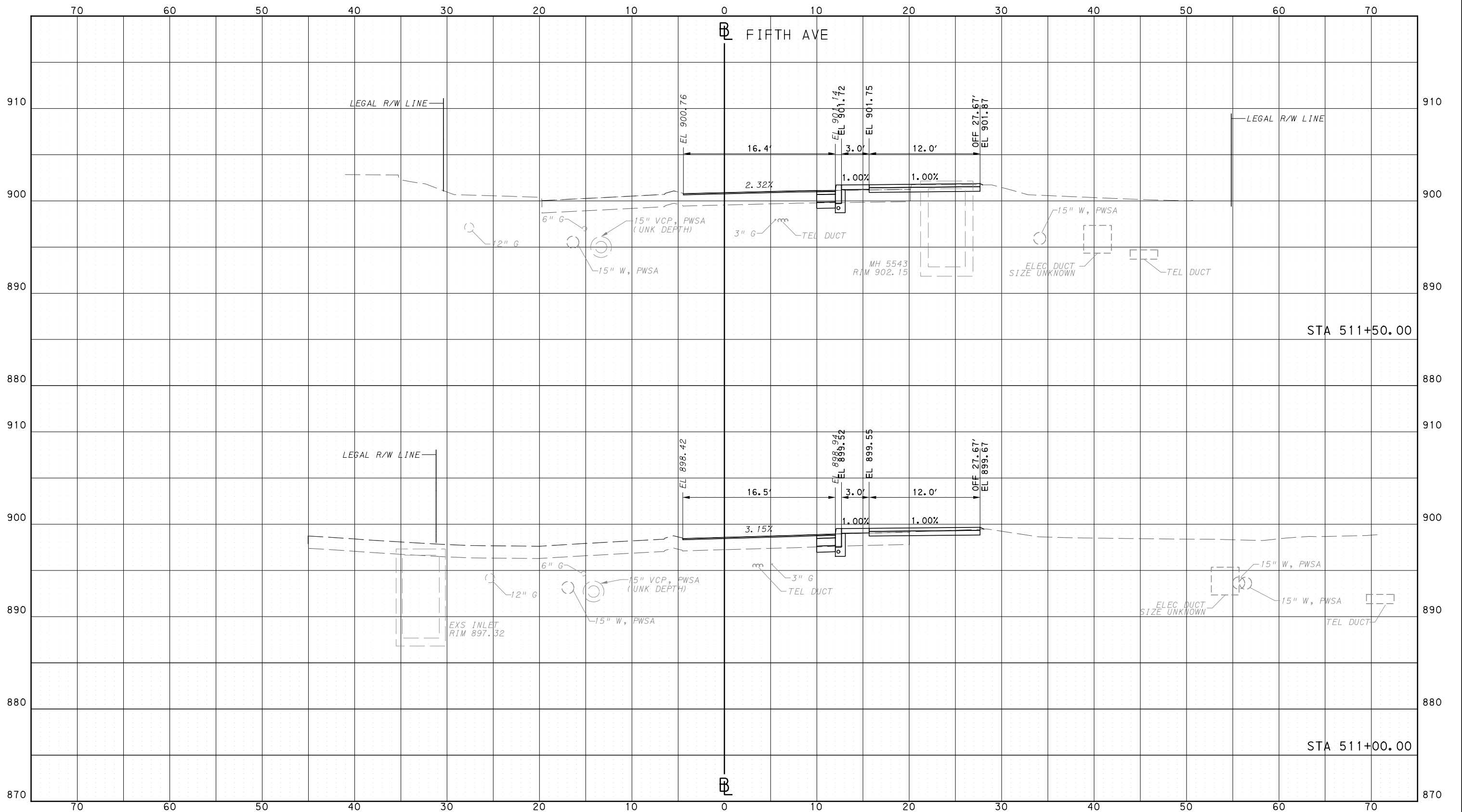
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CONTRACT NO. BRT-001	
DWG. NO. XS111	SHT. 1316

PLOTTED: 3/22/2024 3:05:25 PM

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PORT AUTHORITY OF ALLEGHENY COUNTY  
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DATE	05/01/24
SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT**  
CROSS SECTIONS  
FIFTH AVE - STA 511+00.00 TO STA 511+50.00

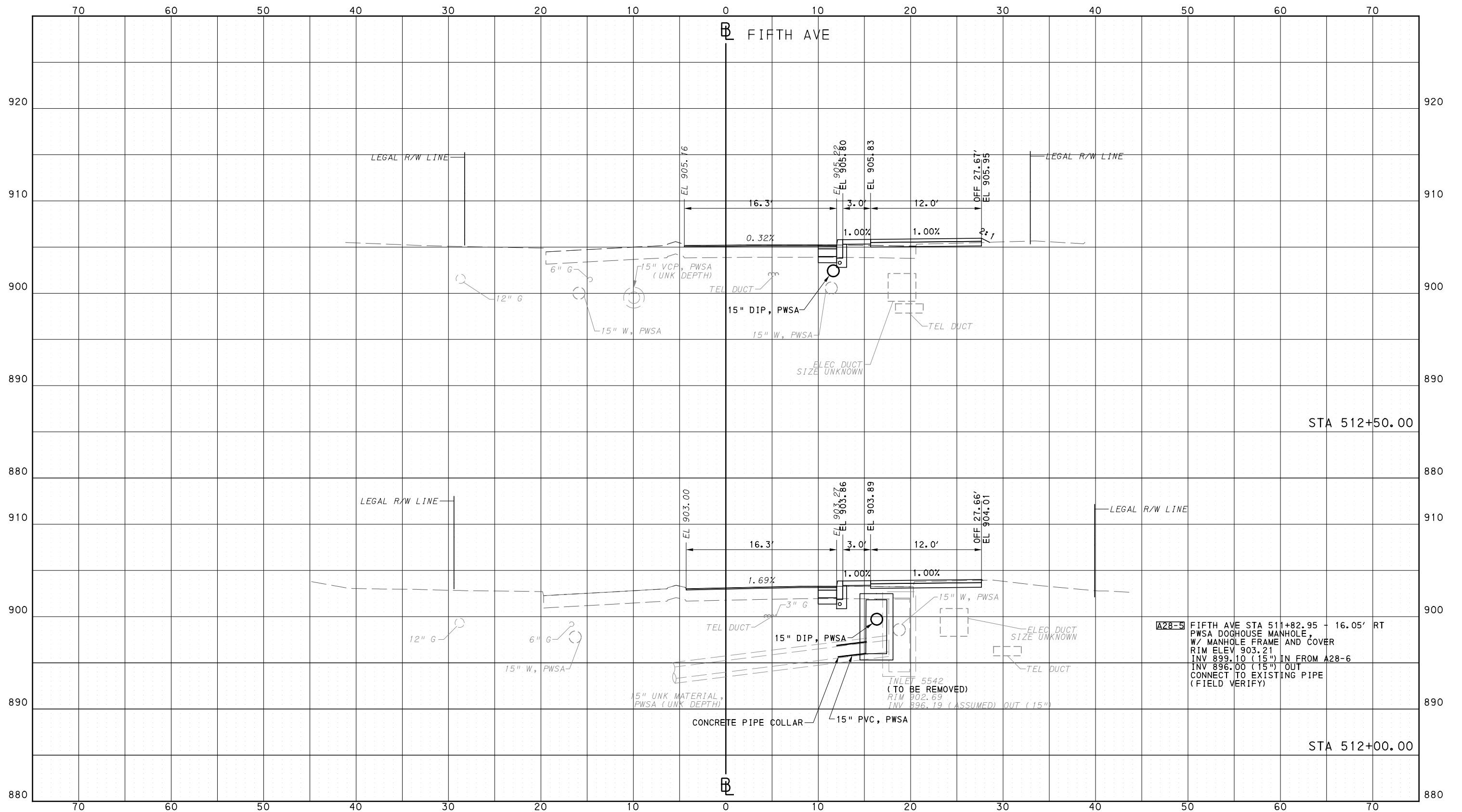
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CONTRACT NO. BRT-001  
DWG. NO. XS112 SHT. 1317

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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS



**A28-5** FIFTH AVE STA 511+82.95 - 16.05' RT  
PWSA DOGHOUSE MANHOLE,  
W/ MANHOLE FRAME AND COVER  
RIM ELEV 903.21  
INV 899.10 (15" IN FROM A28-6  
INV 896.00 (15" OUT  
CONNECT TO EXISTING PIPE  
(FIELD VERIFY)



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IN CHARGE	LAR
DATE	05/01/24
SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT**  
CROSS SECTIONS  
FIFTH AVE - STA 512+00.00 TO STA 512+50.00

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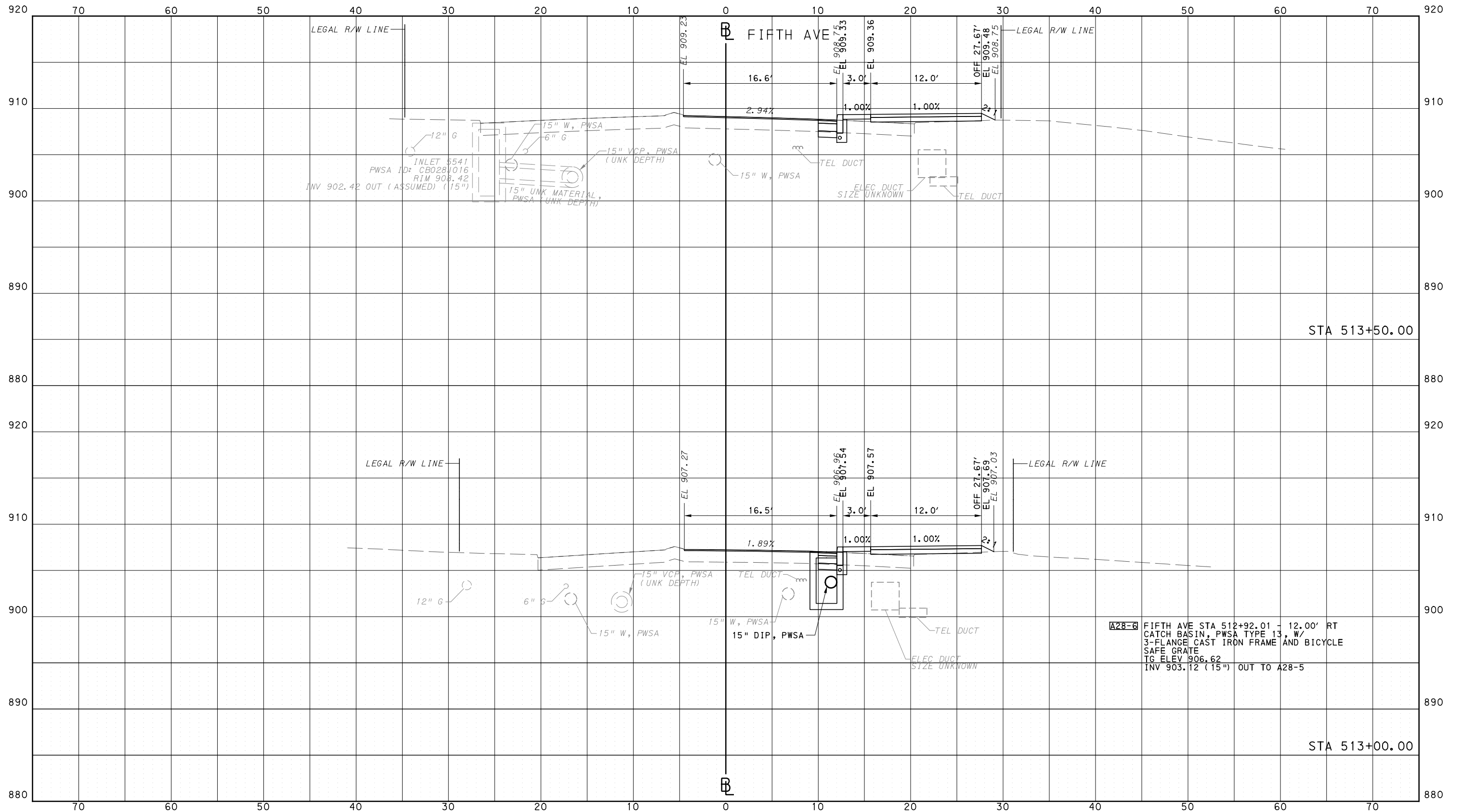
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DWG. NO. XS113 SHT. 1318



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PORT AUTHORITY OF ALLEGHENY COUNTY  
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CHECKED	BFS
IN CHARGE	LAR
DATE	05/01/24
SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
 PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT**  
 CROSS SECTIONS  
 FIFTH AVE - STA 513+00.00 TO STA 513+50.00

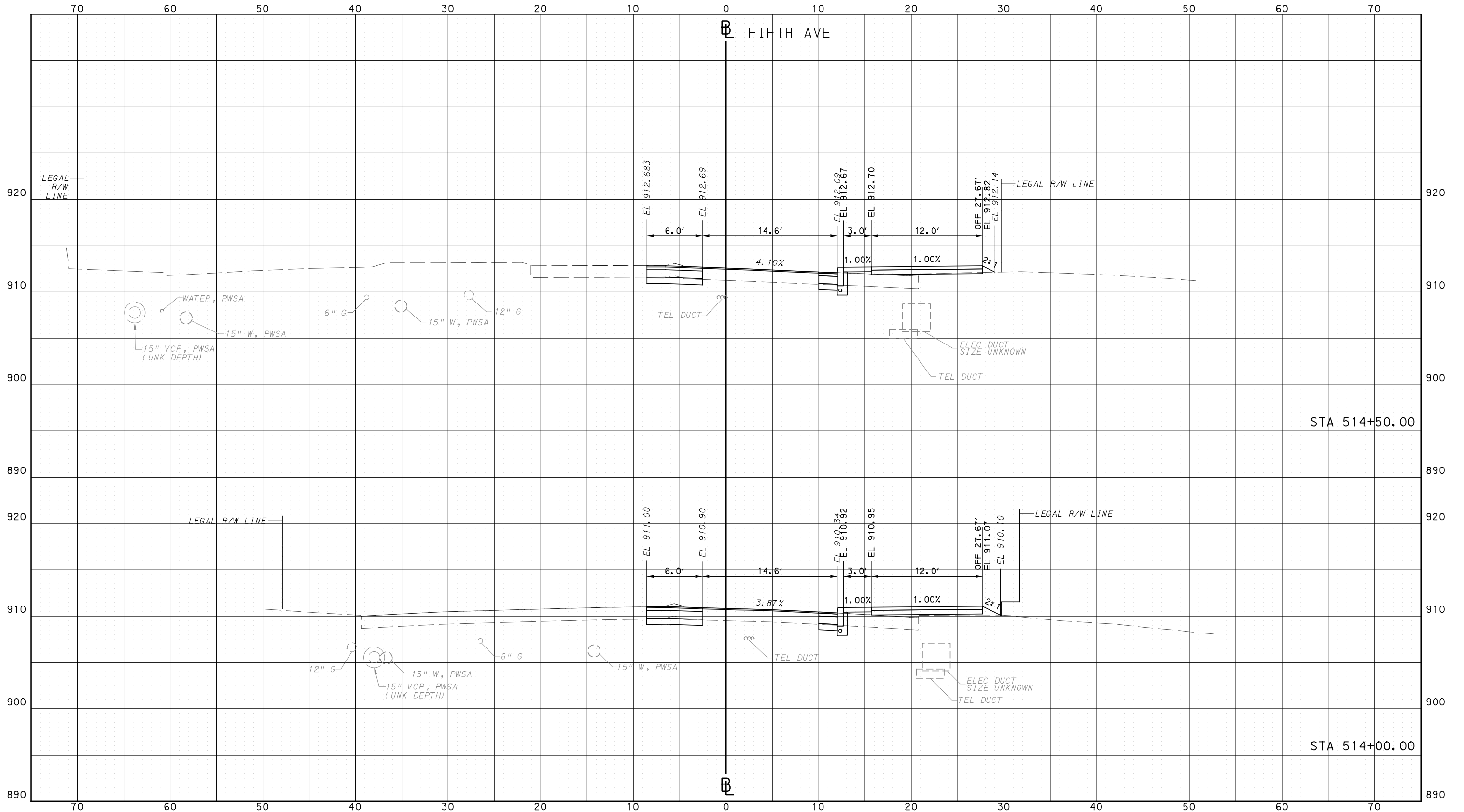
**Port Authority**  
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CONTRACT NO. BRT-001  
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PORT AUTHORITY OF ALLEGHENY COUNTY  
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DESIGNED	DRS
DRAWN	DRS
CHECKED	BFS
IN CHARGE	LAR
DATE	05/01/24
SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT**  
CROSS SECTIONS  
FIFTH AVE - STA 514+00.00 TO STA 514+50.00

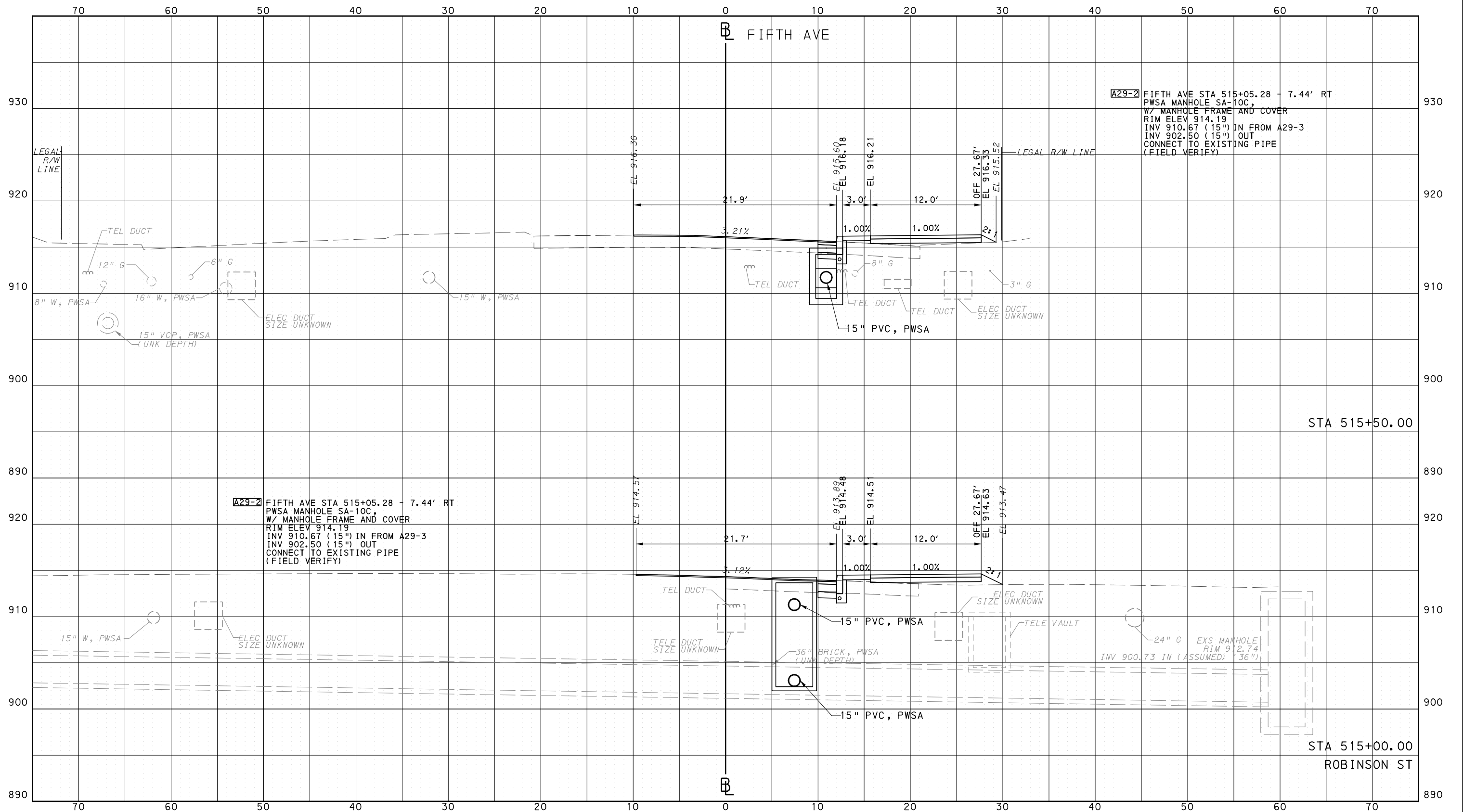
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CONTRACT NO. BRT-001  
DWG. NO. XS115 SHT. 1320

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PORT AUTHORITY OF ALLEGHENY COUNTY  
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IN CHARGE	LAR
DATE	05/01/24
SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
 PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT**  
 CROSS SECTIONS  
 FIFTH AVE - STA 515+00.00 TO STA 515+50.00

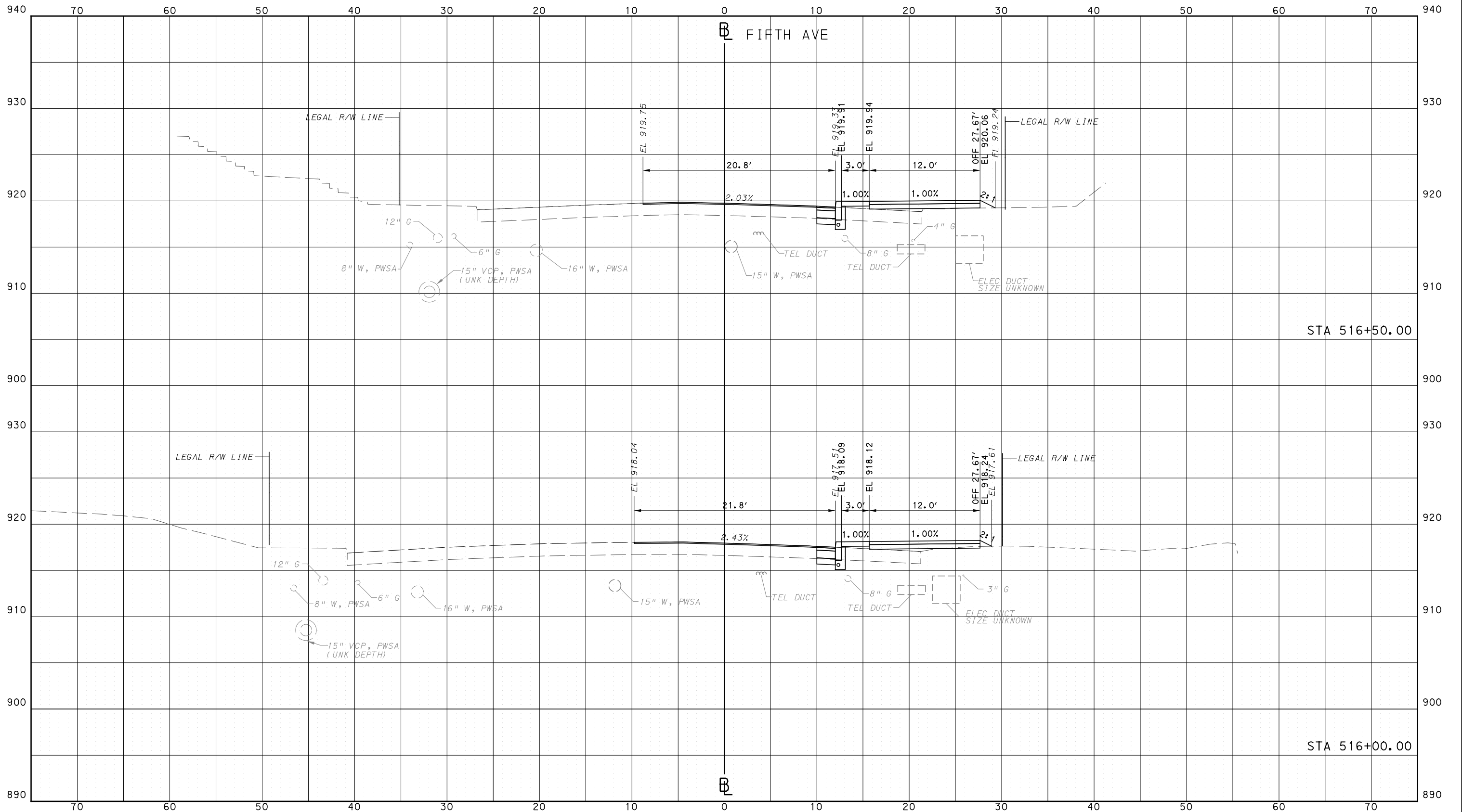
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 DWG. NO. XS116 SHT. 1321

PLOTTED: 3/22/2024 3:04:09 PM

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DATE	05/01/24
SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT**  
CROSS SECTIONS  
FIFTH AVE - STA 516+00.00 TO STA 516+50.00

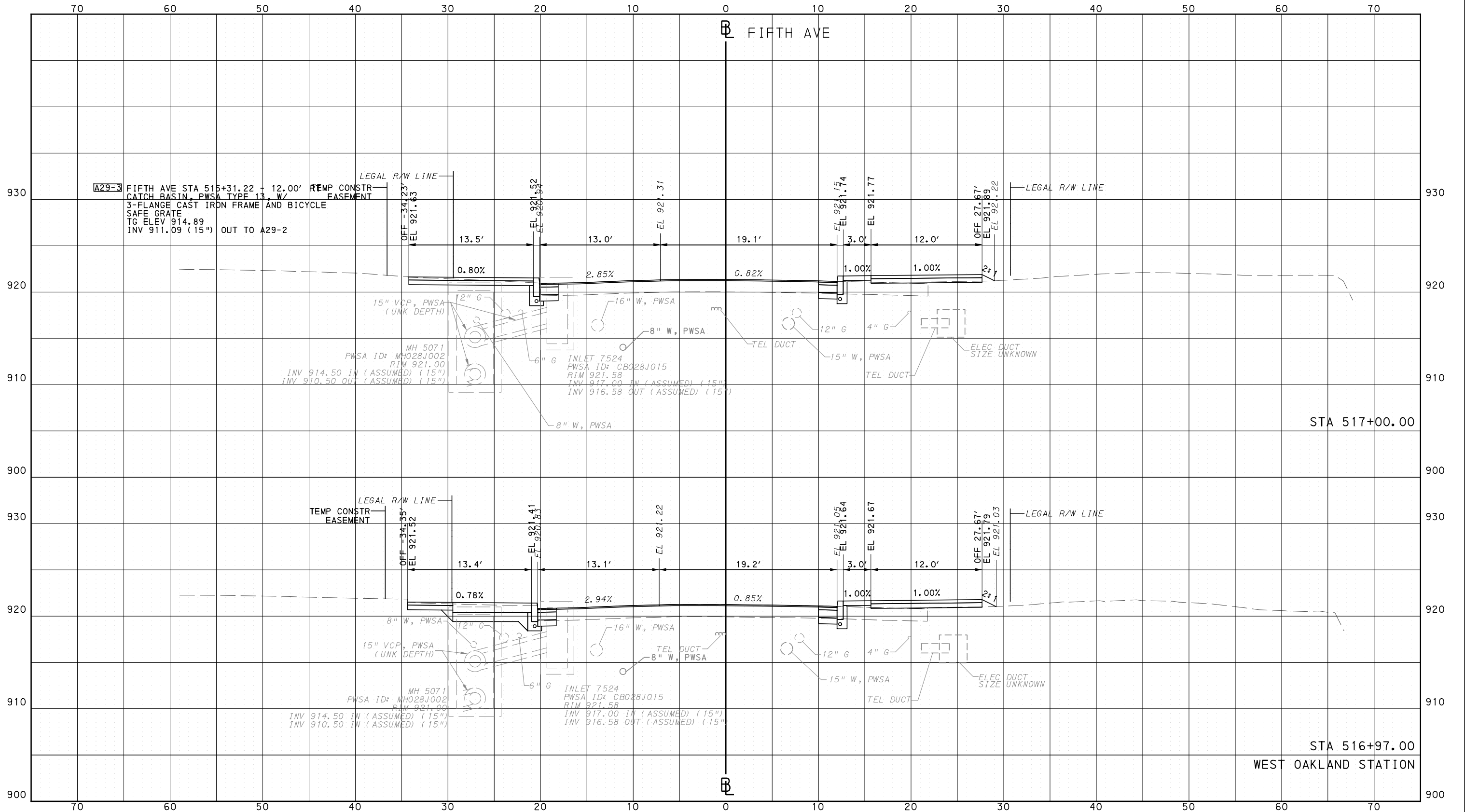
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CONTRACT NO. BRT-001  
DWG. NO. XS117 SHT. 1322

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SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT**  
CROSS SECTIONS  
FIFTH AVE - STA 516+97.00 TO STA 517+00.00

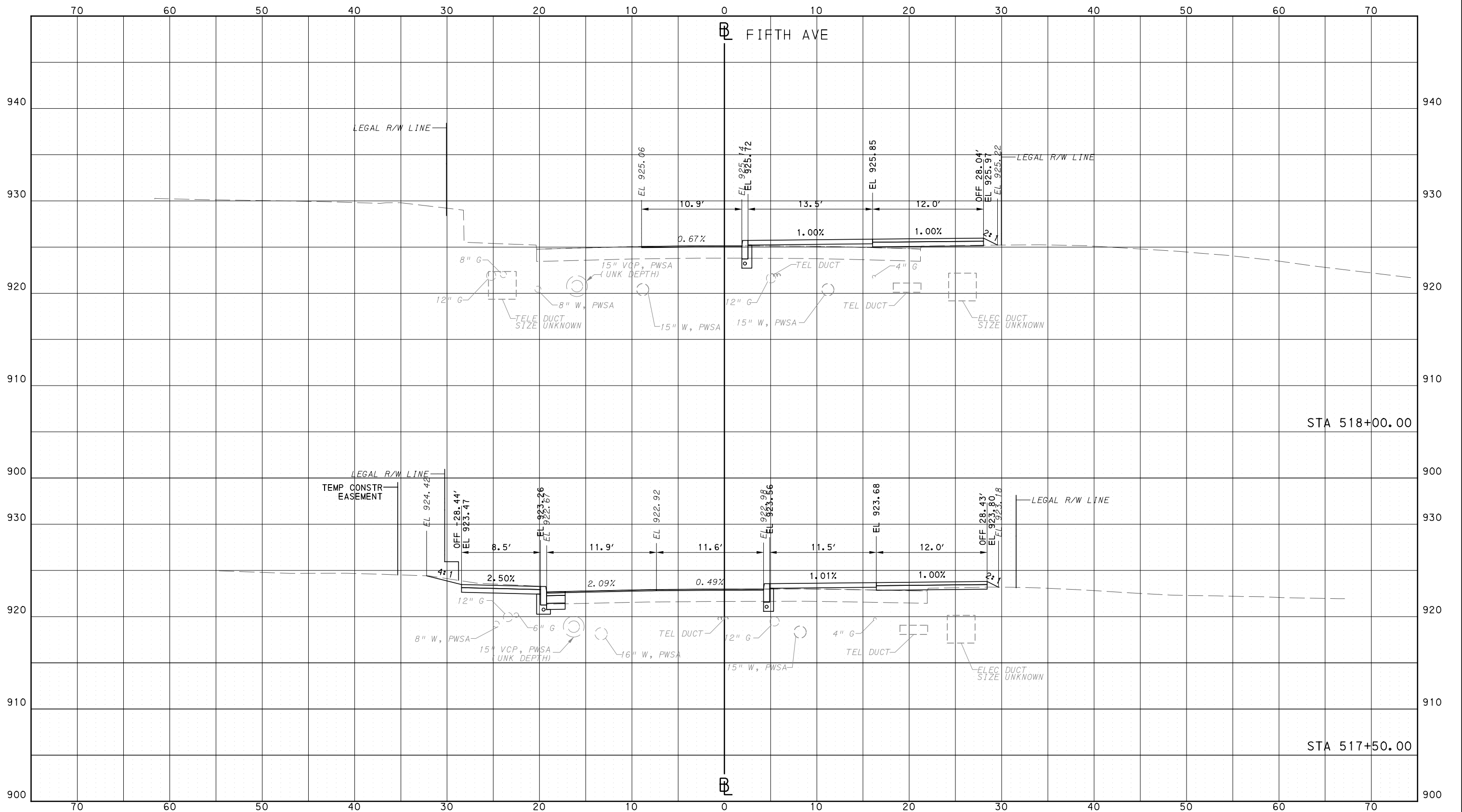
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DWG. NO. XS118 SHT. 1323

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SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
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**BUS RAPID TRANSIT**  
CROSS SECTIONS  
FIFTH AVE - STA 517+50.00 TO STA 518+00.00

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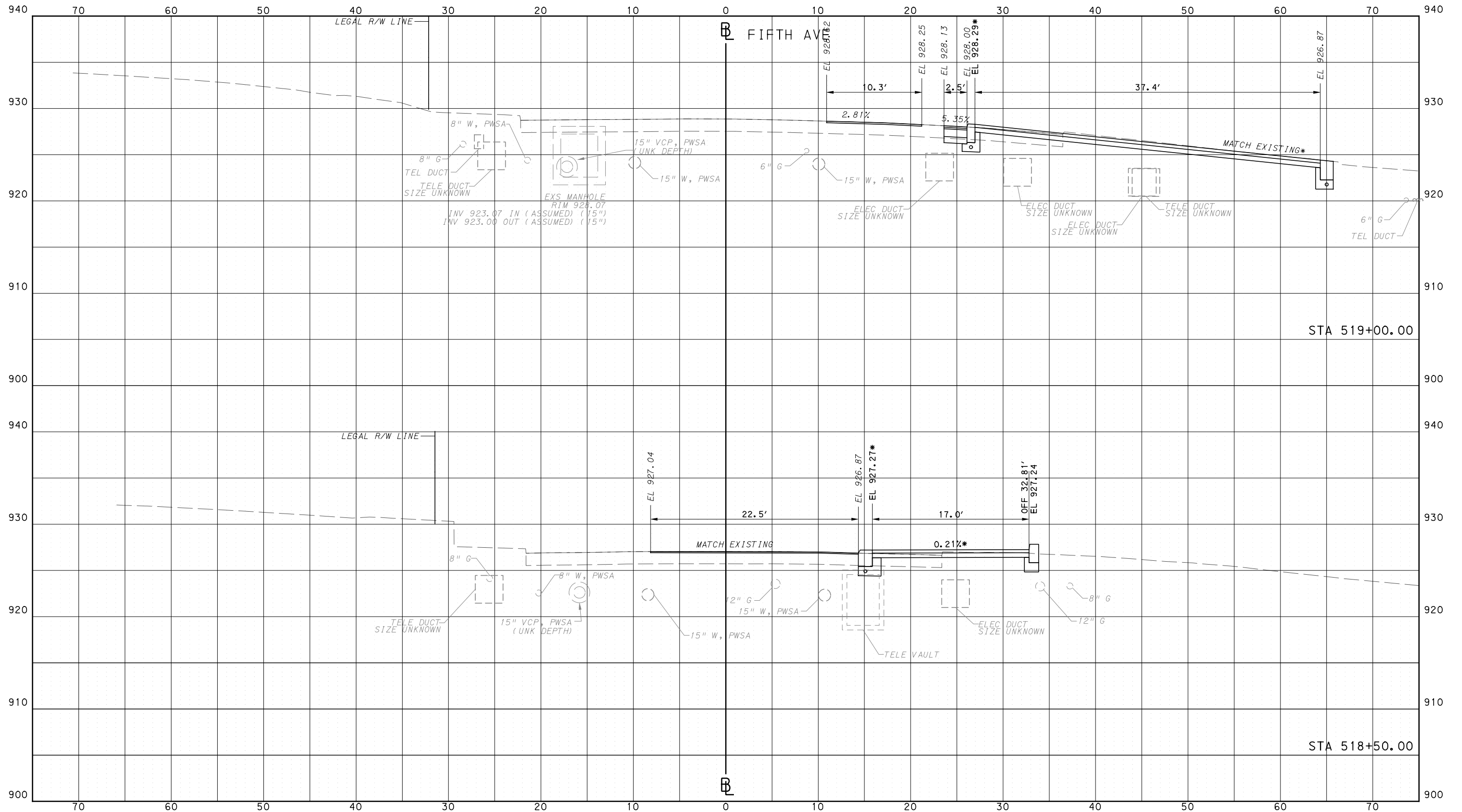
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PLOTTED: 3/22/2024 3:04:36 PM

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PORT AUTHORITY OF ALLEGHENY COUNTY  
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\*TOP OF CURB ELEVATION AND SIDEWALK SLOPES TO BE DETERMINED PER ITEM 01900.001 - DESIGN OF CURB RAMPS



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BUS RAPID TRANSIT  
CROSS SECTIONS  
FIFTH AVE - STA 518+50.00 TO STA 519+00.00



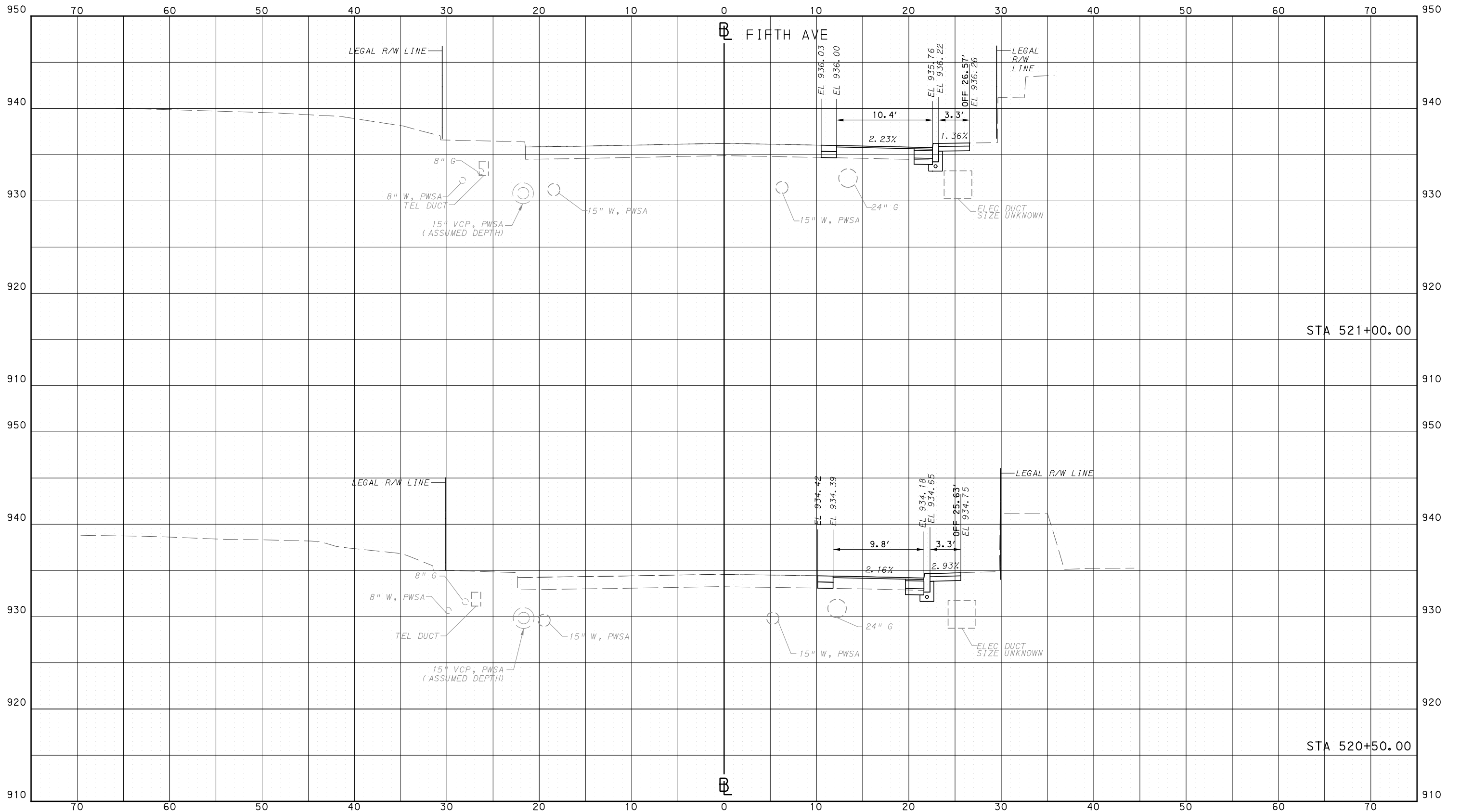
CONTRACT NO. BRT-001  
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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT**  
CROSS SECTIONS  
FIFTH AVE - STA 520+50.00 TO STA 521+00.00

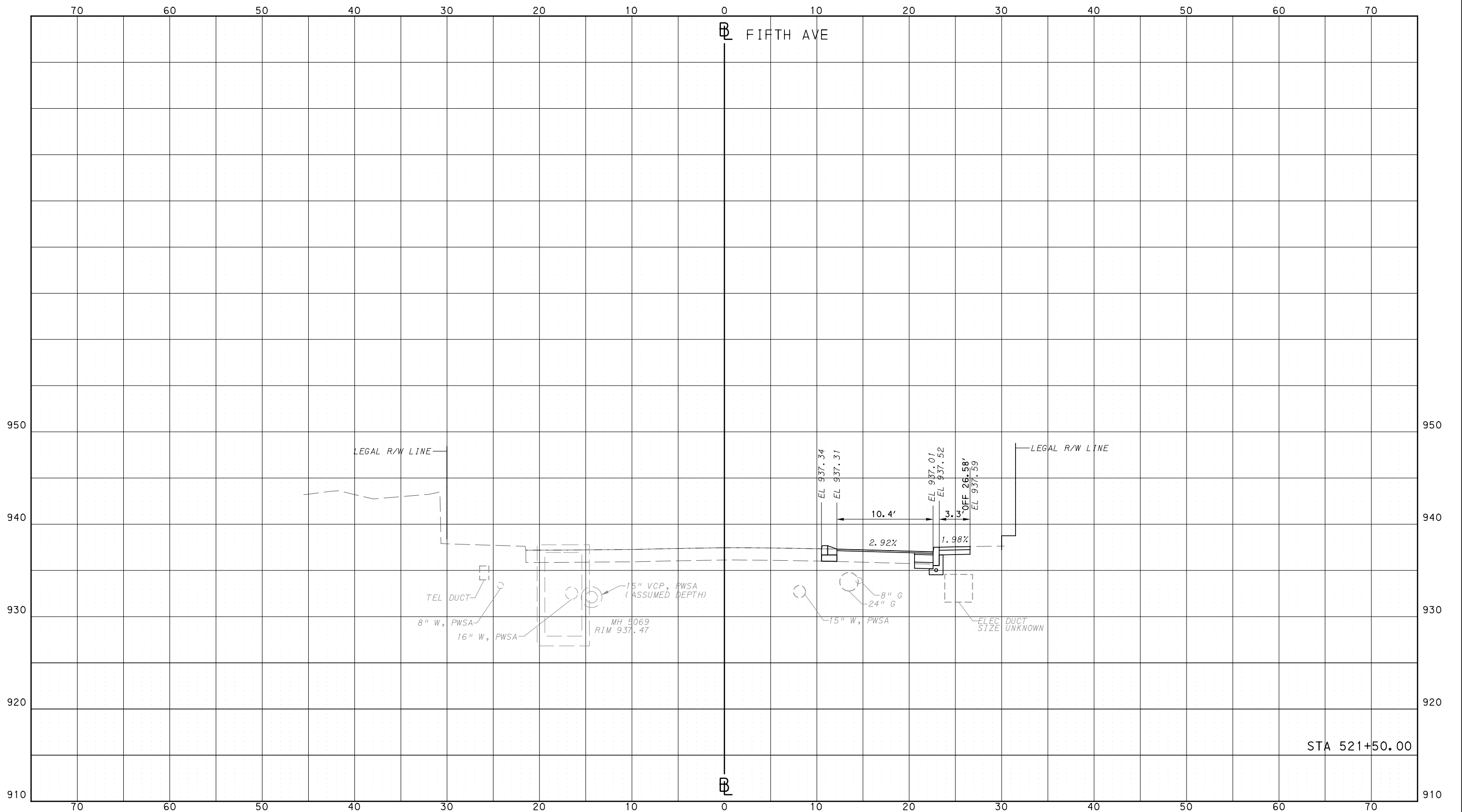


CONTRACT NO. BRT-001  
DWG. NO. XS121 SHT. 1326

PLOTTED: 3/22/2024 3:04:54 PM

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(NOT FOR CONSTRUCTION)

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IN CHARGE	LAR
DATE	05/01/24
SCALE	0 5 10 FEET

PORT AUTHORITY OF ALLEGHENY COUNTY  
PITTSBURGH PENNSYLVANIA

BUS RAPID TRANSIT  
CROSS SECTIONS  
FIFTH AVE - STA 521+50.00



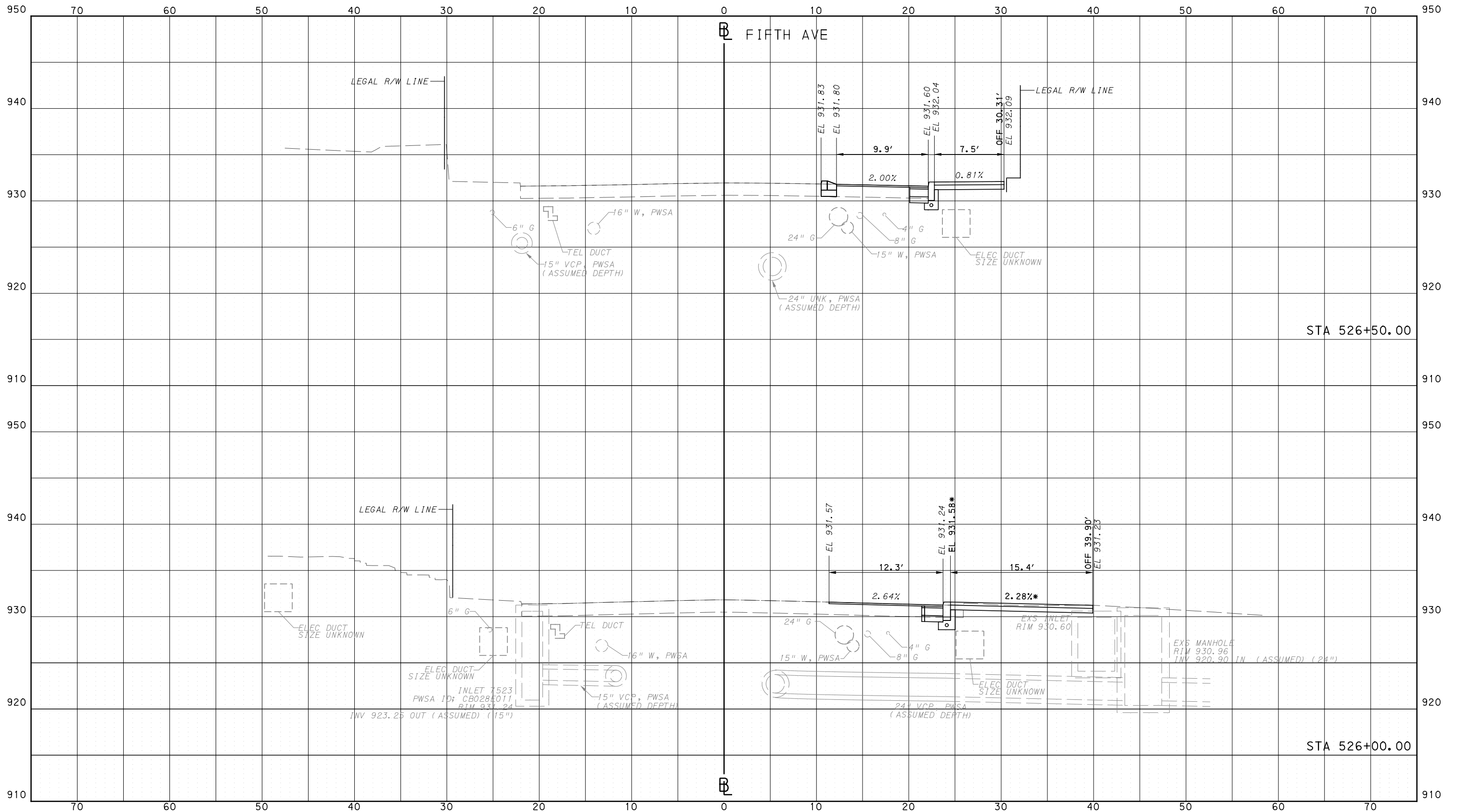
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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS

\*TOP OF CURB ELEVATION AND SIDEWALK SLOPES TO BE DETERMINED PER ITEM 01900.001 - DESIGN OF CURB RAMPS



Gulf Tower  
707 Grant Street  
5th Floor  
Pittsburgh, PA 15219

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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT**  
CROSS SECTIONS  
FIFTH AVE - STA 526+00.00 TO STA 526+50.00

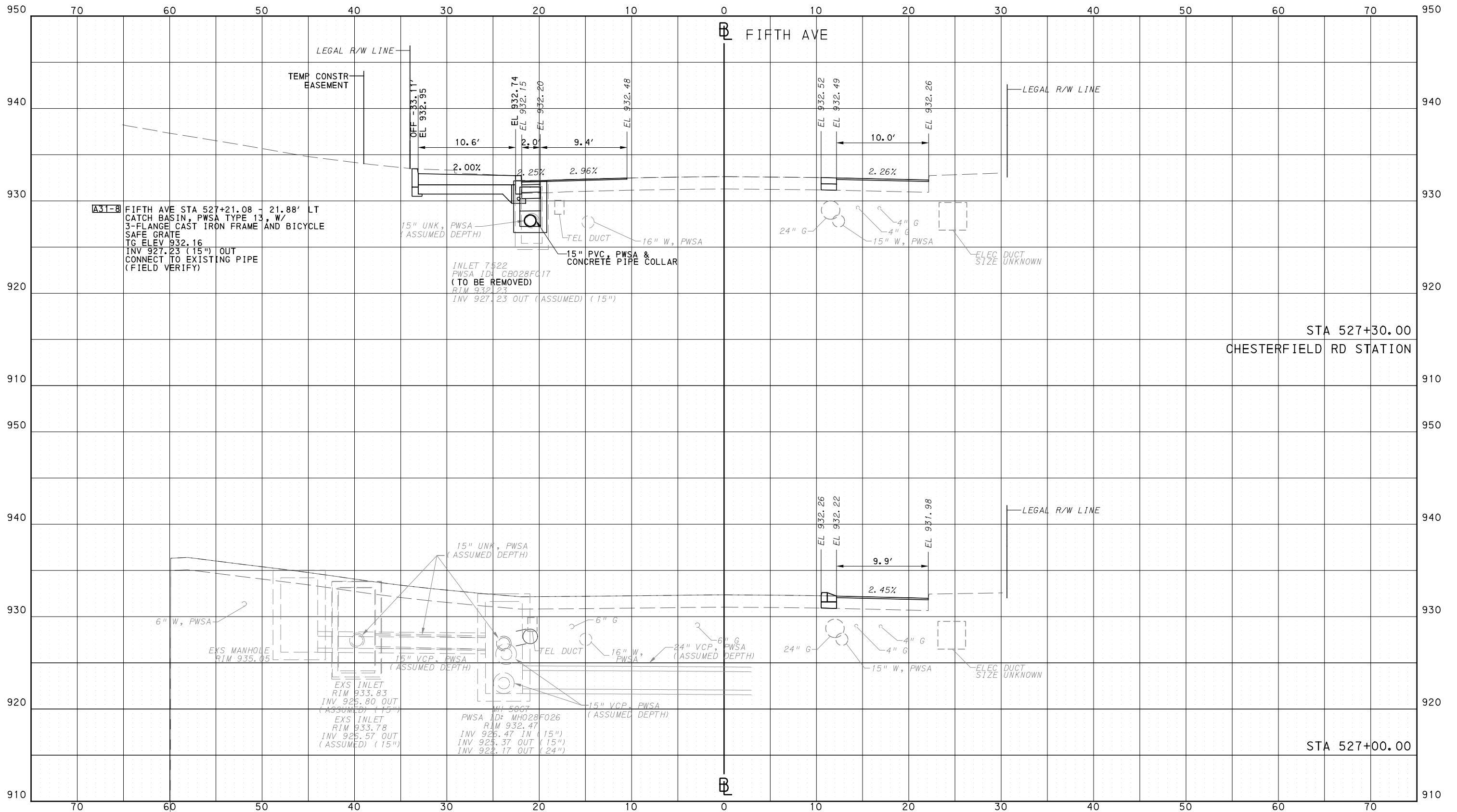
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CONTRACT NO. BRT-001  
DWG. NO. XS123 SHT. 1328

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PORT AUTHORITY OF ALLEGHENY COUNTY  
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DATE	05/01/24
SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

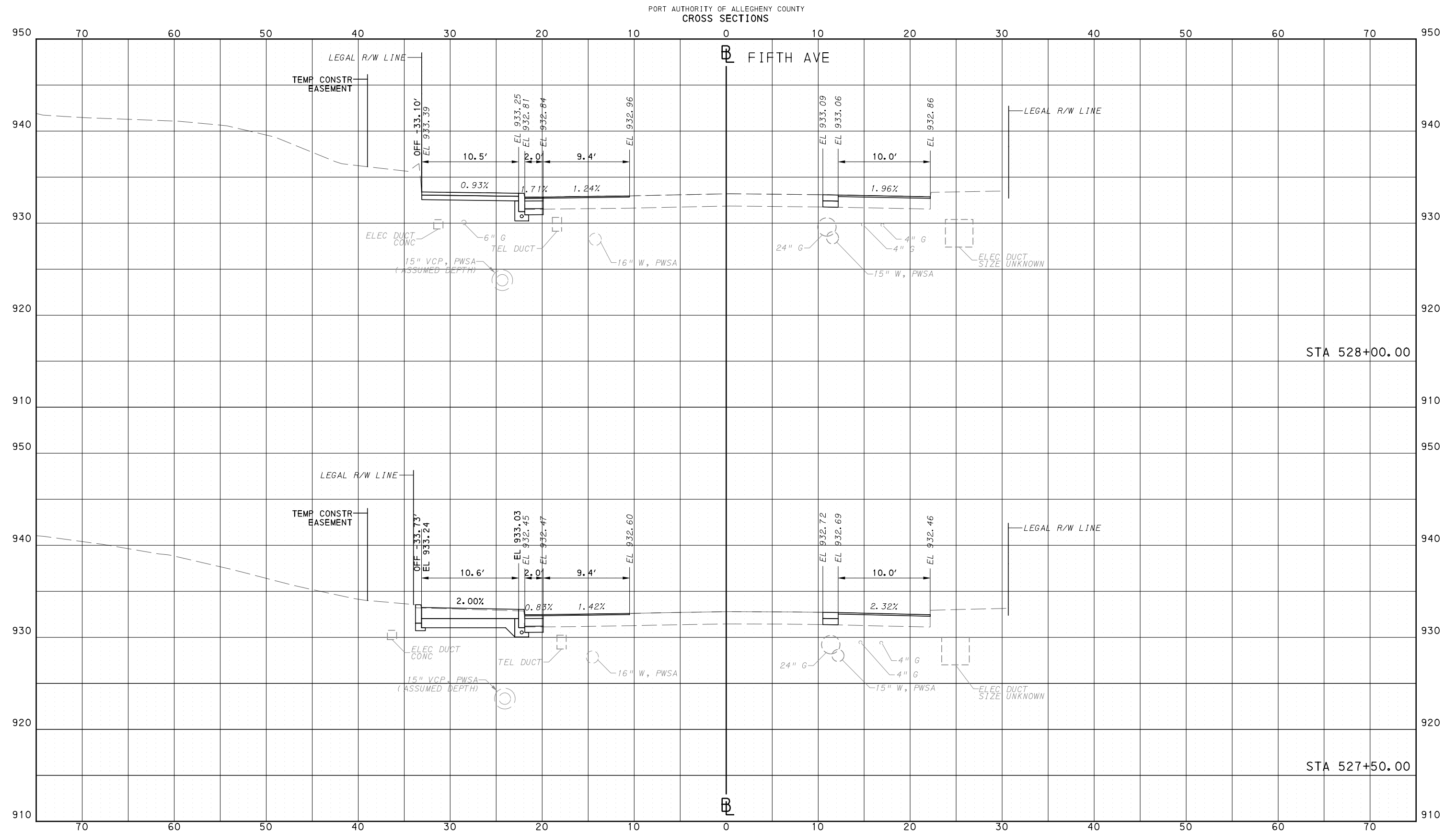
**BUS RAPID TRANSIT**  
CROSS SECTIONS  
FIFTH AVE - STA 527+00.00 TO STA 527+30.00

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CONTRACT NO. BRT-001
DWG. NO. XS124
SHT. 1329

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SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT  
CROSS SECTIONS  
FIFTH AVE - STA 527+50.00 TO STA 528+00.00**

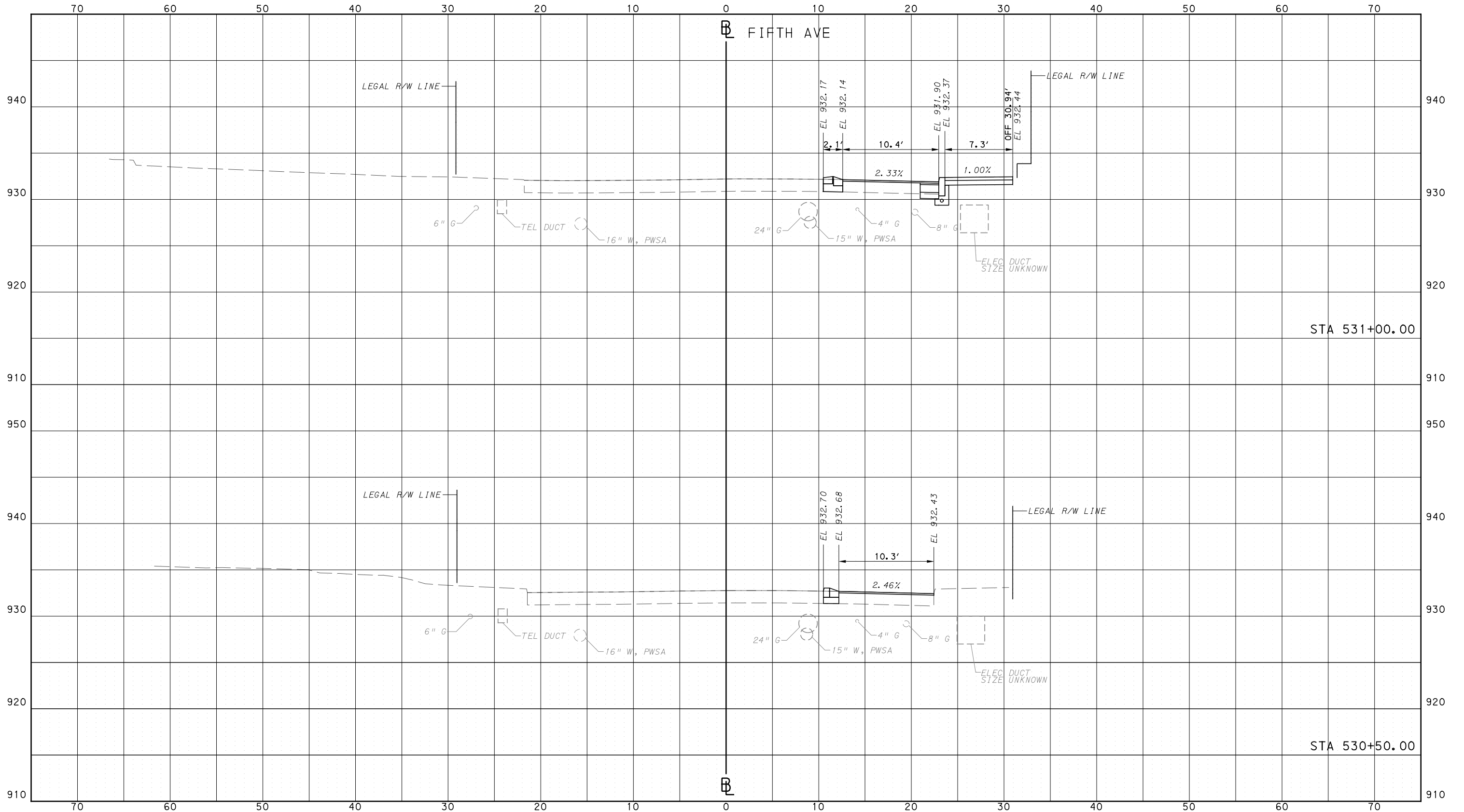
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CONTRACT NO. BRT-001	
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PORT AUTHORITY OF ALLEGHENY COUNTY  
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SCALE	0 5 10 FEET

PORT AUTHORITY OF ALLEGHENY COUNTY  
PITTSBURGH PENNSYLVANIA

BUS RAPID TRANSIT  
CROSS SECTIONS  
FIFTH AVE - STA 530+50.00 TO STA 531+00.00



CONTRACT NO. BRT-001

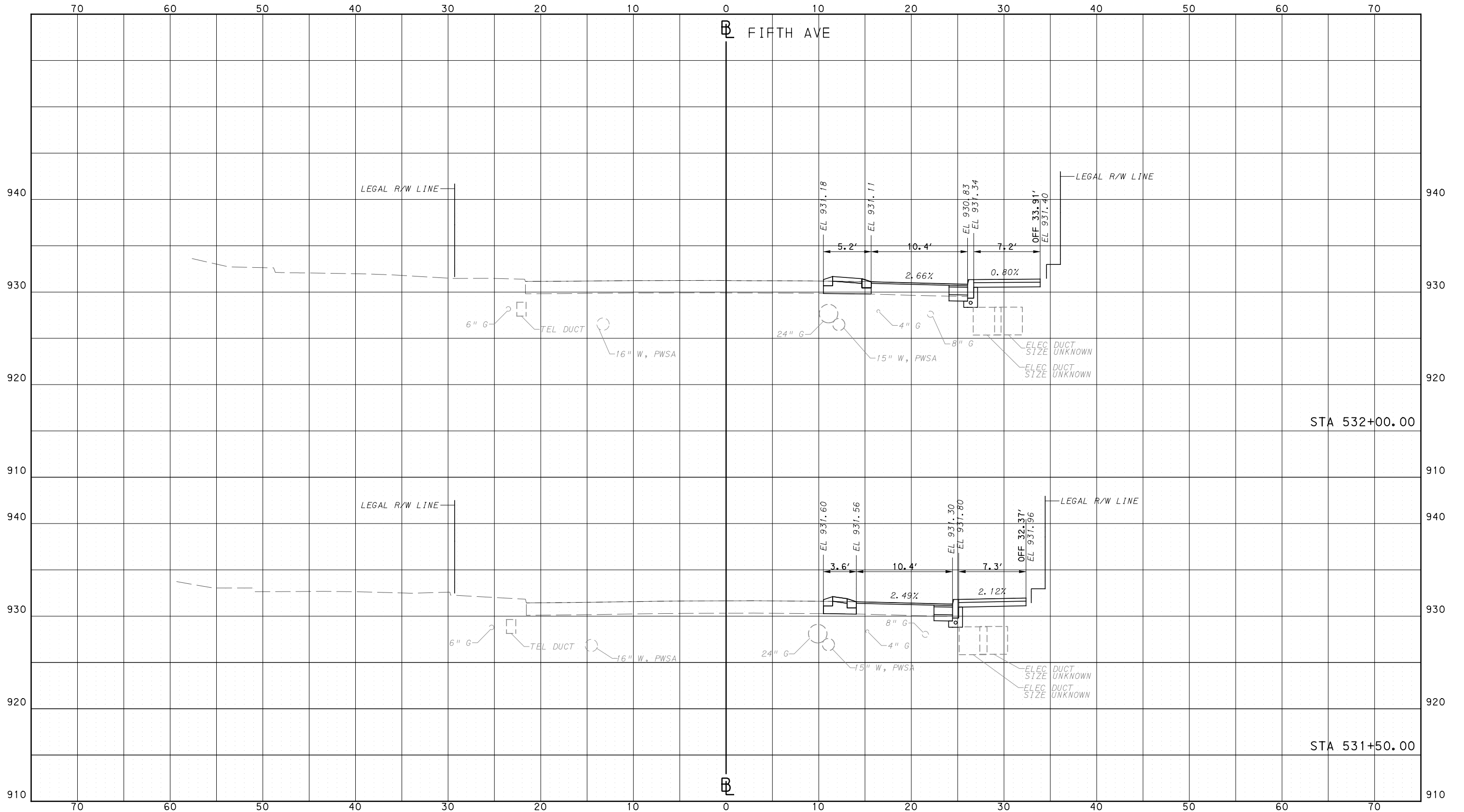
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PORT AUTHORITY OF ALLEGHENY COUNTY  
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DATE	05/01/24
SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT  
CROSS SECTIONS  
FIFTH AVE - STA 531+50.00 TO STA 532+00.00**

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CONTRACT NO. BRT-001  
DWG. NO. XS127 SHT. 1332

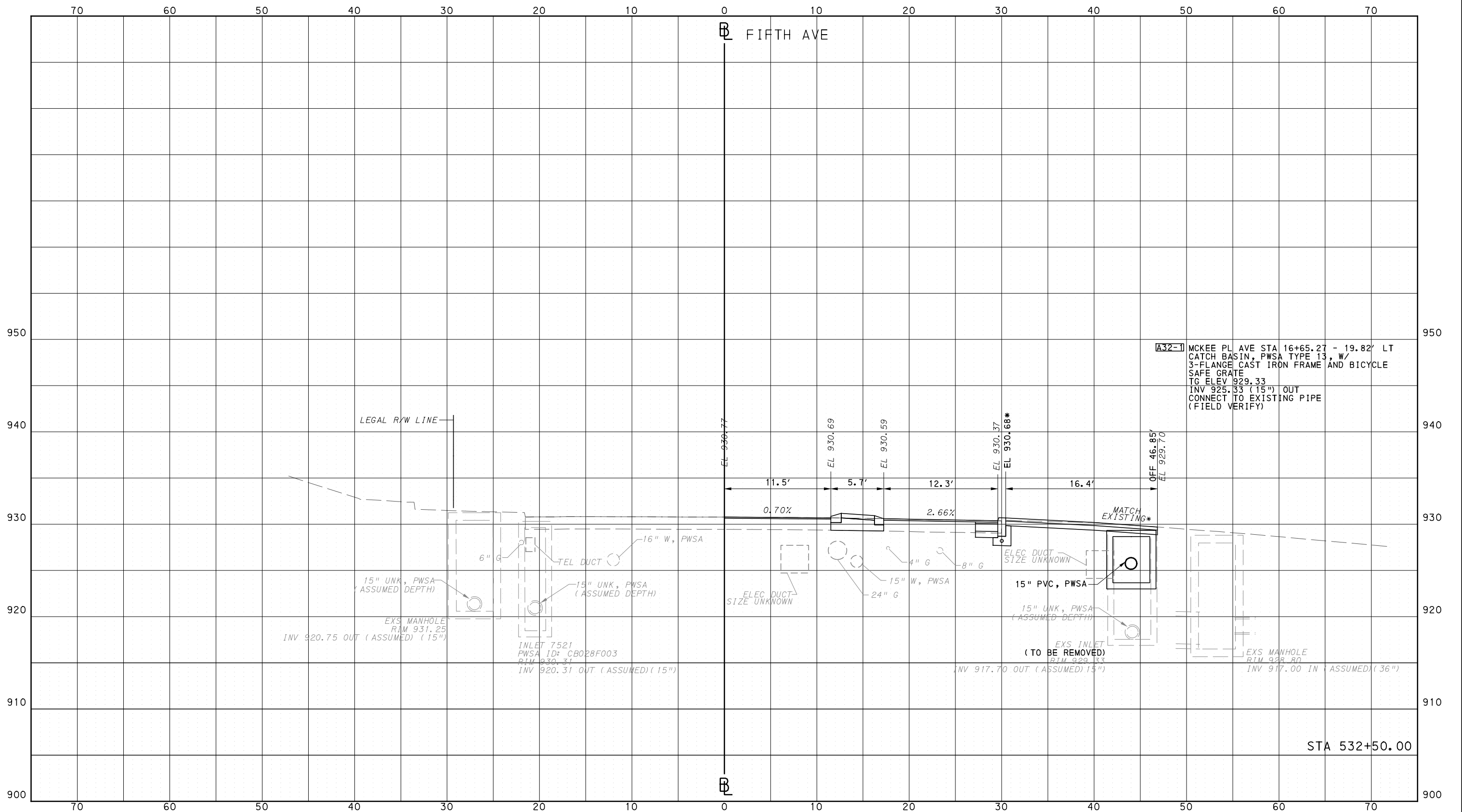


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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS

\*TOP OF CURB ELEVATION AND SIDEWALK SLOPES TO BE DETERMINED PER ITEM 01900.001 - DESIGN OF CURB RAMPS



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IN CHARGE	LAR
DATE	05/01/24
SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT  
CROSS SECTIONS  
FIFTH AVE - STA 532+50.00**

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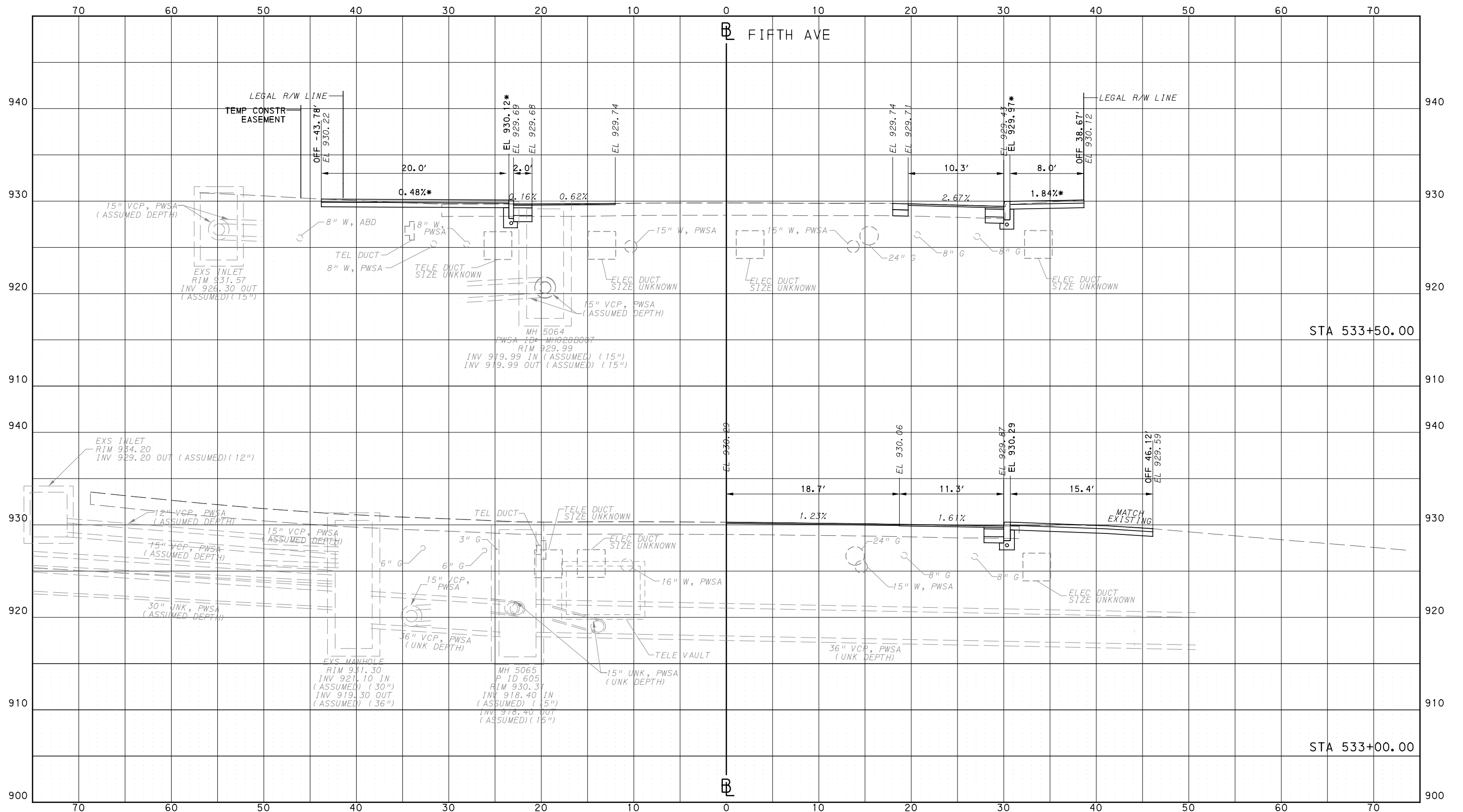
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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS

\*TOP OF CURB ELEVATION AND SIDEWALK SLOPES TO BE DETERMINED PER ITEM 01900.001 - DESIGN OF CURB RAMPS



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Pittsburgh, PA 15219

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IN CHARGE	LAR
DATE	05/01/24
SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT CROSS SECTIONS**  
FIFTH AVE - STA 533+00.00 TO STA 533+50.00

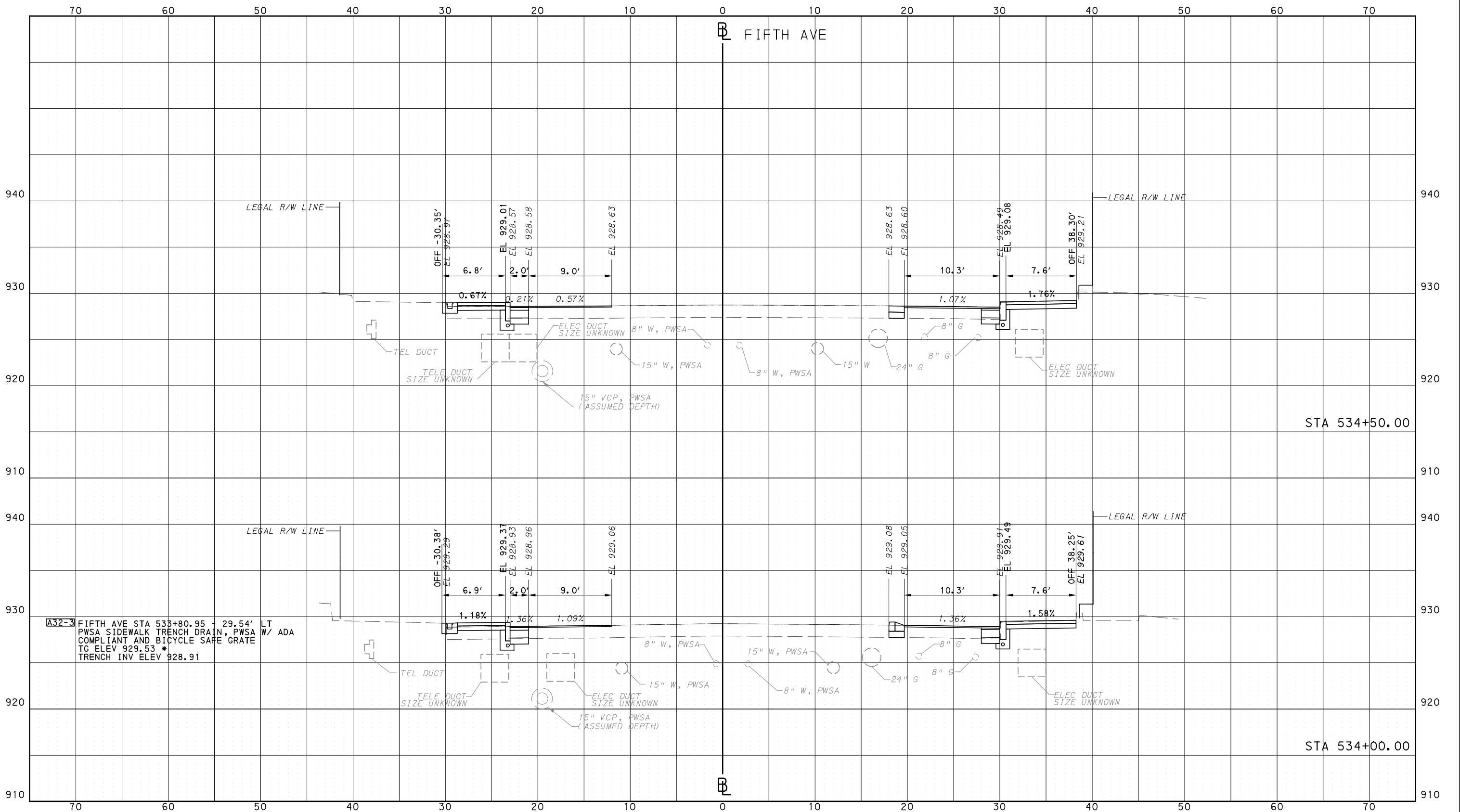
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CONTRACT NO. BRT-001  
DWG. NO. XS129 SHT. 1334

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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS



**A32-3** FIFTH AVE STA 533+80.95 - 29.54' LT  
 PWSA SIDEWALK TRENCH DRAIN, PWSA  
 COMPLIANT AND BICYCLE SAFE GRATE  
 TG ELEV 929.53 \*  
 TRENCH INV ELEV 928.91

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 707 Grant Street  
 5th Floor  
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**(NOT FOR CONSTRUCTION)**

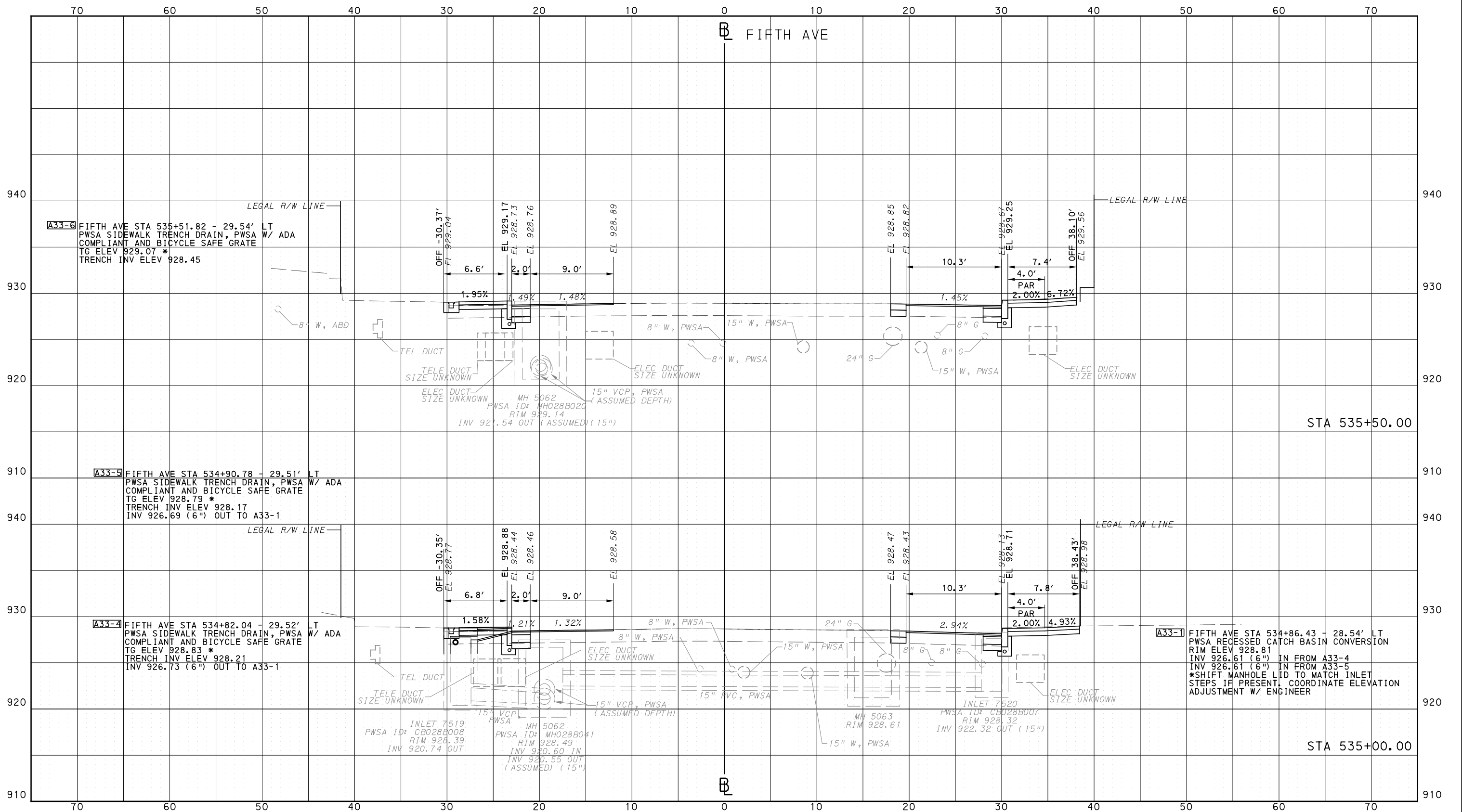
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IN CHARGE	LAR
DATE	05/01/24
SCALE	0 5 10 FEET

<b>PORT AUTHORITY OF ALLEGHENY COUNTY</b> PITTSBURGH PENNSYLVANIA		
<b>BUS RAPID TRANSIT</b> <b>CROSS SECTIONS</b> <b>FIFTH AVE - STA 534+00.00 TO STA 534+50.00</b>		
	<b>CONTRACT NO. BRT-001</b>	
DWG. NO. XS130	SHT. 1335	

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DATE	05/01/24
SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT  
CROSS SECTIONS**  
FIFTH AVE - STA 535+00.00 TO STA 535+50.00

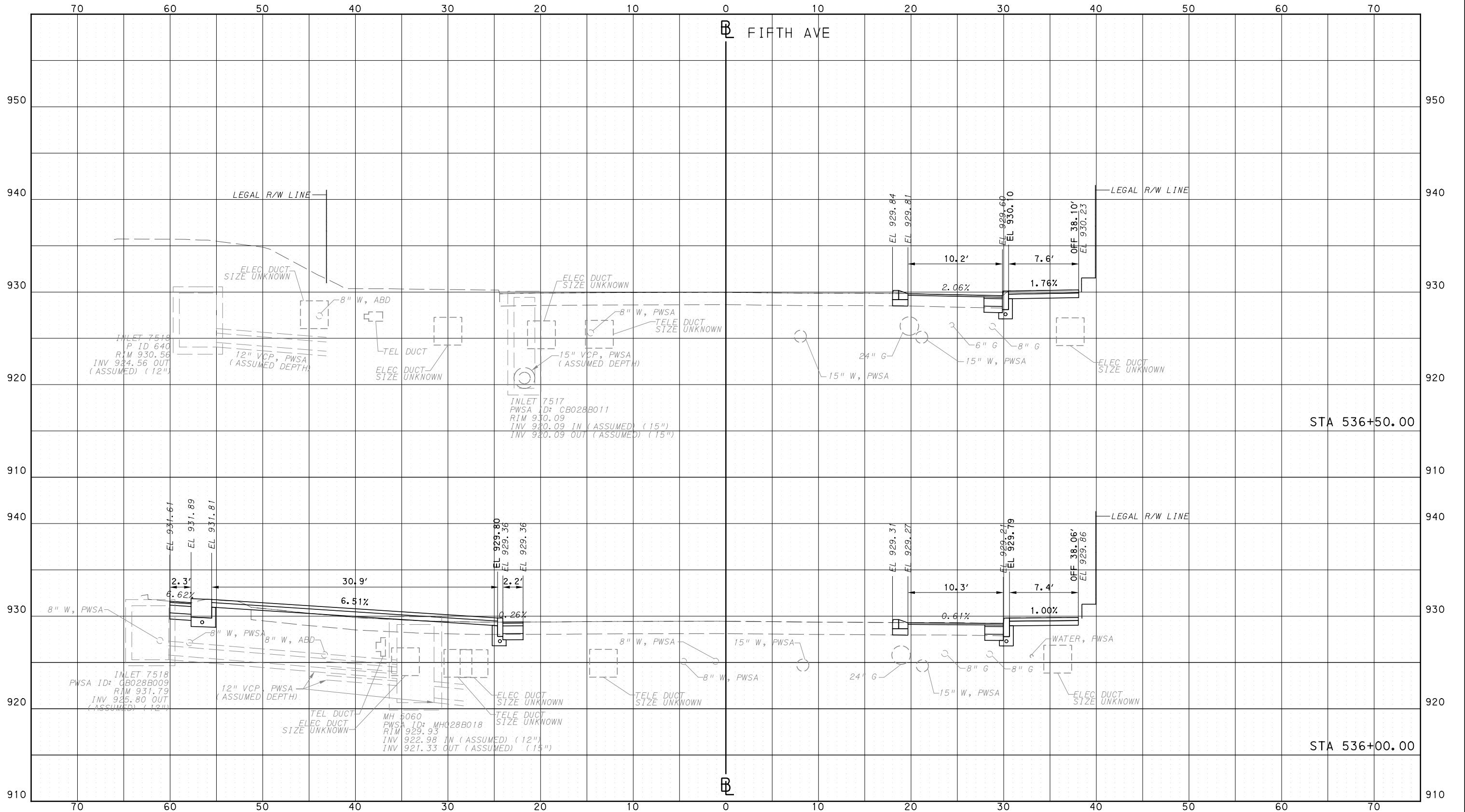
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CONTRACT NO. BRT-001	
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PORT AUTHORITY OF ALLEGHENY COUNTY  
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Pittsburgh, PA 15219

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DATE	05/01/24
SCALE	0 5 10 FEET

PORT AUTHORITY OF ALLEGHENY COUNTY  
PITTSBURGH PENNSYLVANIA

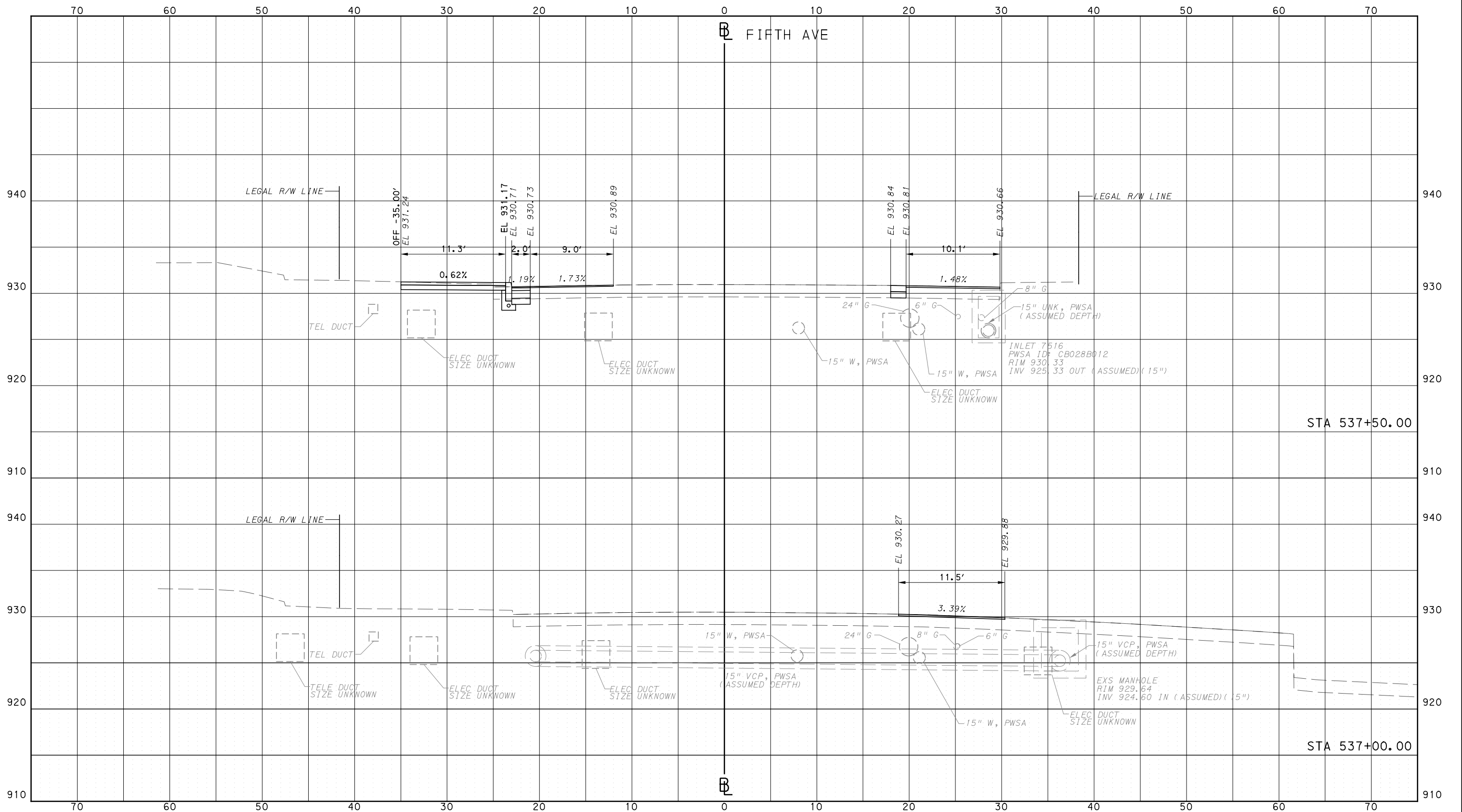
BUS RAPID TRANSIT  
CROSS SECTIONS  
FIFTH AVE - STA 536+00.00 TO STA 536+50.00

**Port Authority** connecting people to life  
CONTRACT NO. BRT-001  
DWG. NO. XS132 SHT. 1337

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PORT AUTHORITY OF ALLEGHENY COUNTY  
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SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT**  
CROSS SECTIONS  
FIFTH AVE - STA 537+00.00 TO STA 537+50.00

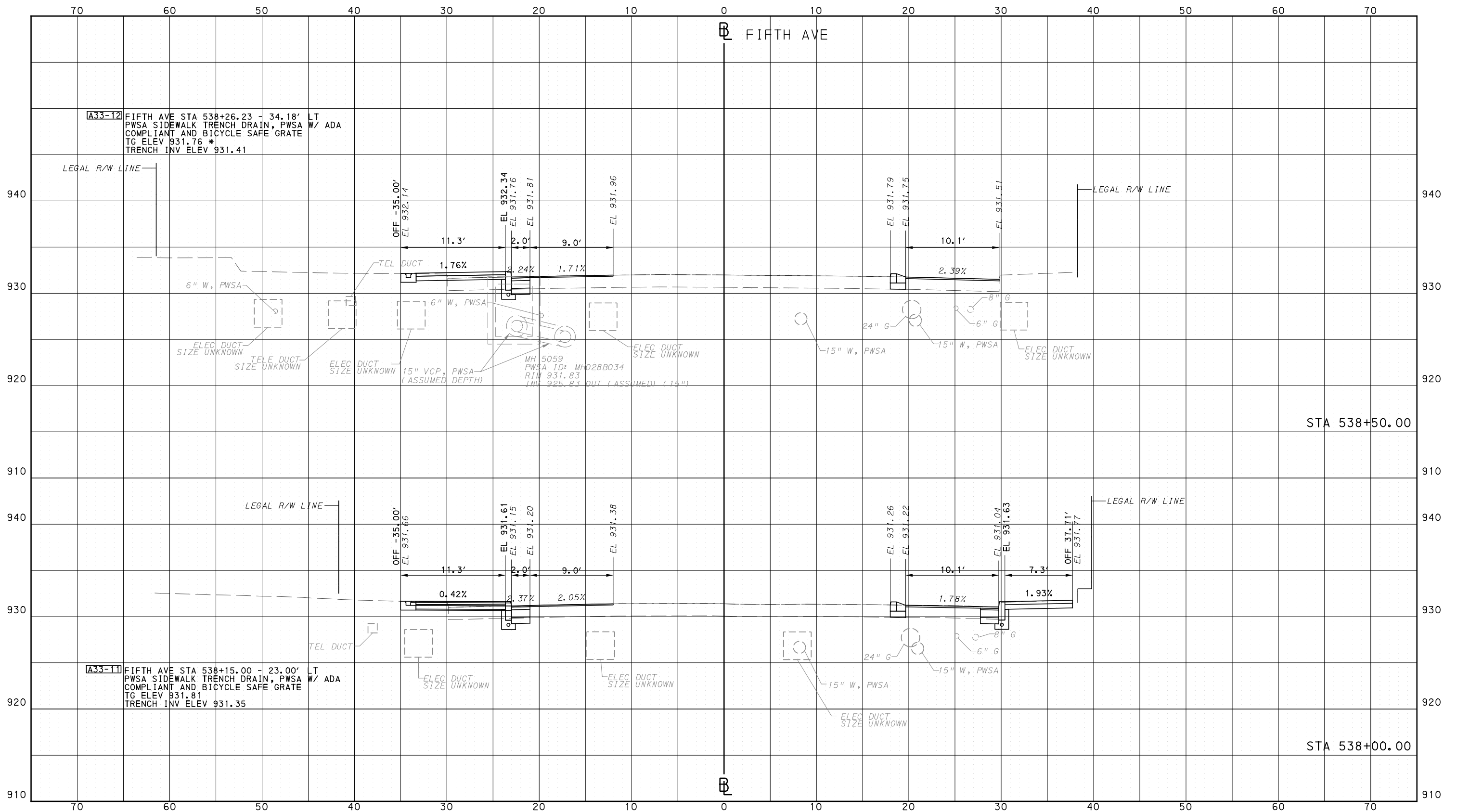
**Port Authority**  
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CONTRACT NO. BRT-001
DWG. NO. XS133
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PORT AUTHORITY OF ALLEGHENY COUNTY  
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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
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**BUS RAPID TRANSIT CROSS SECTIONS**  
FIFTH AVE - STA 538+00.00 TO STA 538+50.00

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CONTRACT NO. BRT-001  
DWG. NO. XS134 SHT. 1339

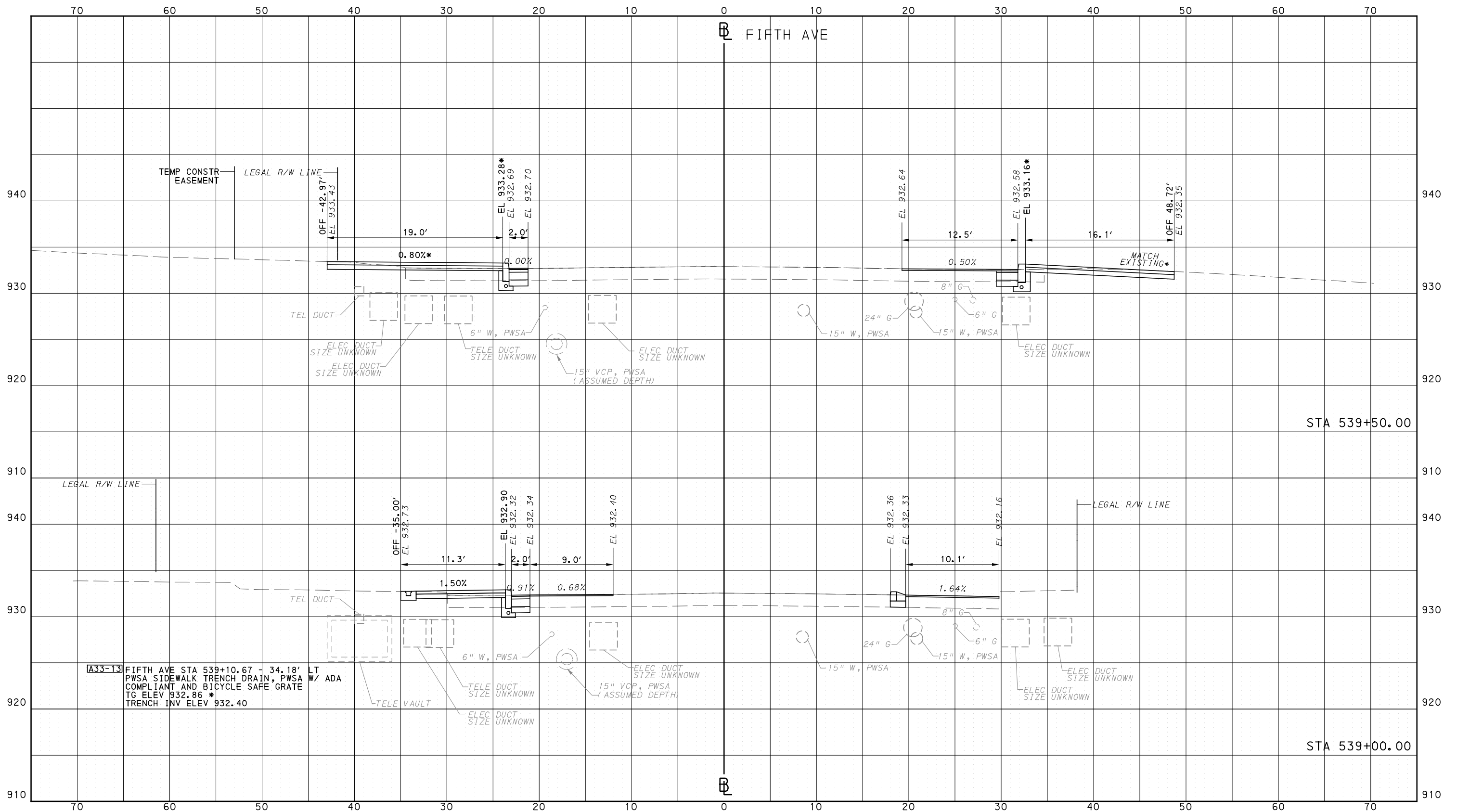


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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS

\*TOP OF CURB ELEVATION AND SIDEWALK SLOPES TO BE DETERMINED PER ITEM 01900.001 - DESIGN OF CURB RAMPS



**A33-13** FIFTH AVE STA 539+10.67 - 34.18' LT  
 PWSA SIDEWALK TRENCH DRAIN, PWSA  
 COMPLIANT AND BICYCLE SAFE GRATE W/ ADA  
 TG ELEV 932.86 \*  
 TRENCH INV ELEV 932.40

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 Gulf Tower  
 707 Grant Street  
 5th Floor  
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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
 PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT  
 CROSS SECTIONS  
 FIFTH AVE - STA 539+00.00 TO STA 539+50.00**

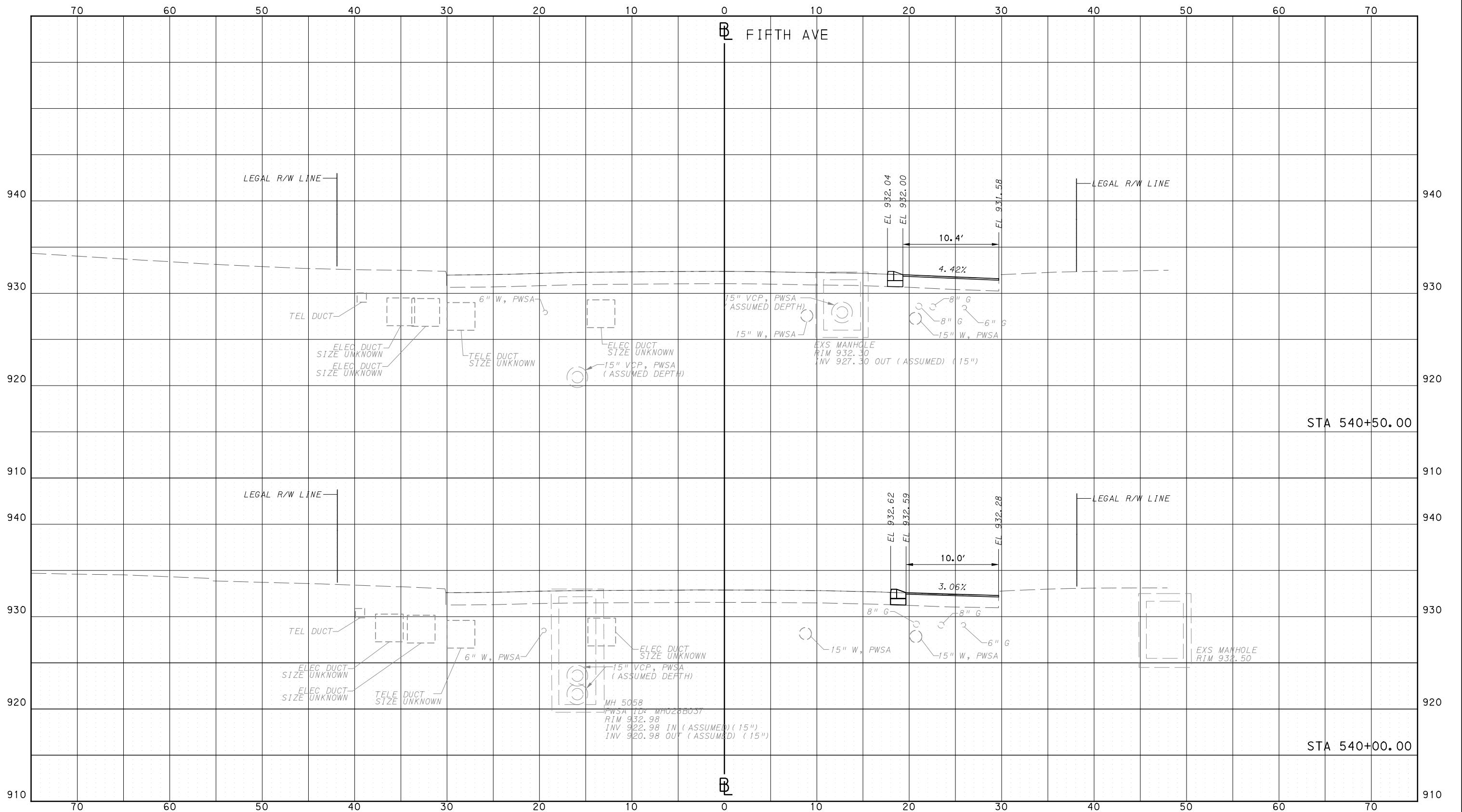
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DWG. NO. XS135
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PORT AUTHORITY OF ALLEGHENY COUNTY  
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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT**  
CROSS SECTIONS  
FIFTH AVE - STA 540+00.00 TO STA 540+50.00

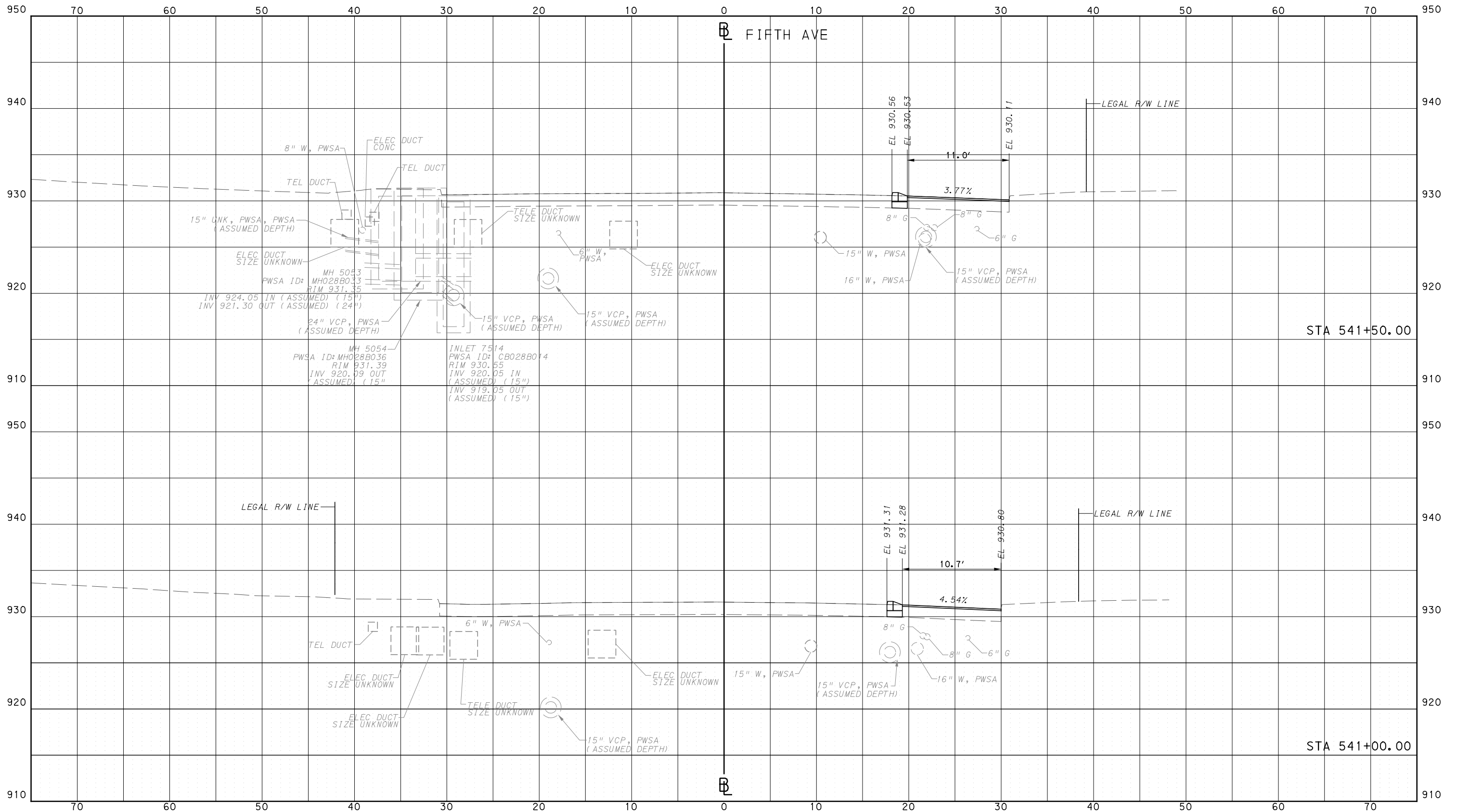
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CONTRACT NO. BRT-001  
DWG. NO. XS136 SHT. 1341

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PORT AUTHORITY OF ALLEGHENY COUNTY  
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IN CHARGE	LAR
DATE	05/01/24
SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
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**BUS RAPID TRANSIT**  
CROSS SECTIONS  
FIFTH AVE - STA 541+00.00 TO STA 541+50.00

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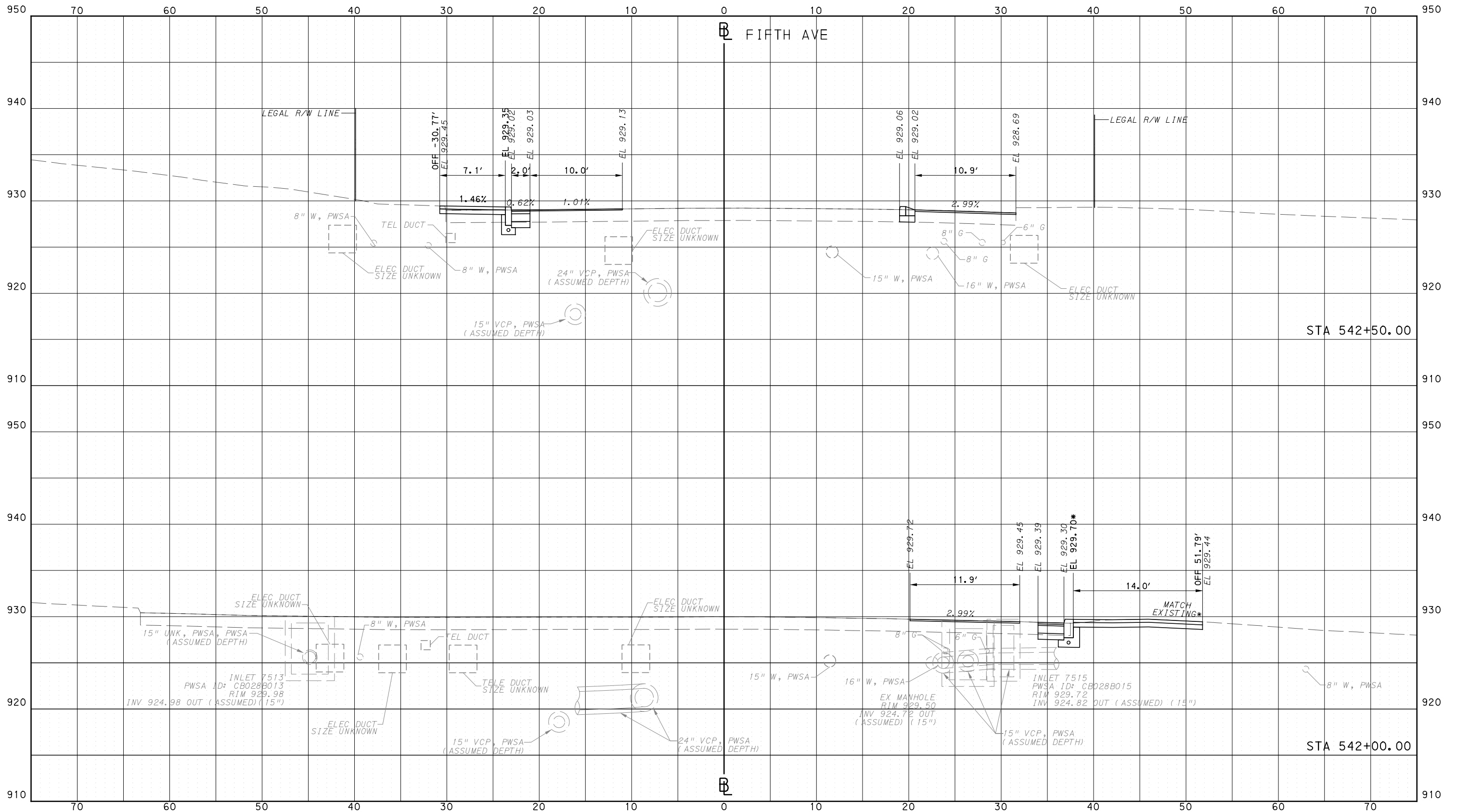
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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS

\*TOP OF CURB ELEVATION AND SIDEWALK SLOPES TO BE DETERMINED PER ITEM 01900.001 - DESIGN OF CURB RAMPS



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IN CHARGE	LAR
DATE	05/01/24
SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT  
CROSS SECTIONS  
FIFTH AVE - STA 542+00.00 TO STA 542+50.00**

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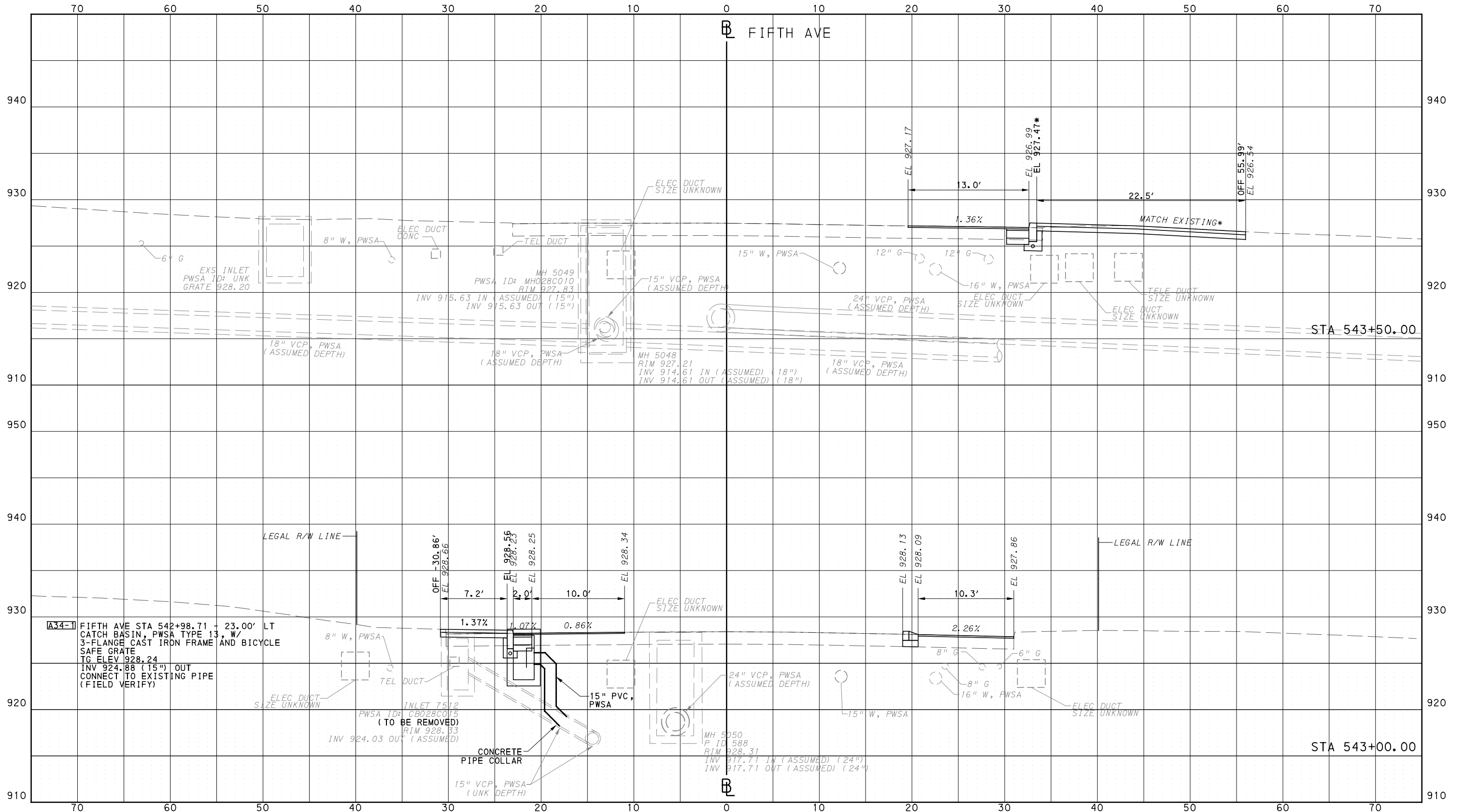
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DWG. NO. XS138
SHT. 1343

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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS

\*TOP OF CURB ELEVATION AND SIDEWALK SLOPES TO BE  
DETERMINED PER ITEM 01900.001 - DESIGN OF CURB RAMPS



Gulf Tower  
707 Grant Street  
5th Floor  
Pittsburgh, PA 15219

NO.	DATE	DESCRIPTION
REVISIONS		

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(NOT FOR CONSTRUCTION)

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DATE	05/01/24
SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT  
CROSS SECTIONS**  
FIFTH AVE - STA 543+00.00 TO STA 543+50.00

**Port Authority** connecting people to life™

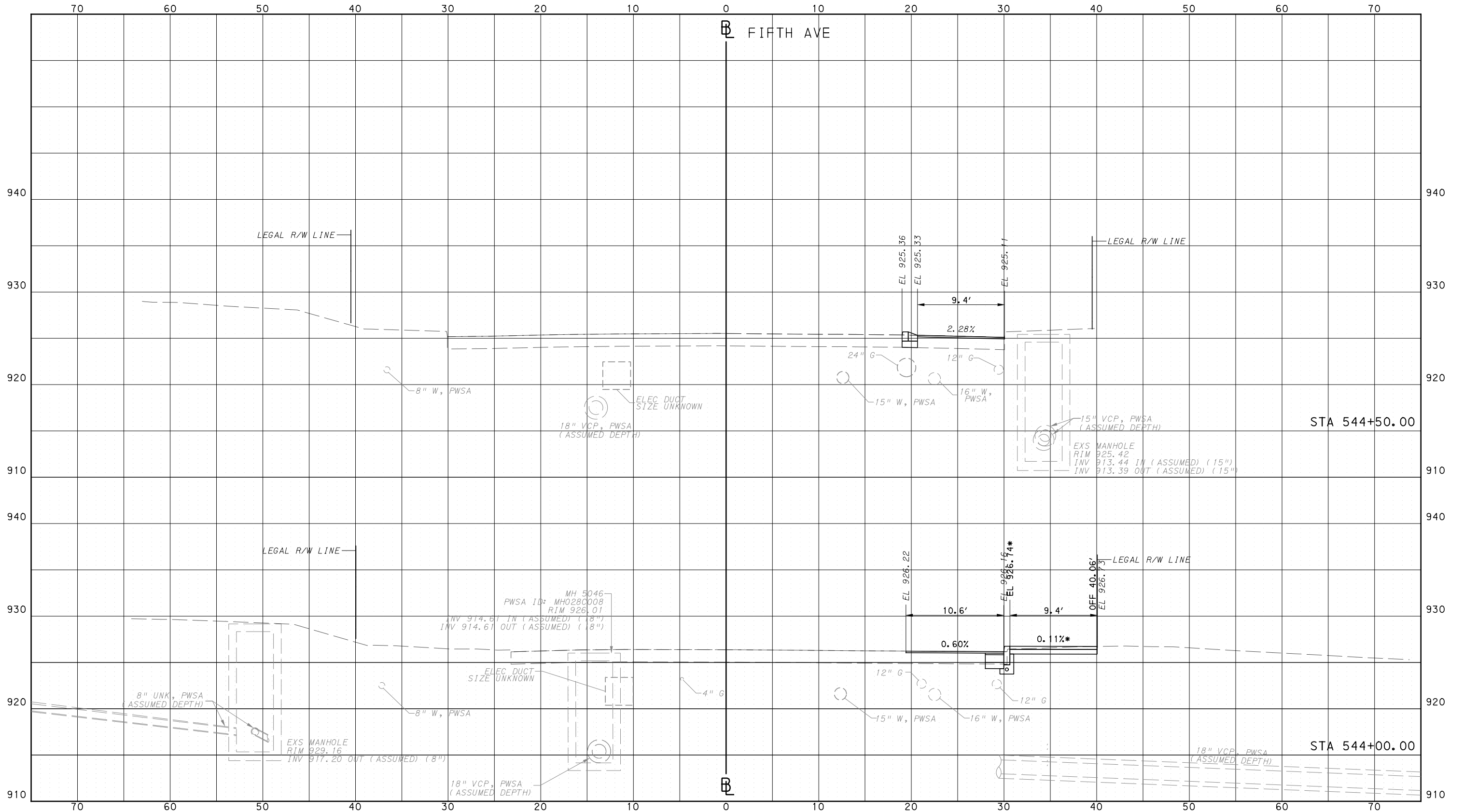
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DWG. NO. XS139 SHT. 1344

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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS

\*TOP OF CURB ELEVATION AND SIDEWALK SLOPES TO BE DETERMINED PER ITEM 01900.001 - DESIGN OF CURB RAMPS



Gulf Tower  
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5th Floor  
Pittsburgh, PA 15219

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DATE	05/01/24
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PORT AUTHORITY OF ALLEGHENY COUNTY  
PITTSBURGH PENNSYLVANIA

BUS RAPID TRANSIT  
CROSS SECTIONS  
FIFTH AVE - STA 544+00.00 TO STA 544+50.00

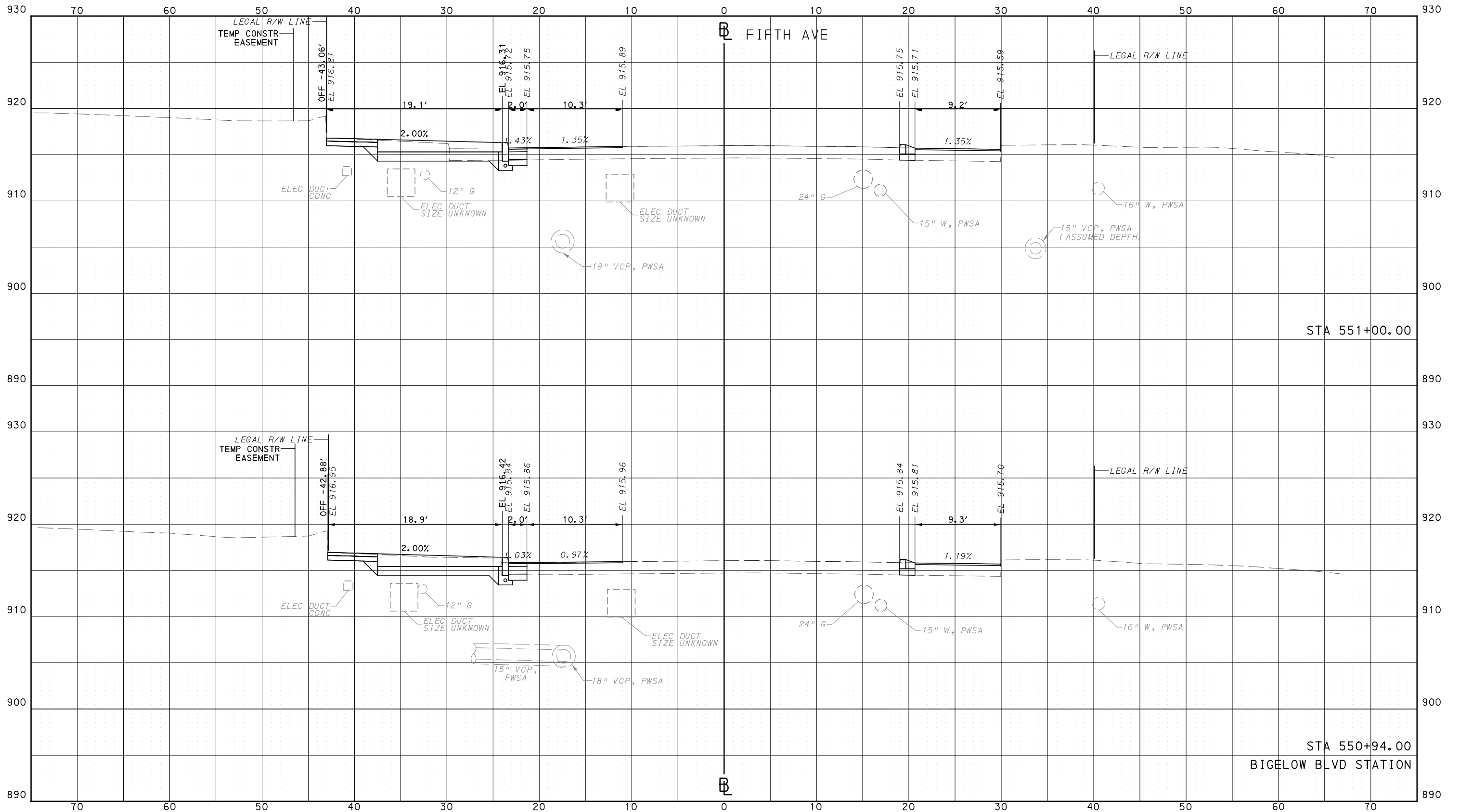


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PORT AUTHORITY OF ALLEGHENY COUNTY  
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IN CHARGE	LAR
DATE	05/01/24
SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT**  
CROSS SECTIONS  
FIFTH AVE - STA 550+94.00 TO STA 551+00.00

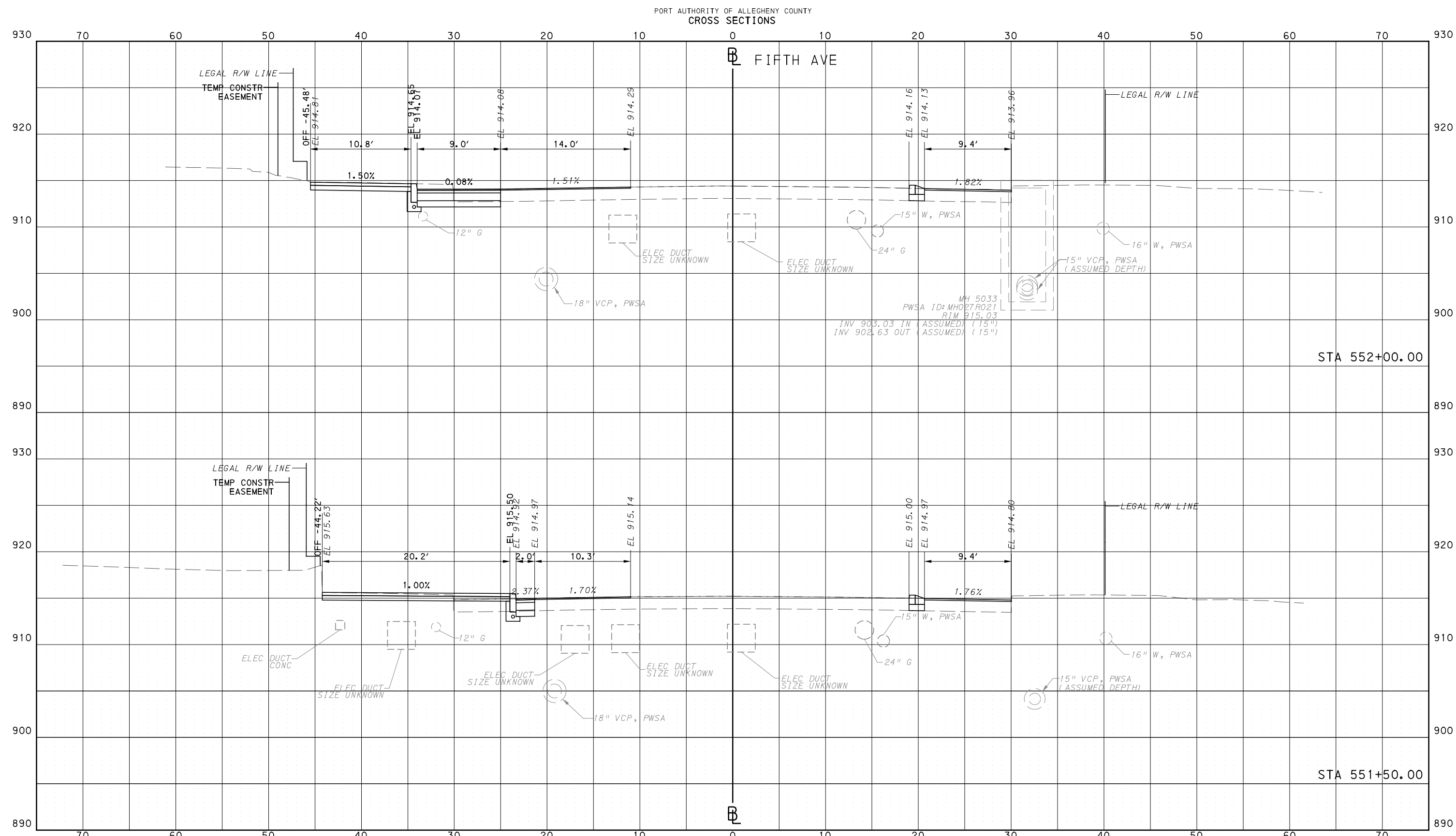
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DWG. NO. XS141 SHT. 1346



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**(NOT FOR CONSTRUCTION)**

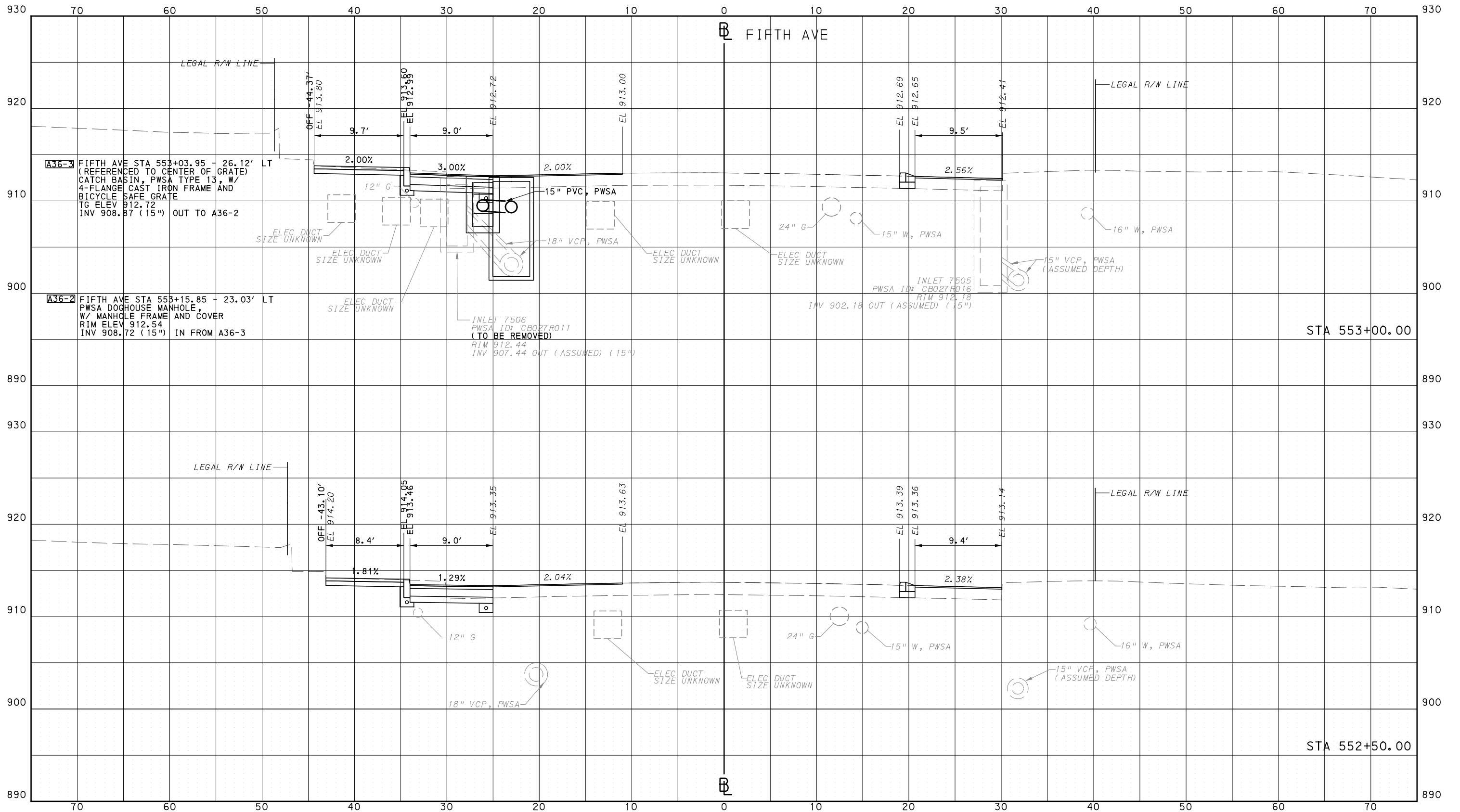
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IN CHARGE	LAR
DATE	05/01/24
SCALE	0 5 10 FEET

<b>PORT AUTHORITY OF ALLEGHENY COUNTY</b> PITTSBURGH PENNSYLVANIA	
<b>BUS RAPID TRANSIT</b> CROSS SECTIONS FIFTH AVE - STA 551+50.00 TO STA 552+00.00	
<b>Port Authority</b> connecting people to life	CONTRACT NO. BRT-001
DWG. NO. XS142	SHT. 1347

PLOTTED: 3/22/2024 3:07:43 PM

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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS



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Pittsburgh, PA 15219

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DATE	05/01/24
SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT**  
CROSS SECTIONS  
FIFTH AVE - STA 552+50.00 TO STA 553+00.00

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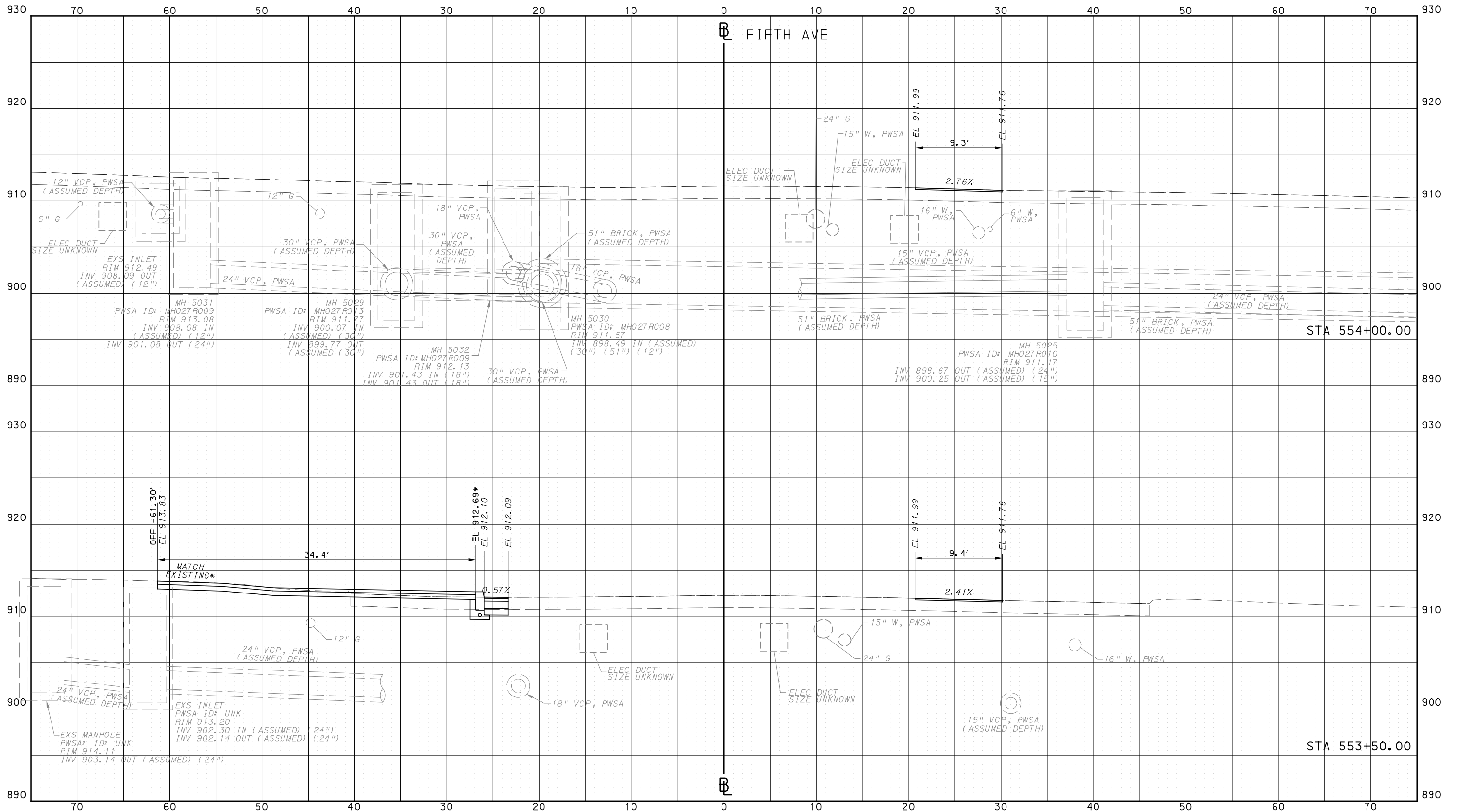
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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS

\*TOP OF CURB ELEVATION AND SIDEWALK SLOPES TO BE DETERMINED PER ITEM 01900.001 - DESIGN OF CURB RAMPS



**AECOM**  
 Gulf Tower  
 707 Grant Street  
 5th Floor  
 Pittsburgh, PA 15219

NO.	DATE	DESCRIPTION
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DESIGNED	AGO
DRAWN	AGO
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DATE	05/01/24
SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
 PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT**  
 CROSS SECTIONS  
 FIFTH AVE - STA 553+50.00 TO STA 554+00.00

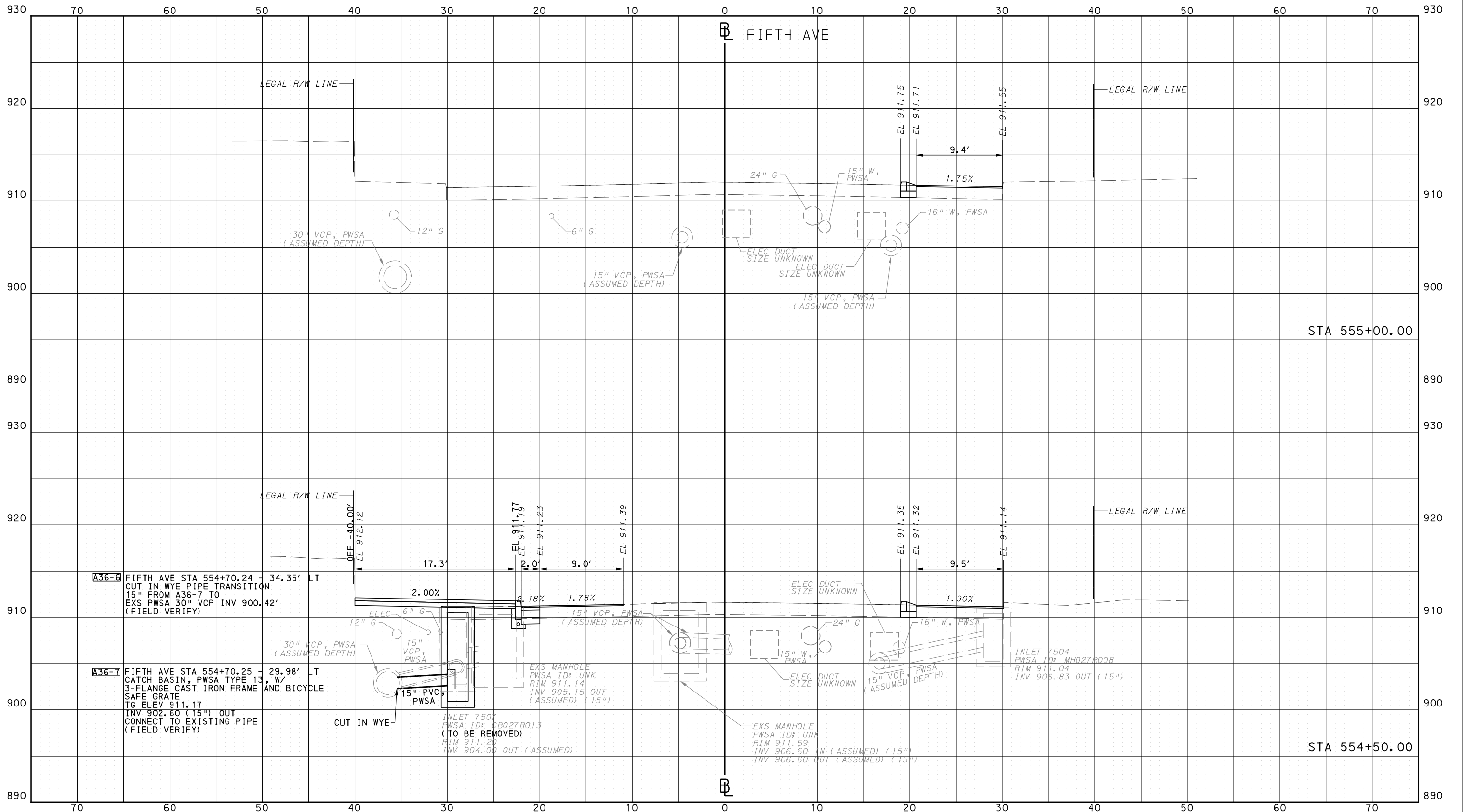
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CONTRACT NO. BRT-001  
 DWG. NO. XS144 SHT. 1349

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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS



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DESIGNED	AGO
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IN CHARGE	LAR
DATE	05/01/24
SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT**  
CROSS SECTIONS  
FIFTH AVE - STA 554+50.00 TO STA 555+00.00

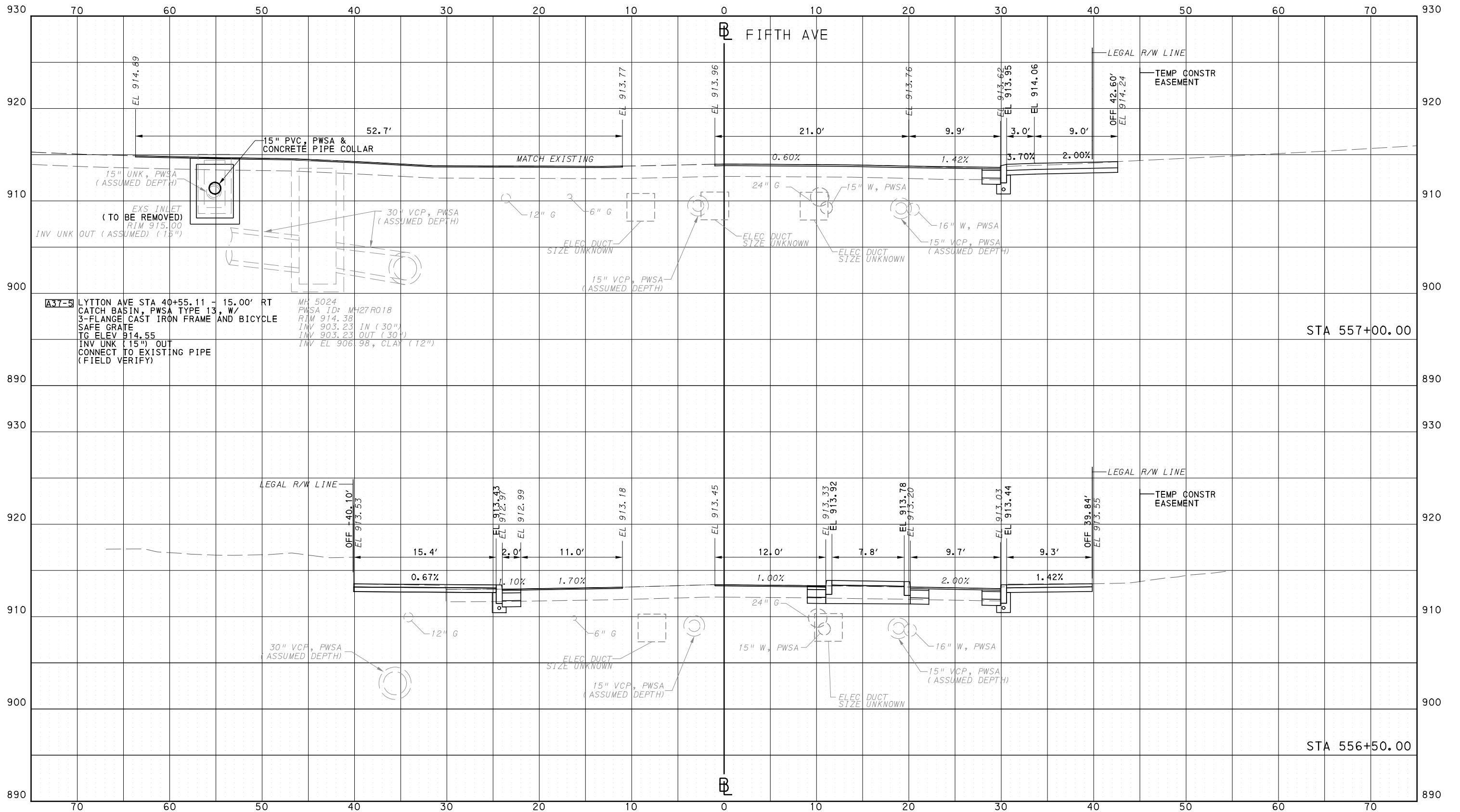
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PORT AUTHORITY OF ALLEGHENY COUNTY  
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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT  
CROSS SECTIONS  
FIFTH AVE - STA 556+50.00 TO STA 557+00.00**

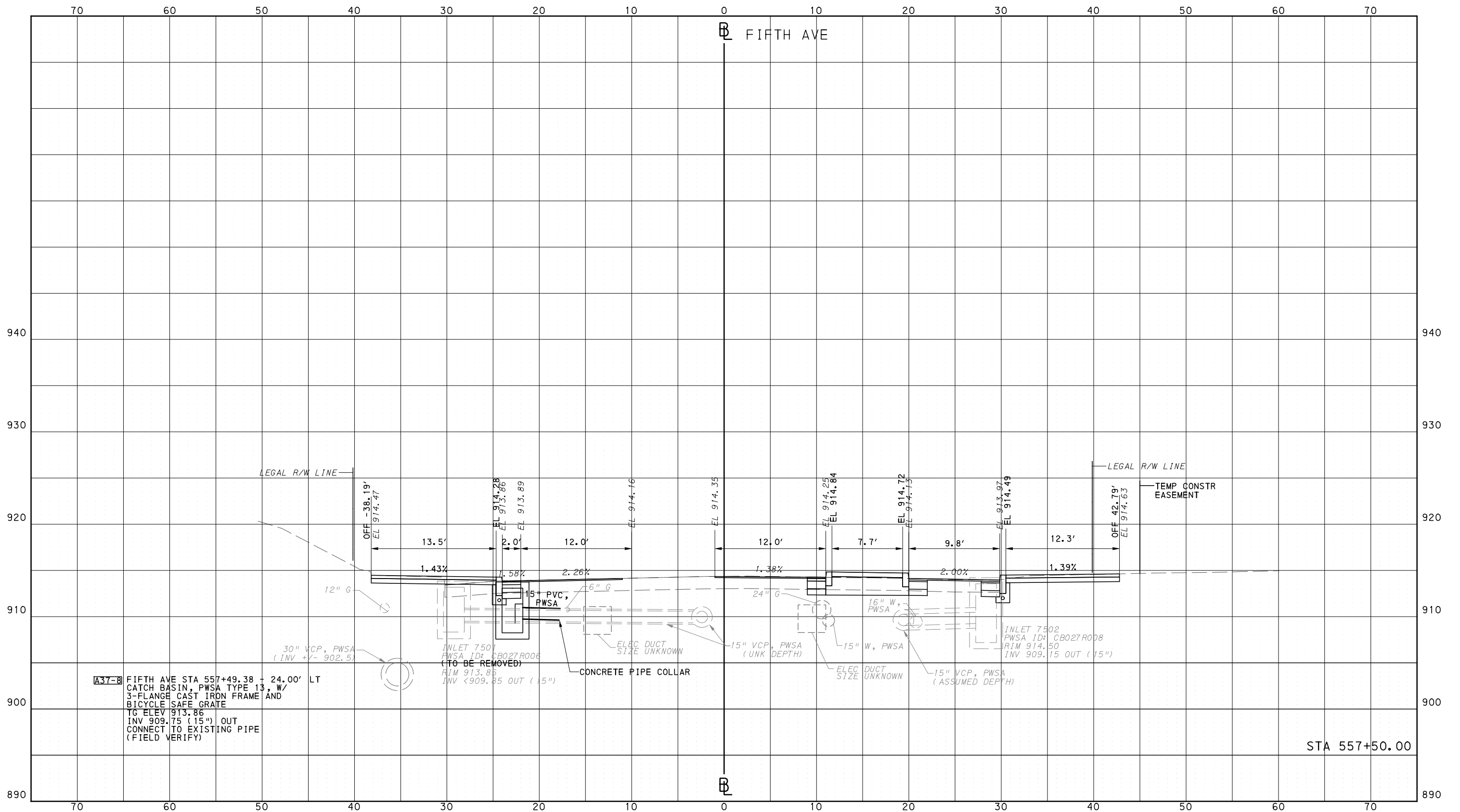
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CONTRACT NO. BRT-001  
DWG. NO. XS146 SHT. 1351

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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS



**A37-8** FIFTH AVE STA 557+49.38 + 24.00' LT  
CATCH BASIN, PWSA TYPE 13, W/  
3-FLANGE CAST IRON FRAME AND  
BICYCLE SAFE GRATE  
TO ELEV 913.86  
INV 909.75 (15") OUT  
CONNECT TO EXISTING PIPE  
(FIELD VERIFY)

INLET 7502  
PWSA ID: CB027R008  
RIM 914.50  
INV 909.15 OUT (15")  
**(TO BE REMOVED)**

CONCRETE PIPE COLLAR



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707 Grant Street  
5th Floor  
Pittsburgh, PA 15219

NO.	DATE	DESCRIPTION
REVISIONS		

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**(NOT FOR CONSTRUCTION)**

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CHECKED	BFS
IN CHARGE	LAR
DATE	05/01/24
SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT  
CROSS SECTIONS  
FIFTH AVE - STA 557+50.00**

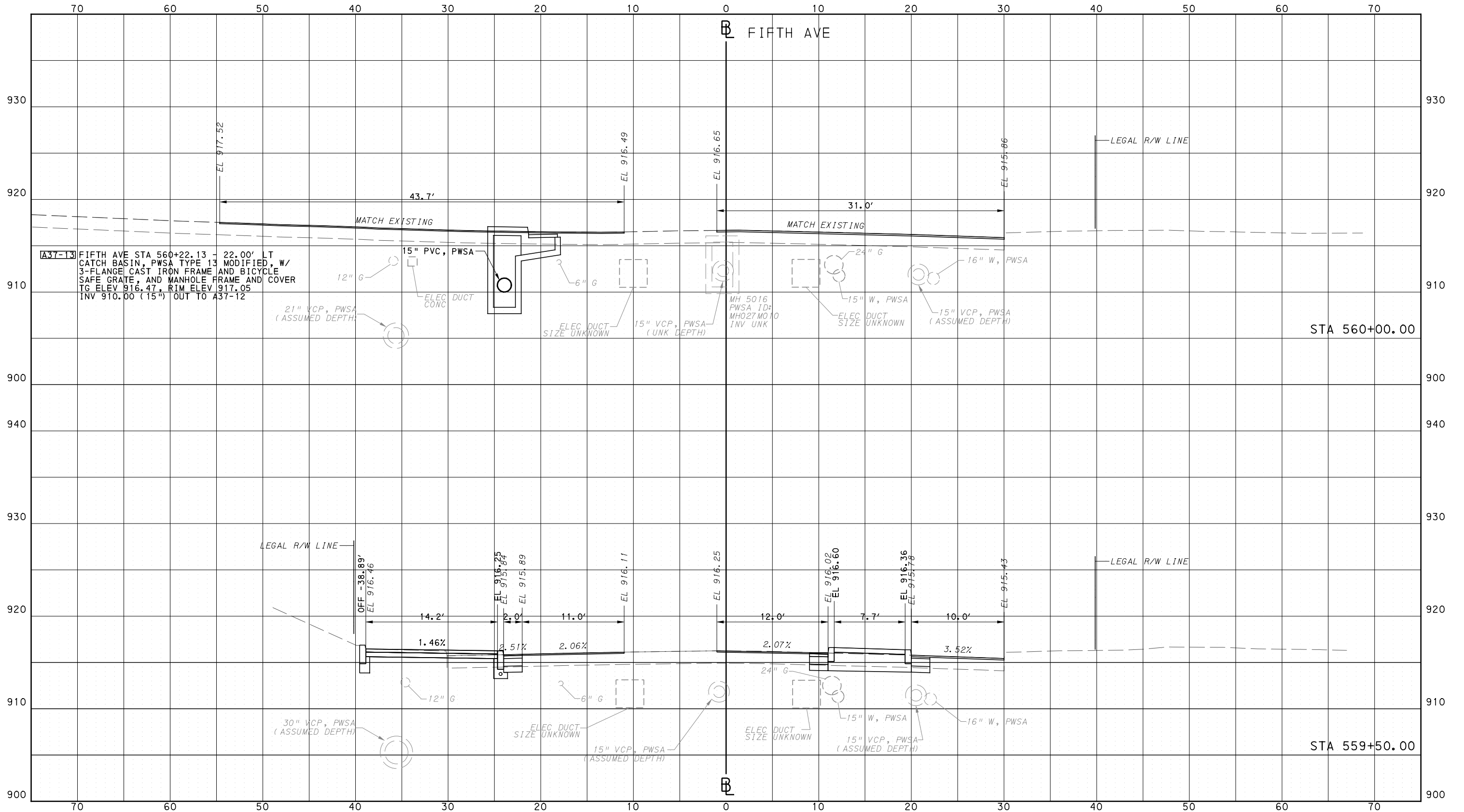
**Port Authority**  
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CONTRACT NO. BRT-001  
DWG. NO. XS147 SHT. 1352

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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS



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IN CHARGE	LAR
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SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

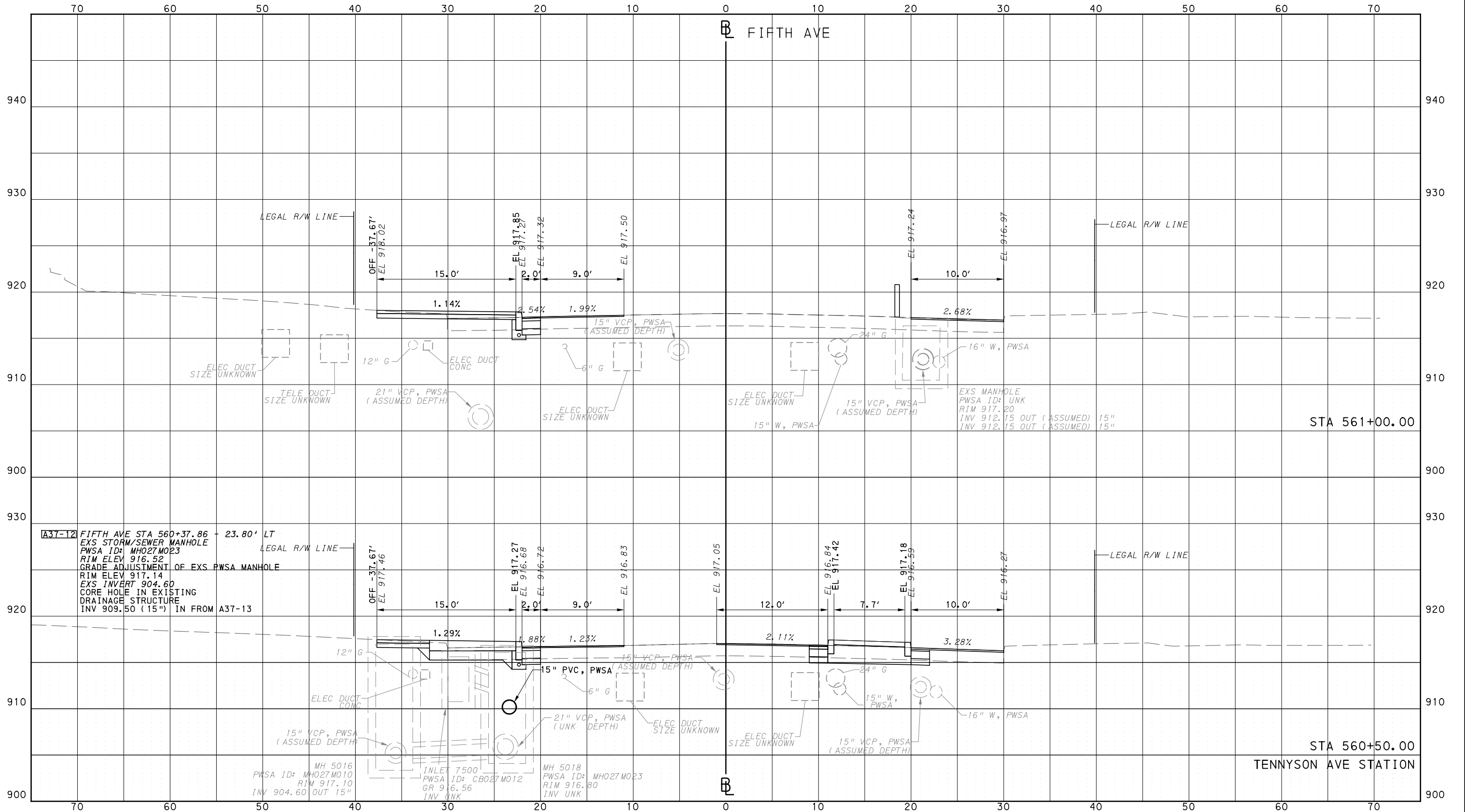
**BUS RAPID TRANSIT**  
CROSS SECTIONS  
FIFTH AVE - STA 559+50.00 TO STA 560+00.00

**Port Authority**  
connecting people to life

CONTRACT NO. BRT-001
DWG. NO. XS148
SHT. 1353



PORT AUTHORITY OF ALLEGHENY COUNTY CROSS SECTIONS



**A37-12** FIFTH AVE STA 560+37.86 - 23.80' LT  
 EXS STORM/SEWER MANHOLE  
 PWSA ID: MH027M023  
 RIM ELEV 916.52  
 GRADE ADJUSTMENT OF EXS PWSA MANHOLE  
 RIM ELEV 917.14  
 EXS INVERT 904.60  
 CORE HOLE IN EXISTING DRAINAGE STRUCTURE  
 INV 909.50 (15") IN FROM A37-13

MH 5016 PWSA ID: MH027M010 RIM 917.10 INV 904.60 OUT 15"  
 INLET 7500 PWSA ID: CB027M012 GR 916.56 INV UNK  
 MH 5018 PWSA ID: MH027M023 RIM 916.80 INV UNK



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**(NOT FOR CONSTRUCTION)**

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DATE	05/01/24
SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
 PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT**  
 CROSS SECTIONS  
 FIFTH AVE - STA 560+50.00 TO STA 561+00.00

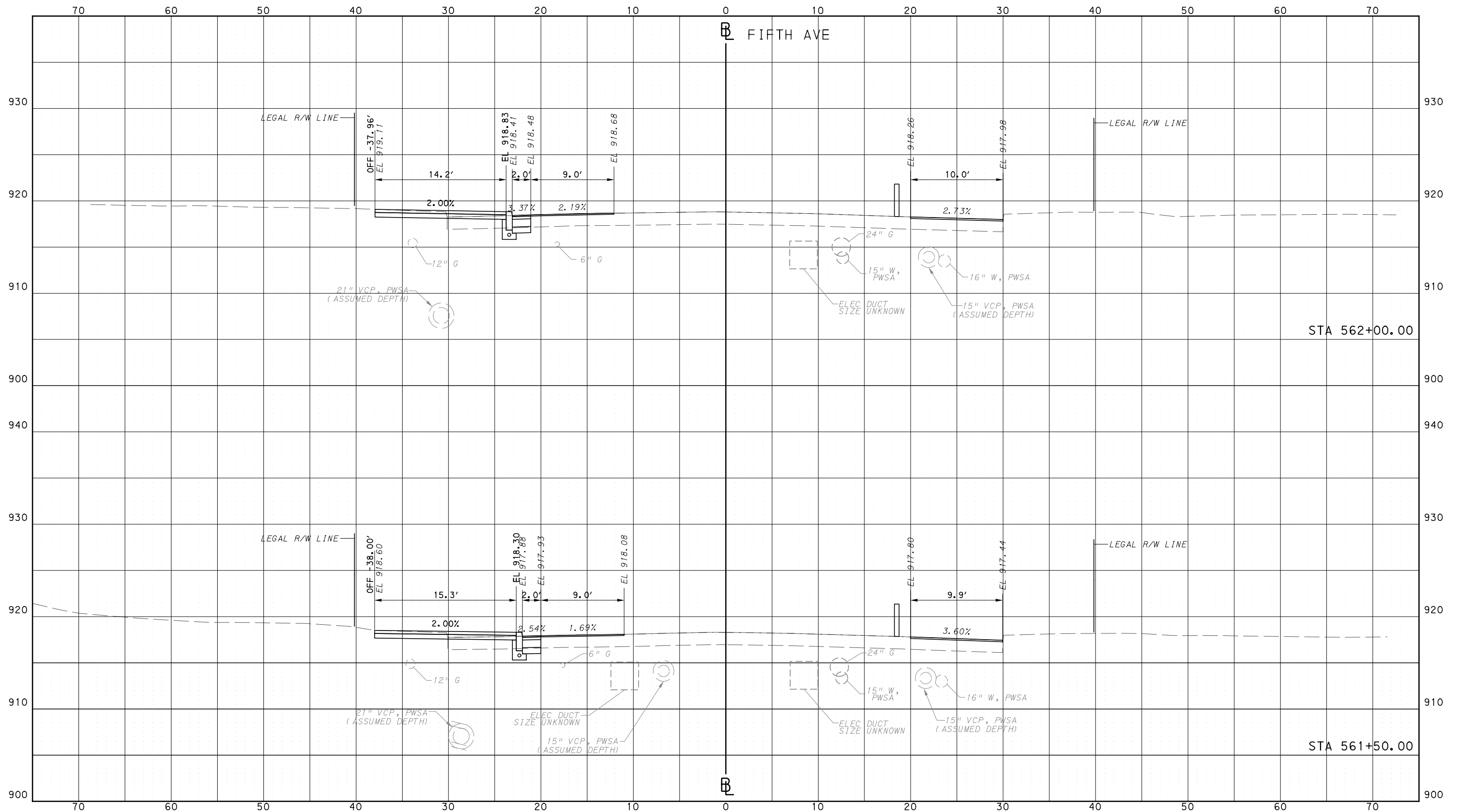
**Port Authority** connecting people to life

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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS



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707 Grant Street  
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(NOT FOR CONSTRUCTION)

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DRAWN	AGO
CHECKED	BFS
IN CHARGE	LAR
DATE	05/01/24
SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT**  
CROSS SECTIONS  
FIFTH AVE - STA 561+50.00 TO STA 562+00.00

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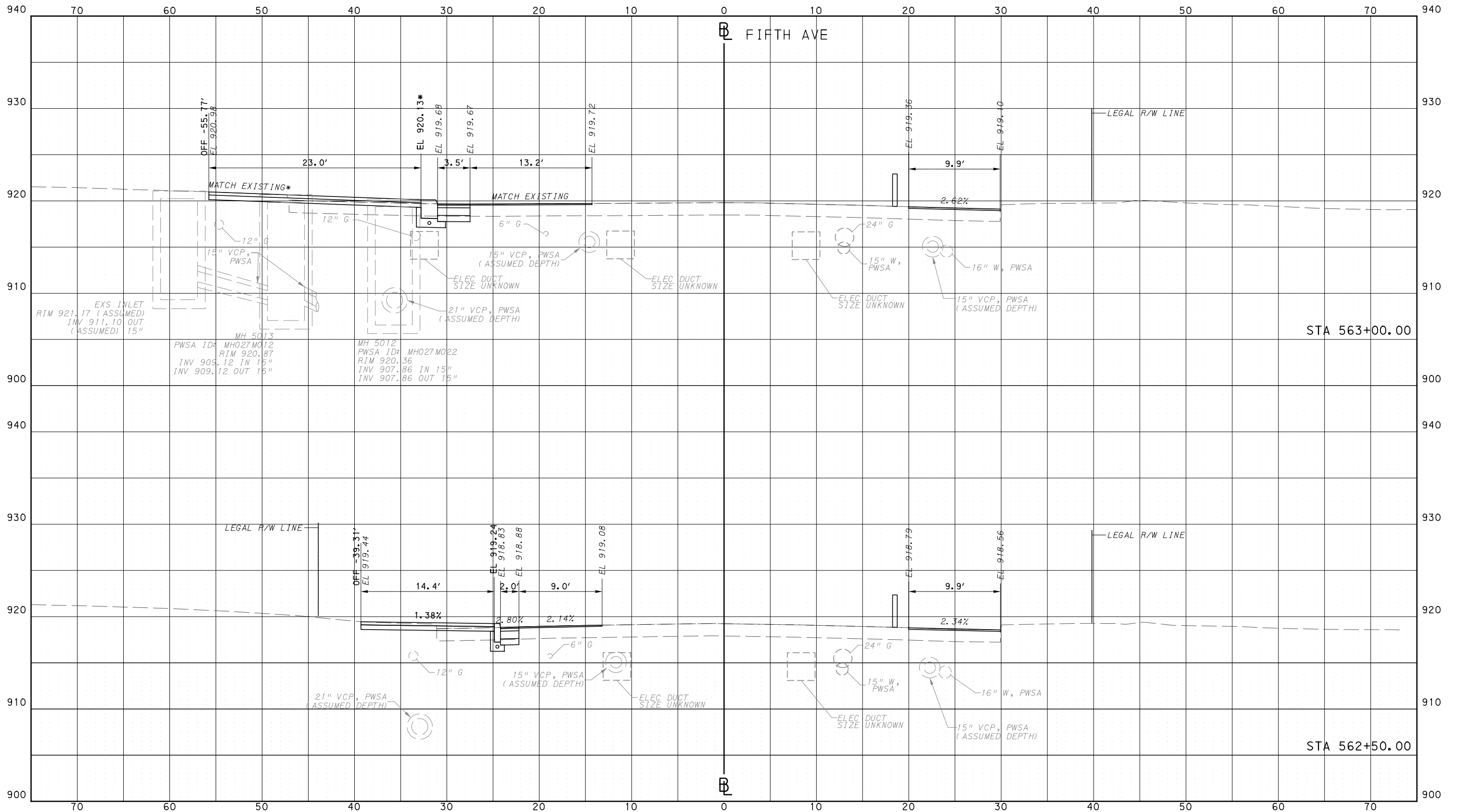
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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS

\*TOP OF CURB ELEVATION AND SIDEWALK SLOPES TO BE DETERMINED PER ITEM 01900.001 - DESIGN OF CURB RAMPS



NO.	DATE	DESCRIPTION
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**(NOT FOR CONSTRUCTION)**

DESIGNED	AGO
DRAWN	AGO
CHECKED	BFS
IN CHARGE	LAR
DATE	05/01/24
SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT**  
CROSS SECTIONS  
FIFTH AVE - STA 562+50.00 TO STA 563+00.00

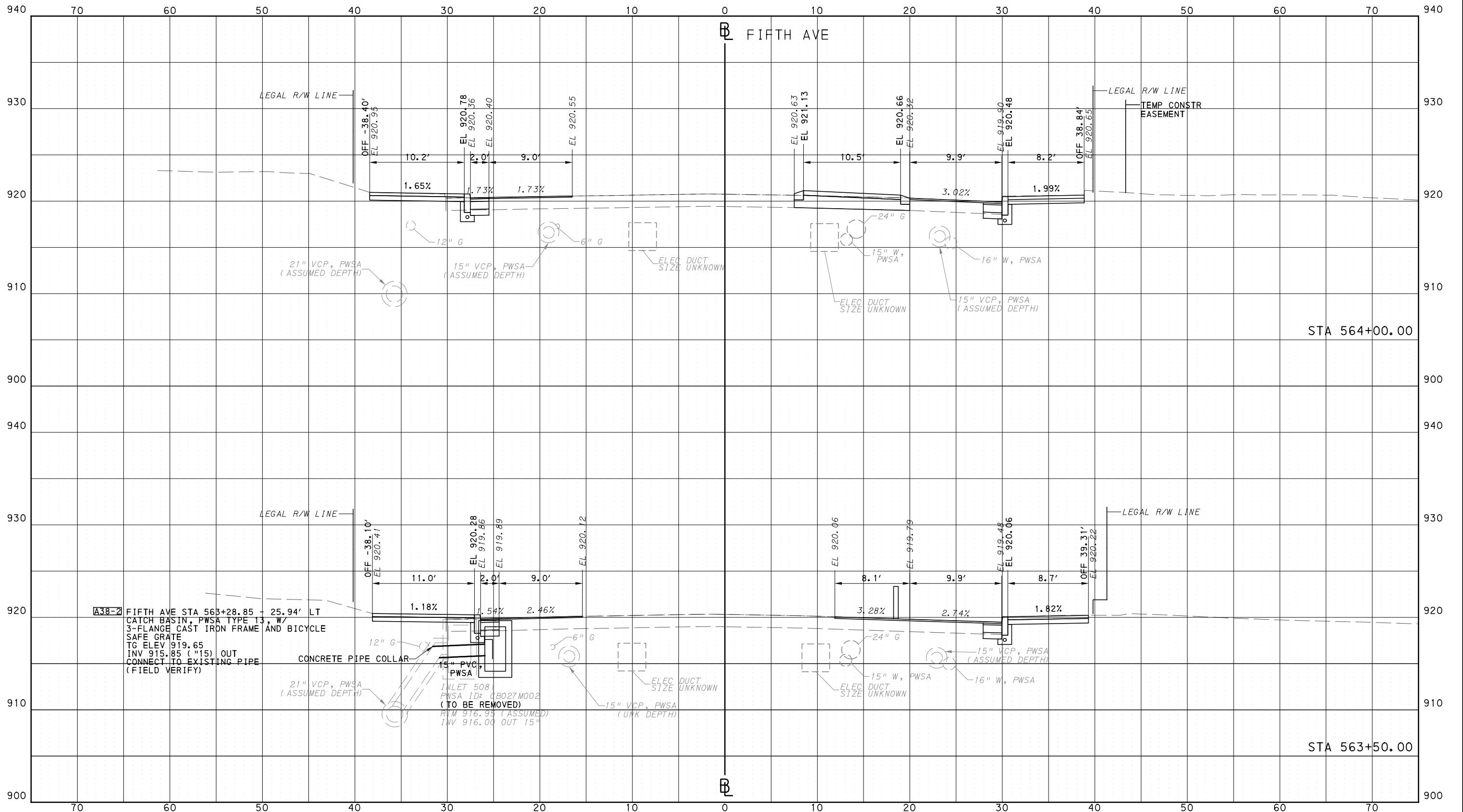
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CONTRACT NO. BRT-001  
DWG. NO. XS151 SHT. 1356

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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS



Gulf Tower  
707 Grant Street  
5th Floor  
Pittsburgh, PA 15219

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DESIGNED	AGO
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CHECKED	BFS
IN CHARGE	LAR
DATE	05/01/24
SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT**  
CROSS SECTIONS  
FIFTH AVE - STA 563+50.00 TO STA 564+00.00

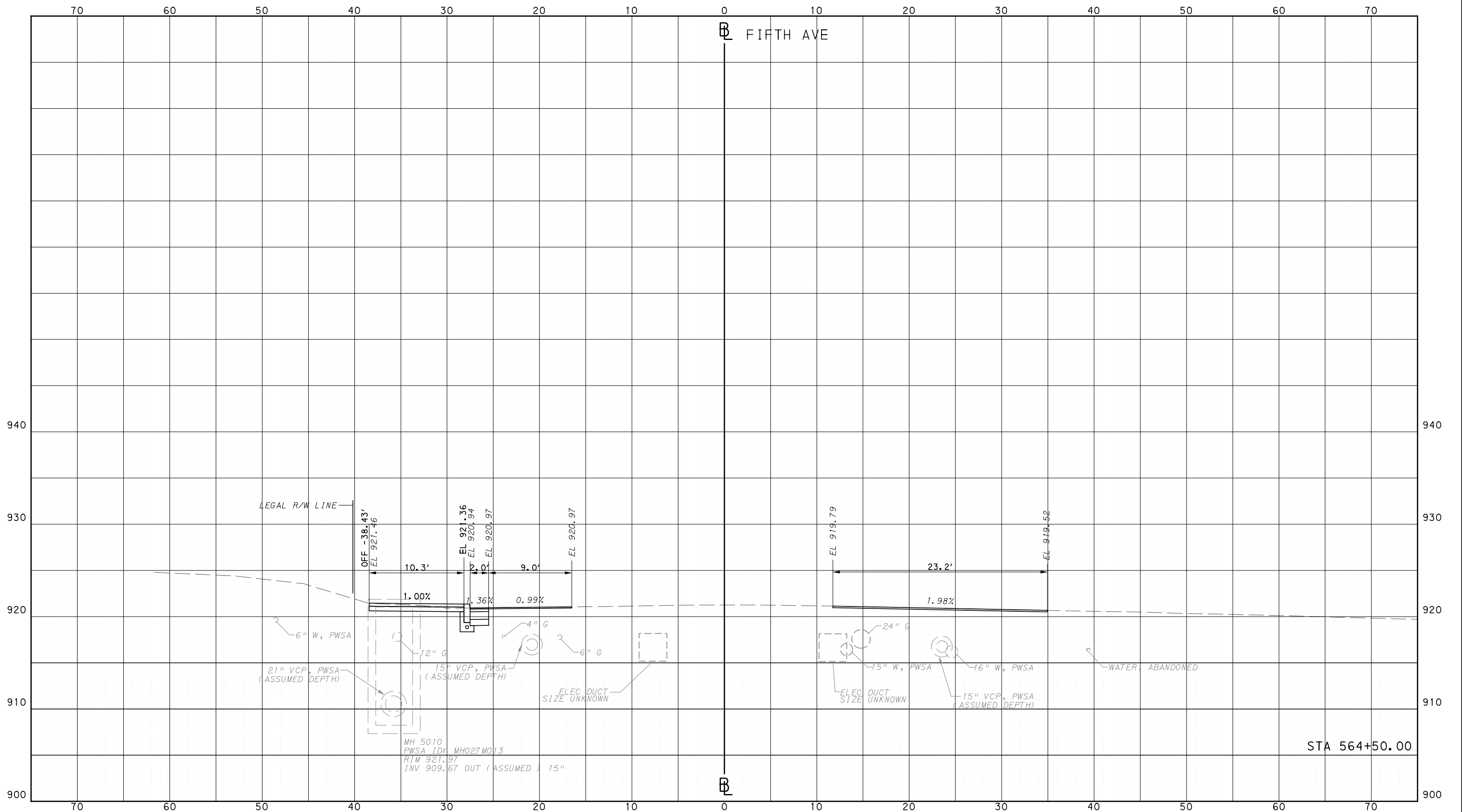
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PORT AUTHORITY OF ALLEGHENY COUNTY  
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SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT**  
CROSS SECTIONS  
FIFTH AVE - STA 564+50.00 TO STA 573+95.00

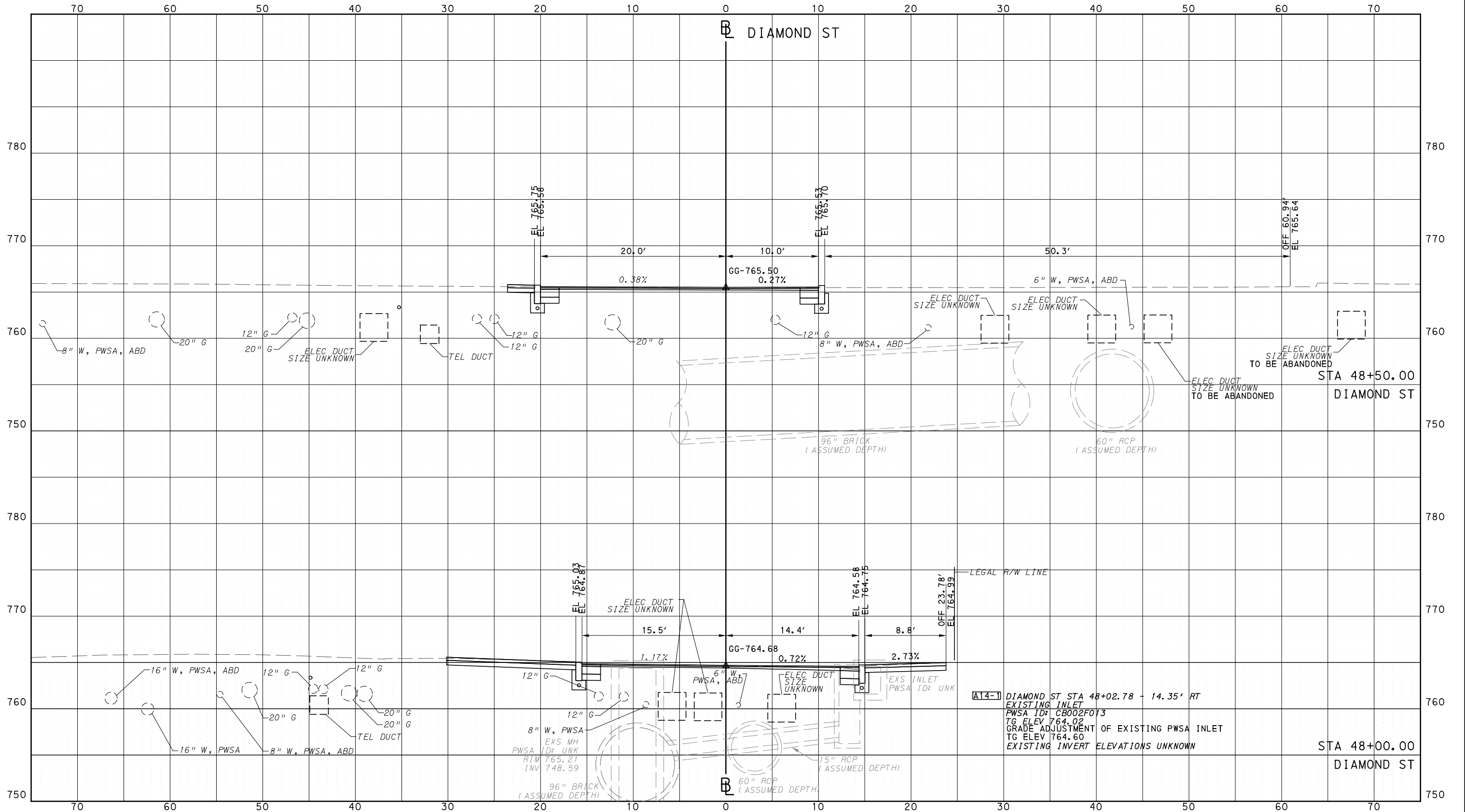
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DWG. NO. XS153
SHT. 1358

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PORT AUTHORITY OF ALLEGHENY COUNTY  
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(NOT FOR CONSTRUCTION)

DESIGNED	DRS
DRAWN	DRS
CHECKED	BFS
IN CHARGE	LAR
DATE	05/01/24
SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT**  
CROSS SECTIONS  
DIAMOND ST - STA 48+00.00 TO STA 48+50.00

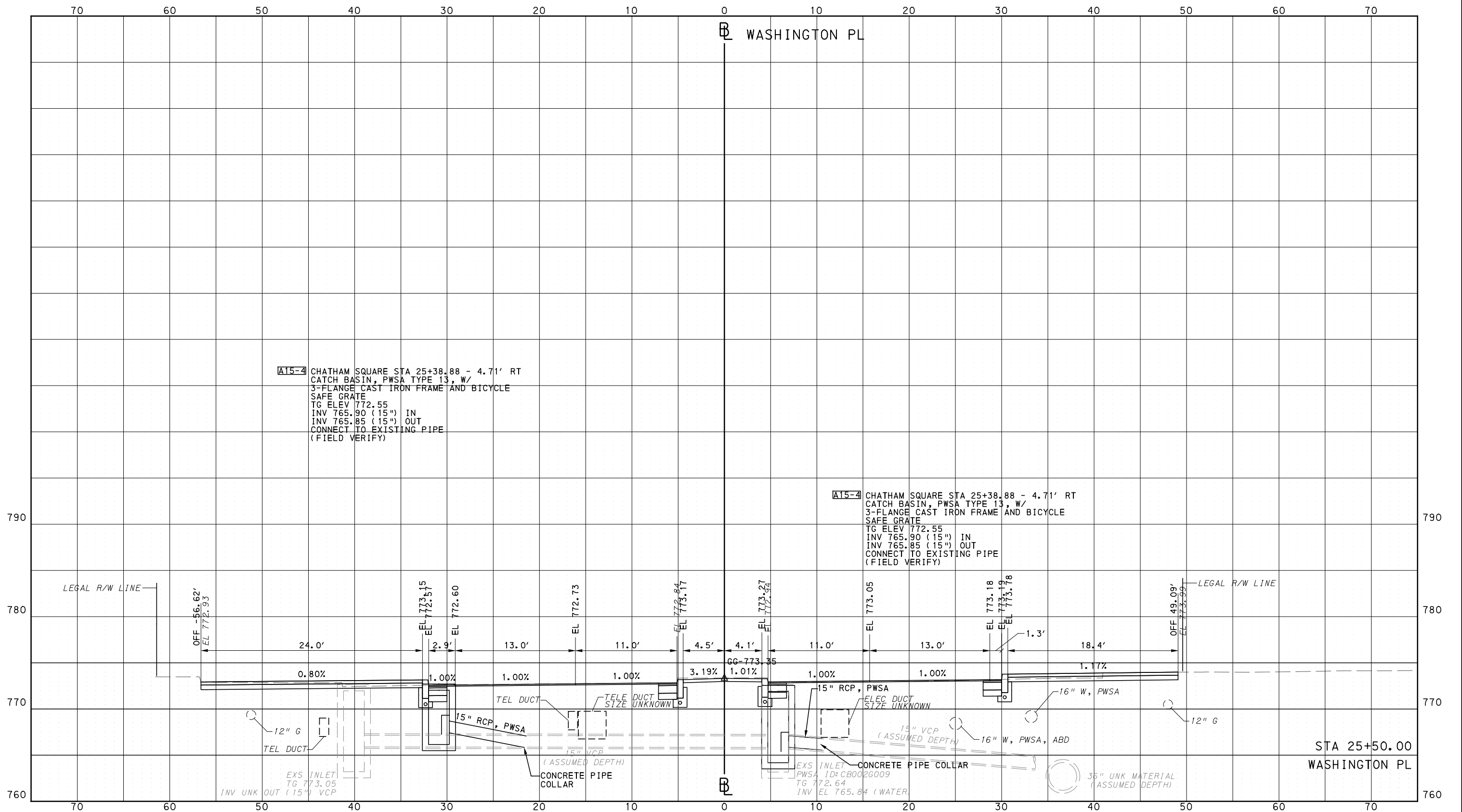
**Port Authority**  
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CONTRACT NO. BRT-001
DWG. NO. XS154
SHT. 1359

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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS



**A15-4** CHATHAM SQUARE STA 25+38.88 - 4.71' RT  
 CATCH BASIN, PWSA TYPE 13, W/  
 3-FLANGE CAST IRON FRAME AND BICYCLE  
 SAFE GRATE  
 TG ELEV 772.55  
 INV 765.90 (15") IN  
 INV 765.85 (15") OUT  
 CONNECT TO EXISTING PIPE  
 (FIELD VERIFY)

**A15-4** CHATHAM SQUARE STA 25+38.88 - 4.71' RT  
 CATCH BASIN, PWSA TYPE 13, W/  
 3-FLANGE CAST IRON FRAME AND BICYCLE  
 SAFE GRATE  
 TG ELEV 772.55  
 INV 765.90 (15") IN  
 INV 765.85 (15") OUT  
 CONNECT TO EXISTING PIPE  
 (FIELD VERIFY)



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REVISIONS		

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**(NOT FOR CONSTRUCTION)**

DESIGNED	DRS
DRAWN	DRS
CHECKED	BFS
IN CHARGE	LAR
DATE	05/01/24
SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT  
CROSS SECTIONS  
WASHINGTON PL - STA 25+50.00**

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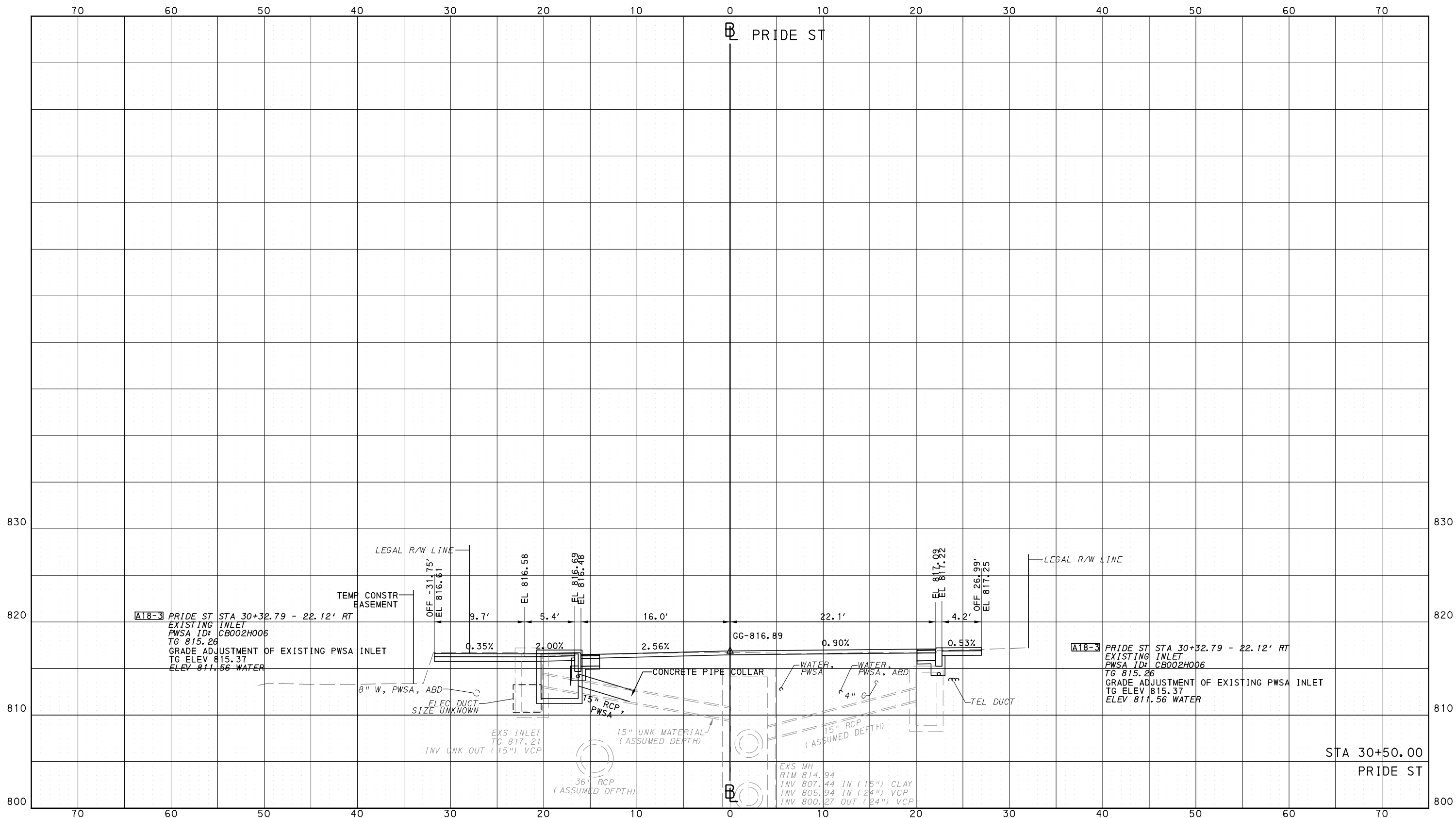
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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS



Gulf Tower  
707 Grant Street  
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Pittsburgh, PA 15219

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SCALE	0 5 10 FEET

PORT AUTHORITY OF ALLEGHENY COUNTY  
PITTSBURGH PENNSYLVANIA

BUS RAPID TRANSIT  
CROSS SECTIONS  
PRIDE ST - STA 30+50.00



CONTRACT NO. BRT-001

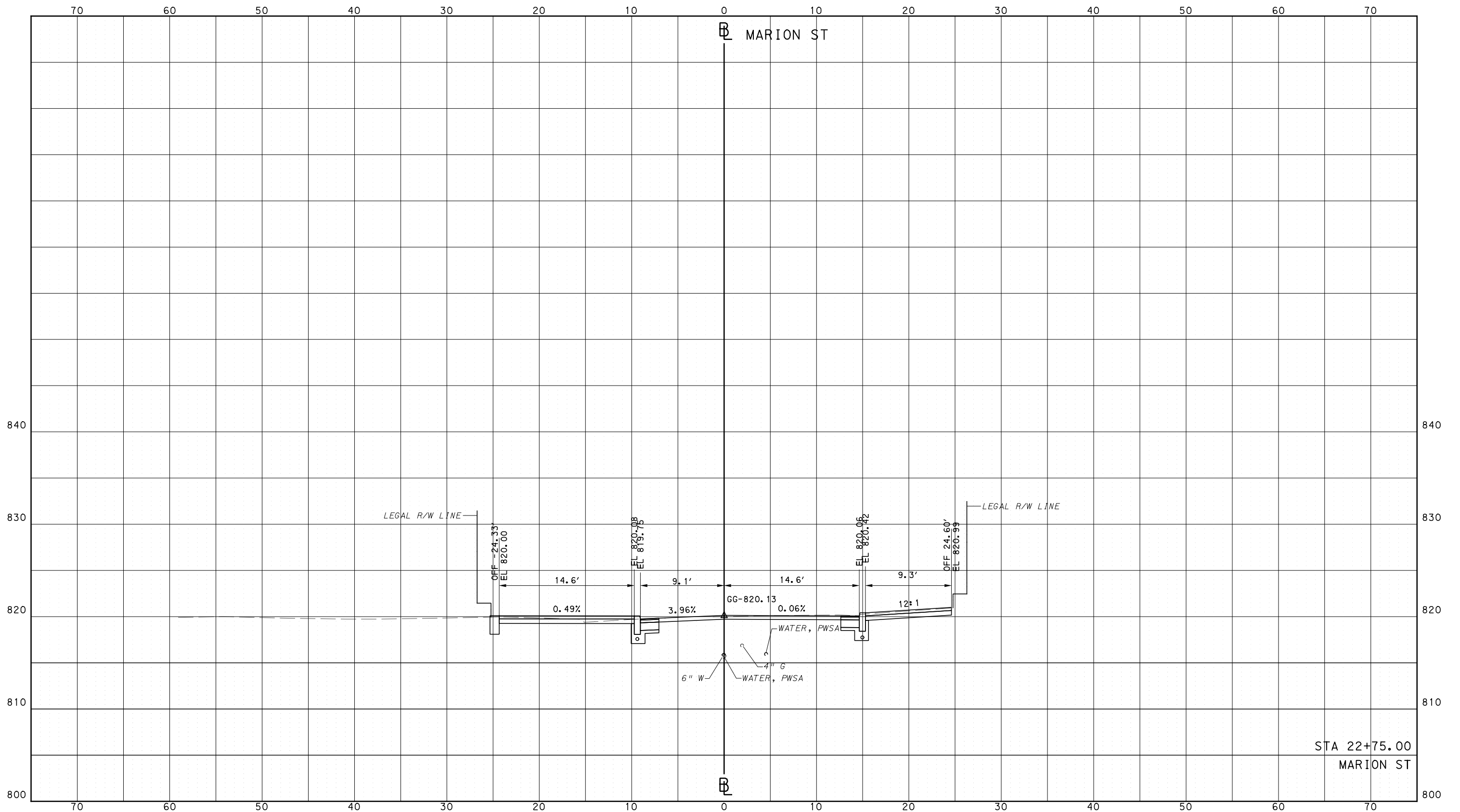
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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS



STA 22+75.00  
MARION ST



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SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT**  
CROSS SECTIONS  
MARION ST - STA 22+75.00

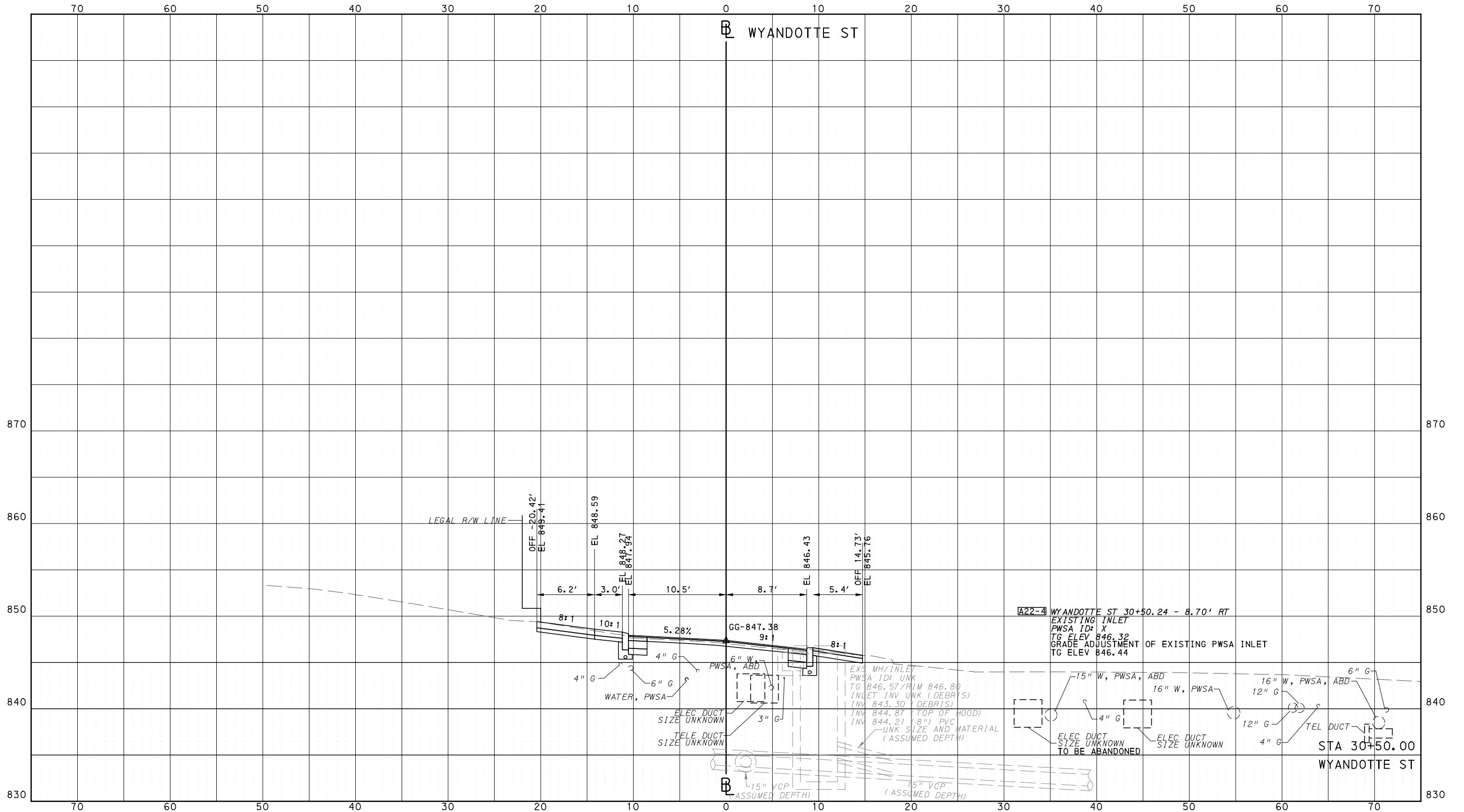
**Port Authority** connecting people to life™

CONTRACT NO. BRT-001  
DWG. NO. XS157 SHT. 1362

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PORT AUTHORITY OF ALLEGHENY COUNTY  
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DRAWN	DRS
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IN CHARGE	LAR
DATE	05/01/24
SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT  
CROSS SECTIONS  
WYANDOTTE ST - STA 30+50.00**

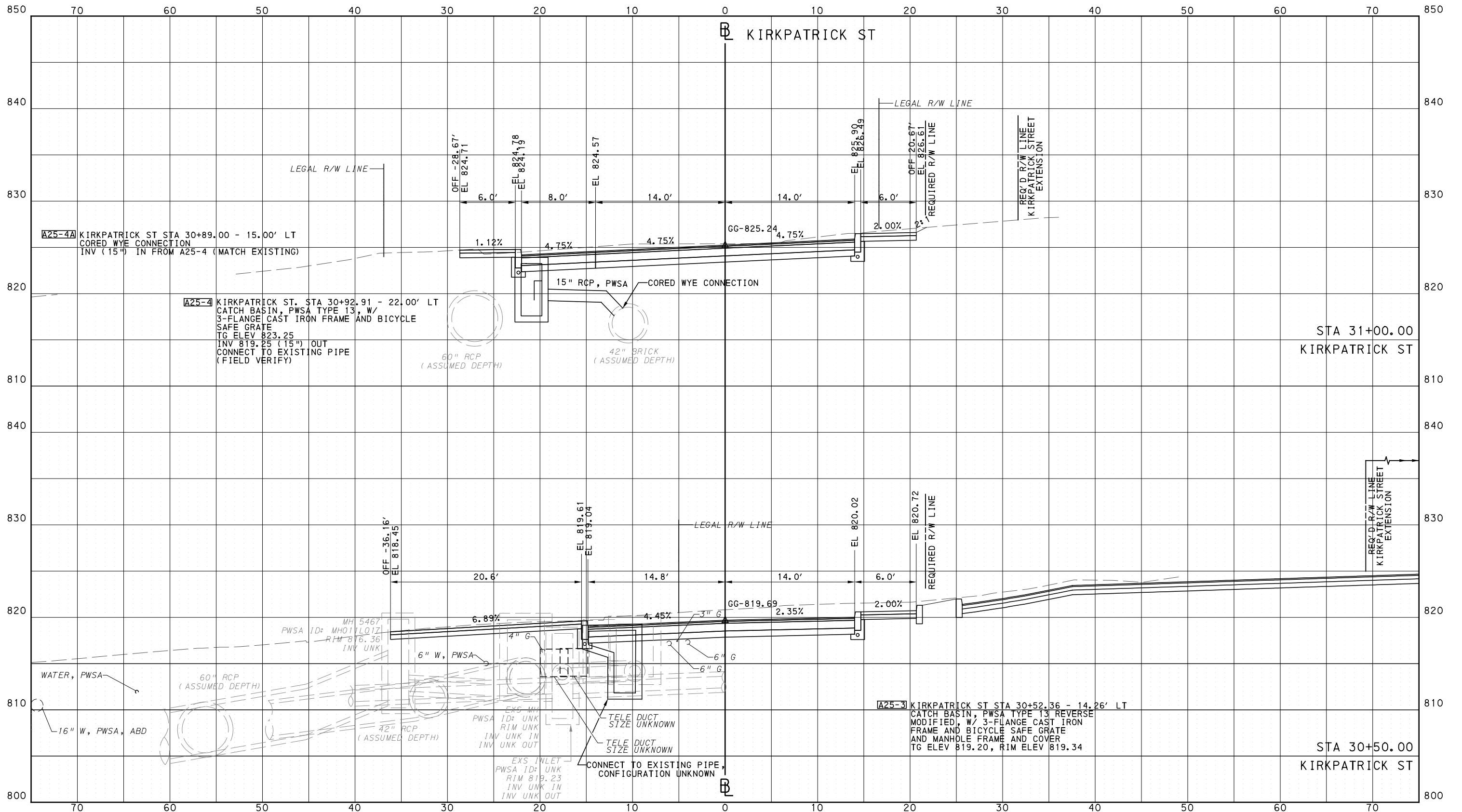
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PORT AUTHORITY OF ALLEGHENY COUNTY  
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CHECKED	BFS
IN CHARGE	LAR
DATE	05/01/24
SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT**  
CROSS SECTIONS  
KIRKPATRICK ST - STA 30+50.00 TO STA 31+00.00

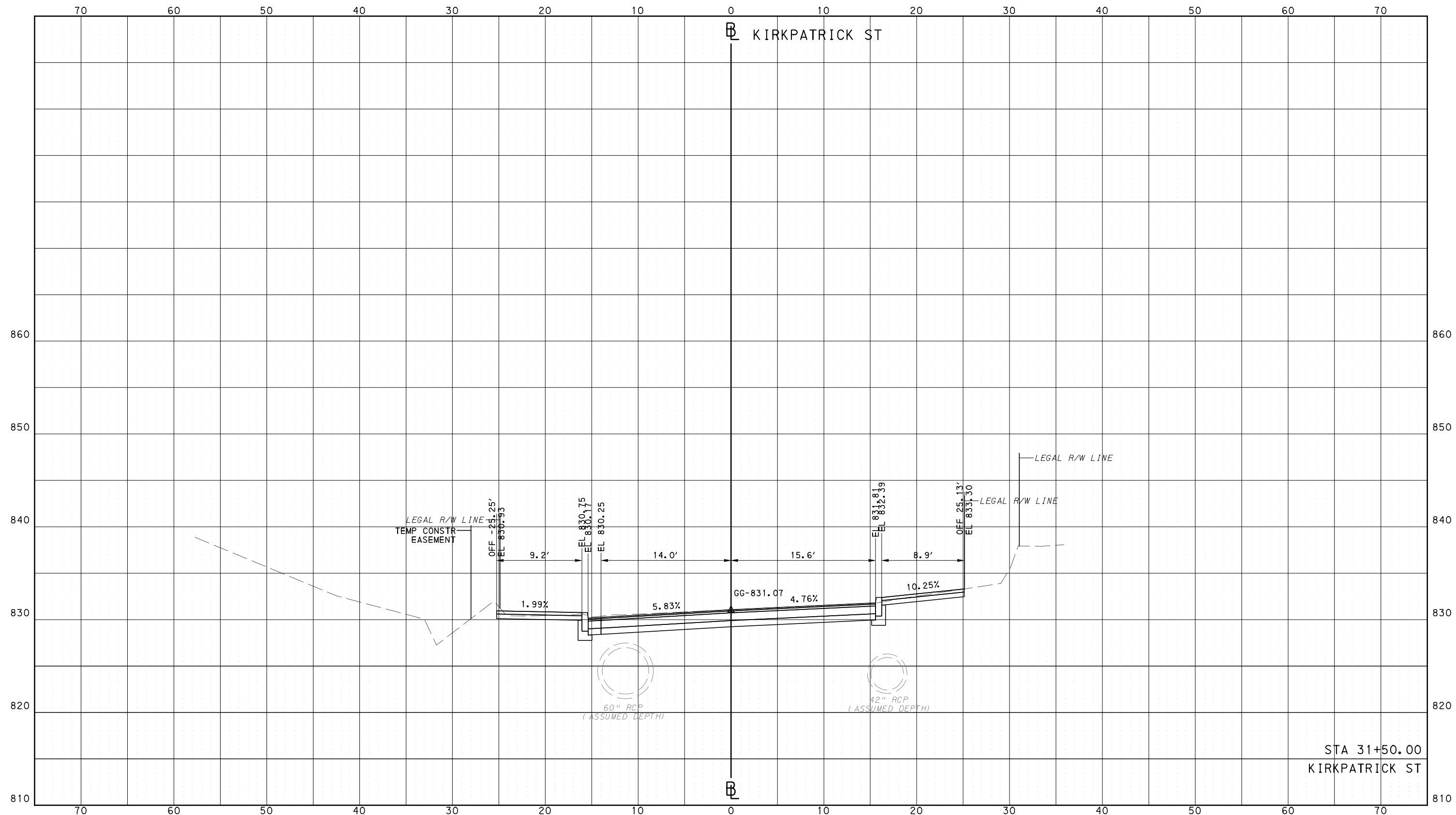
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CONTRACT NO. BRT-001  
DWG. NO. XS159 SHT. 1364

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PORT AUTHORITY OF ALLEGHENY COUNTY  
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DRAWN	DRS
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IN CHARGE	LAR
DATE	05/01/24
SCALE	0 5 10 FEET

PORT AUTHORITY OF ALLEGHENY COUNTY  
PITTSBURGH PENNSYLVANIA

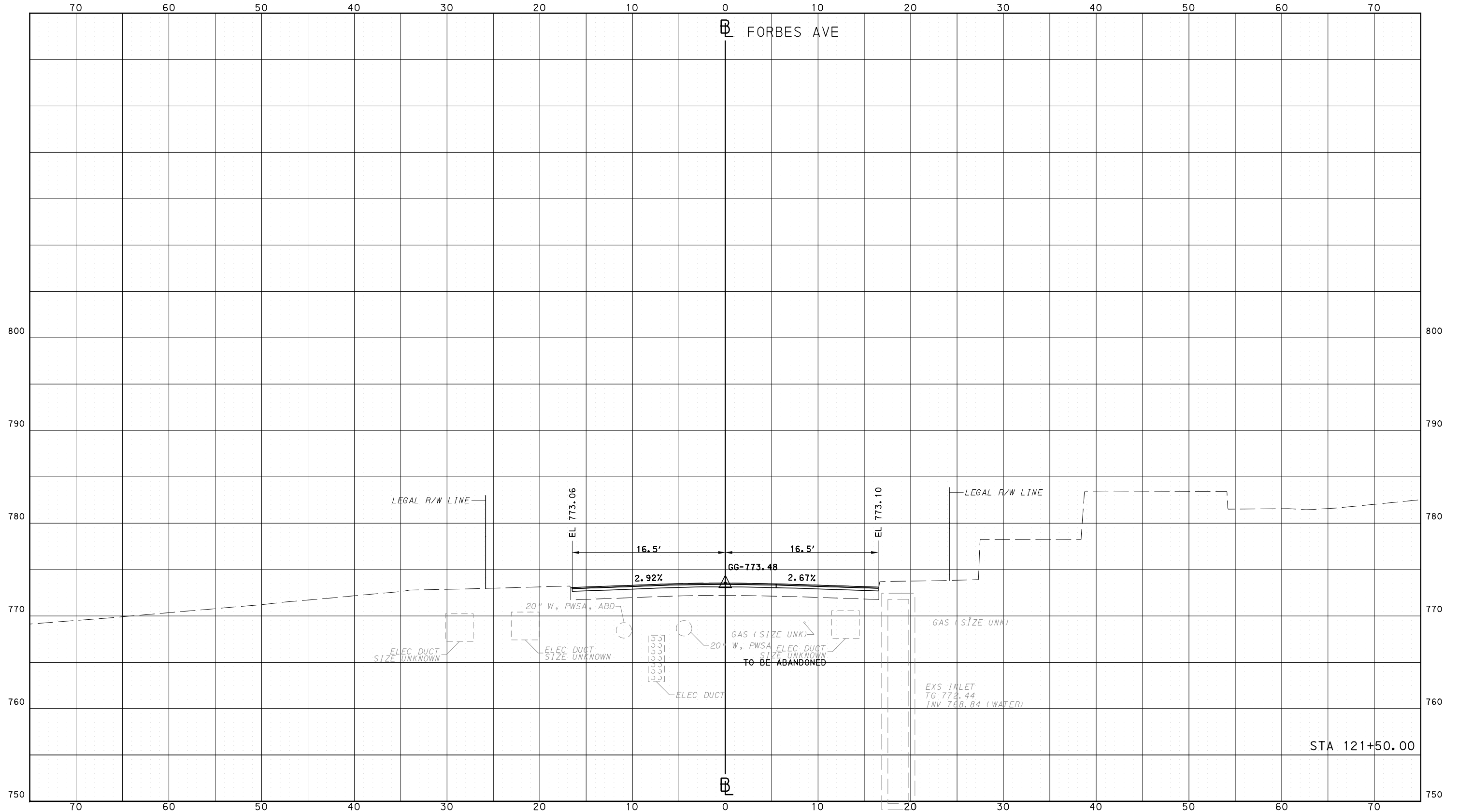
BUS RAPID TRANSIT  
CROSS SECTIONS  
KIRKPATRICK ST - STA 31+50.00



CONTRACT NO. BRT-001  
DWG. NO. XS160 SHT. 1365

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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS



Gulf Tower  
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5th Floor  
Pittsburgh, PA 15219



GANNETT FLEMING, INC.  
Foster Plaza 8  
Suite 400  
730 Holiday Drive  
Pittsburgh, PA. 15220

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DESIGNED	RRH
DRAWN	DVP
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IN CHARGE	GEC
DATE	05/01/24
SCALE	0 5 10 FEET

PORT AUTHORITY OF ALLEGHENY COUNTY  
PITTSBURGH PENNSYLVANIA

BUS RAPID TRANSIT  
CROSS SECTIONS  
FORBES AVE - STA 121+50.00

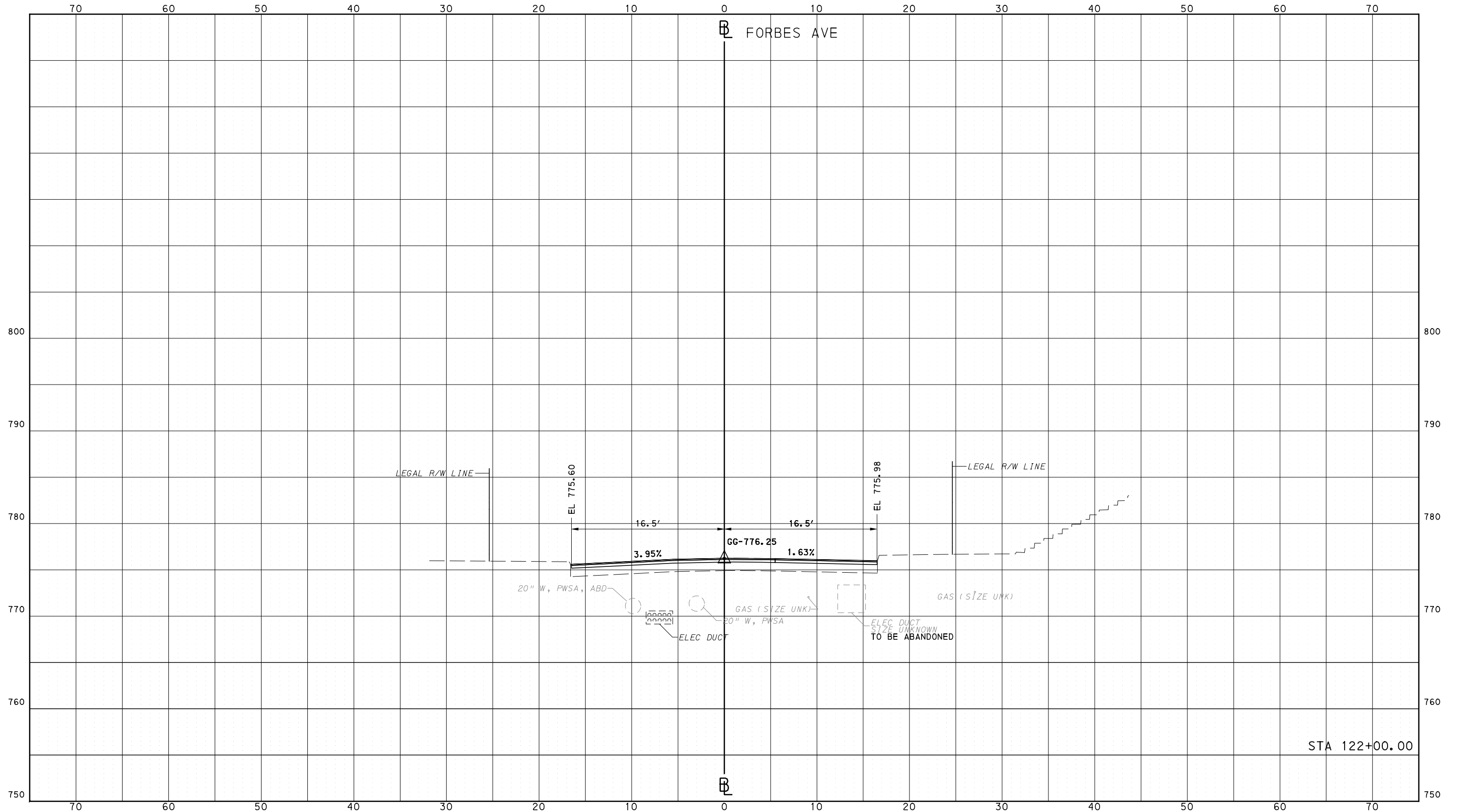


CONTRACT NO. BRT-001

DWG. NO. XS162 SHT. 1368

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PORT AUTHORITY OF ALLEGHENY COUNTY  
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STA 122+00.00

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Gulf Tower  
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5th Floor  
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**GANNETT FLEMING**  
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Foster Plaza 8  
Suite 400  
730 Holiday Drive  
Pittsburgh, PA. 15220

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CHECKED	KCF
IN CHARGE	GEC
DATE	05/01/24
SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT  
CROSS SECTIONS  
FORBES AVE - STA 122+00.00**

**Port Authority** connecting people to life

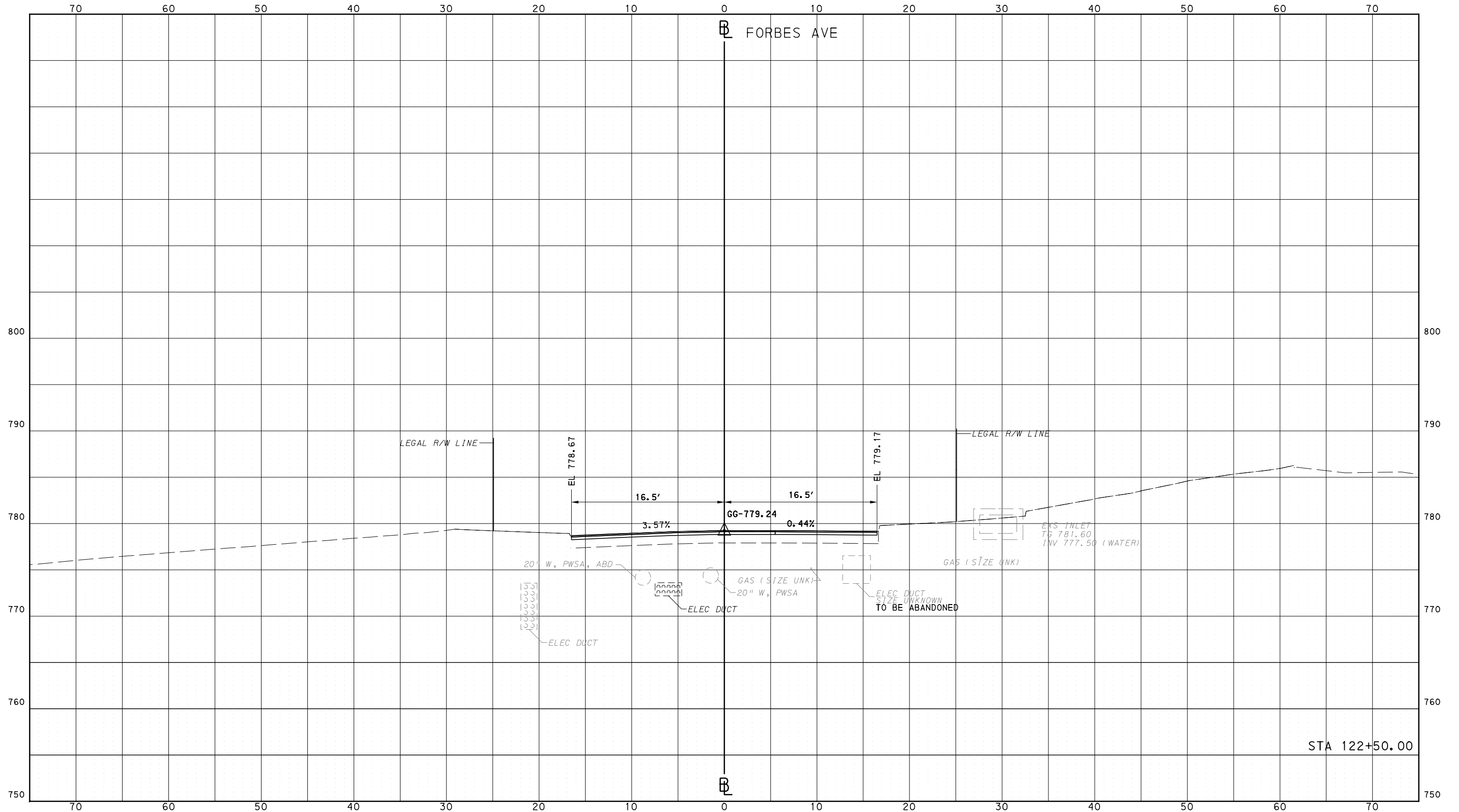
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PORT AUTHORITY OF ALLEGHENY COUNTY  
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DESIGNED	RRH
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IN CHARGE	GEC
DATE	05/01/24
SCALE	0 5 10 FEET

PORT AUTHORITY OF ALLEGHENY COUNTY  
PITTSBURGH PENNSYLVANIA

BUS RAPID TRANSIT  
CROSS SECTIONS  
FORBES AVE - STA 122+50.00



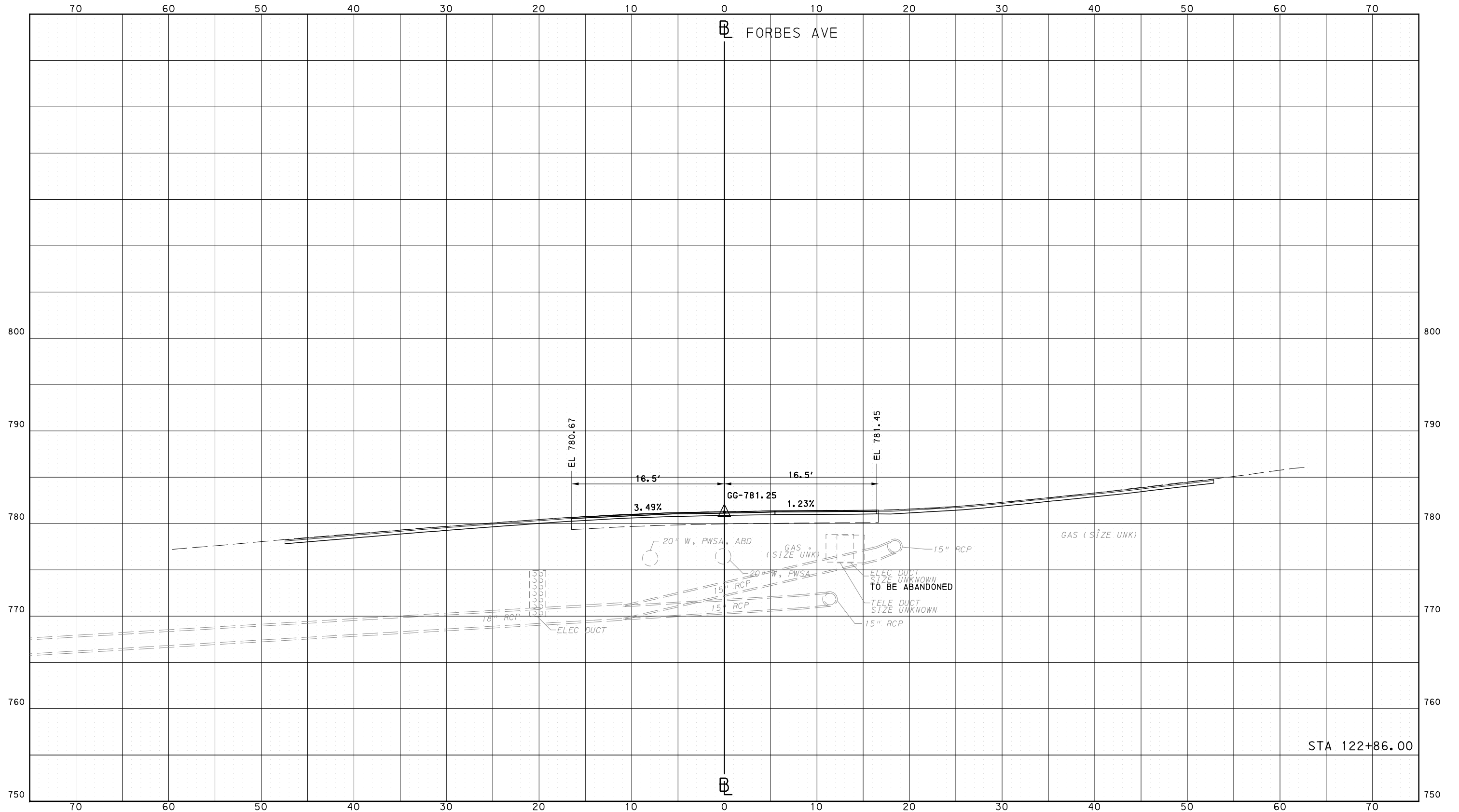
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DWG. NO. XS164

SHT. 1370

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Pittsburgh, PA 15219

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GANNETT FLEMING, INC.  
Foster Plaza 8  
Suite 400  
730 Holiday Drive  
Pittsburgh, PA. 15220

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IN CHARGE	GEC
DATE	05/01/24
SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

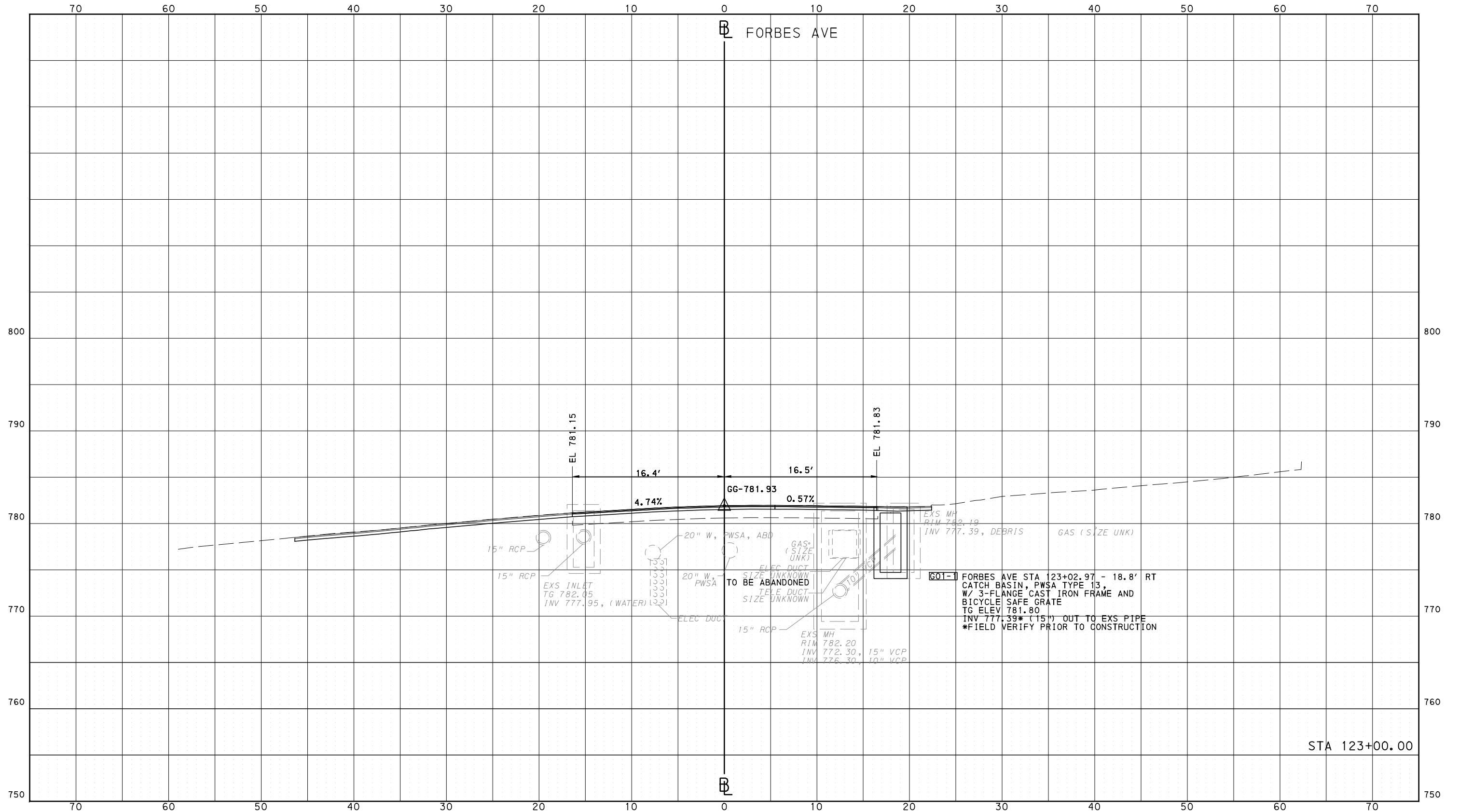
**BUS RAPID TRANSIT  
CROSS SECTIONS  
FORBES AVE - STA 122+86.00**

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CONTRACT NO. BRT-001
DWG. NO. XS165
SHT. 1371

OPERATOR: "joseph.silich" FILE PATH: c:\pwork\ing\escom-ds16-md\joseph.silich\escom.com\d0207632\p-brt-07\_xs\_base\_shts1-50.dgn PLOTTED: 3/23/2024 10:47:40 AM

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DATE	05/01/24
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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT  
CROSS SECTIONS  
FORBES AVE - STA 123+00.00**

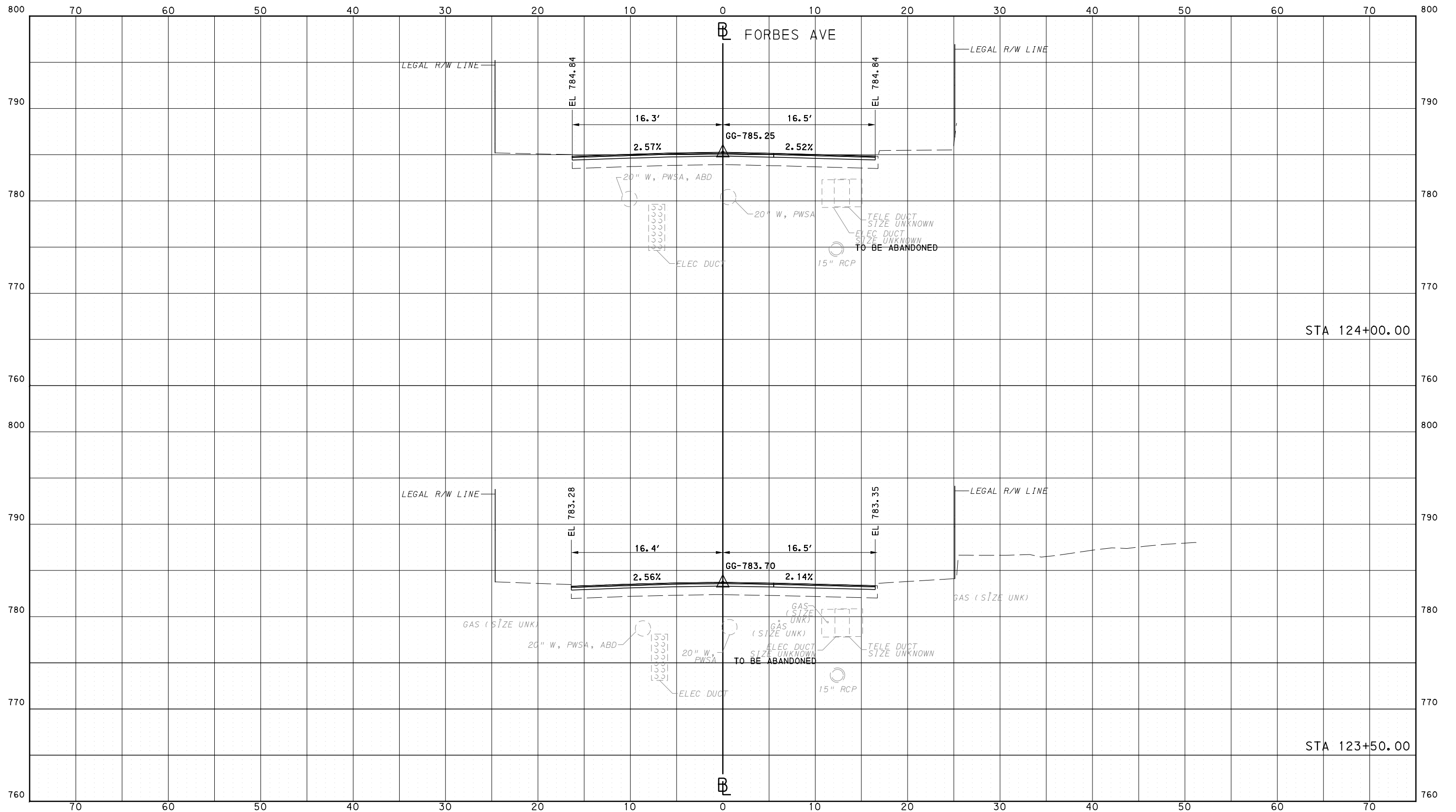
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IN CHARGE	GEC
DATE	05/01/24
SCALE	0 5 10 FEET

PORT AUTHORITY OF ALLEGHENY COUNTY  
PITTSBURGH PENNSYLVANIA

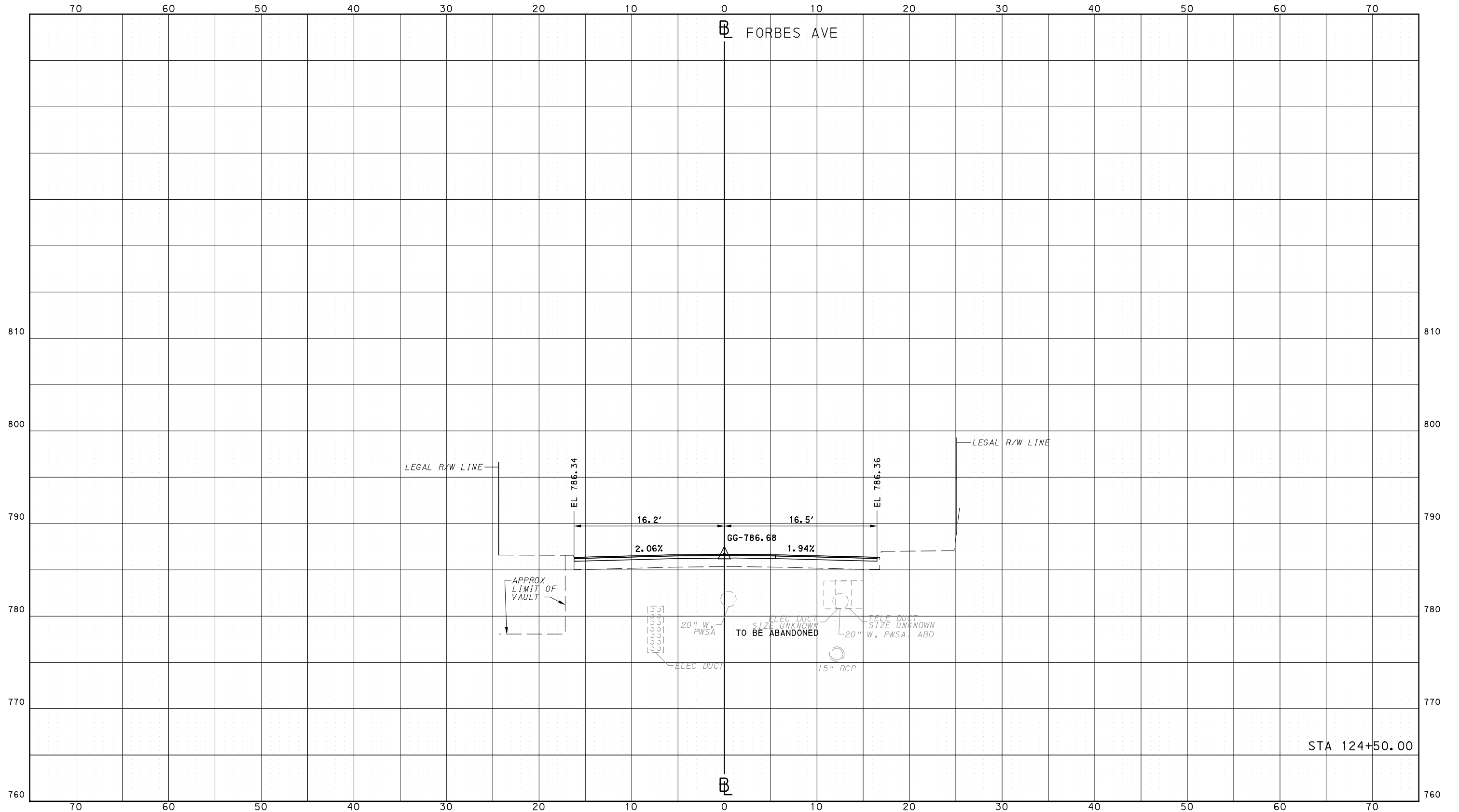
BUS RAPID TRANSIT  
CROSS SECTIONS  
FORBES AVE - STA 123+50.00 TO STA 124+00.00



CONTRACT NO. BRT-001  
DWG. NO. XS167 SHT. 1373

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PORT AUTHORITY OF ALLEGHENY COUNTY  
 CROSS SECTIONS



STA 124+50.00

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DRAWN	DVP
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IN CHARGE	GEC
DATE	05/01/24
SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
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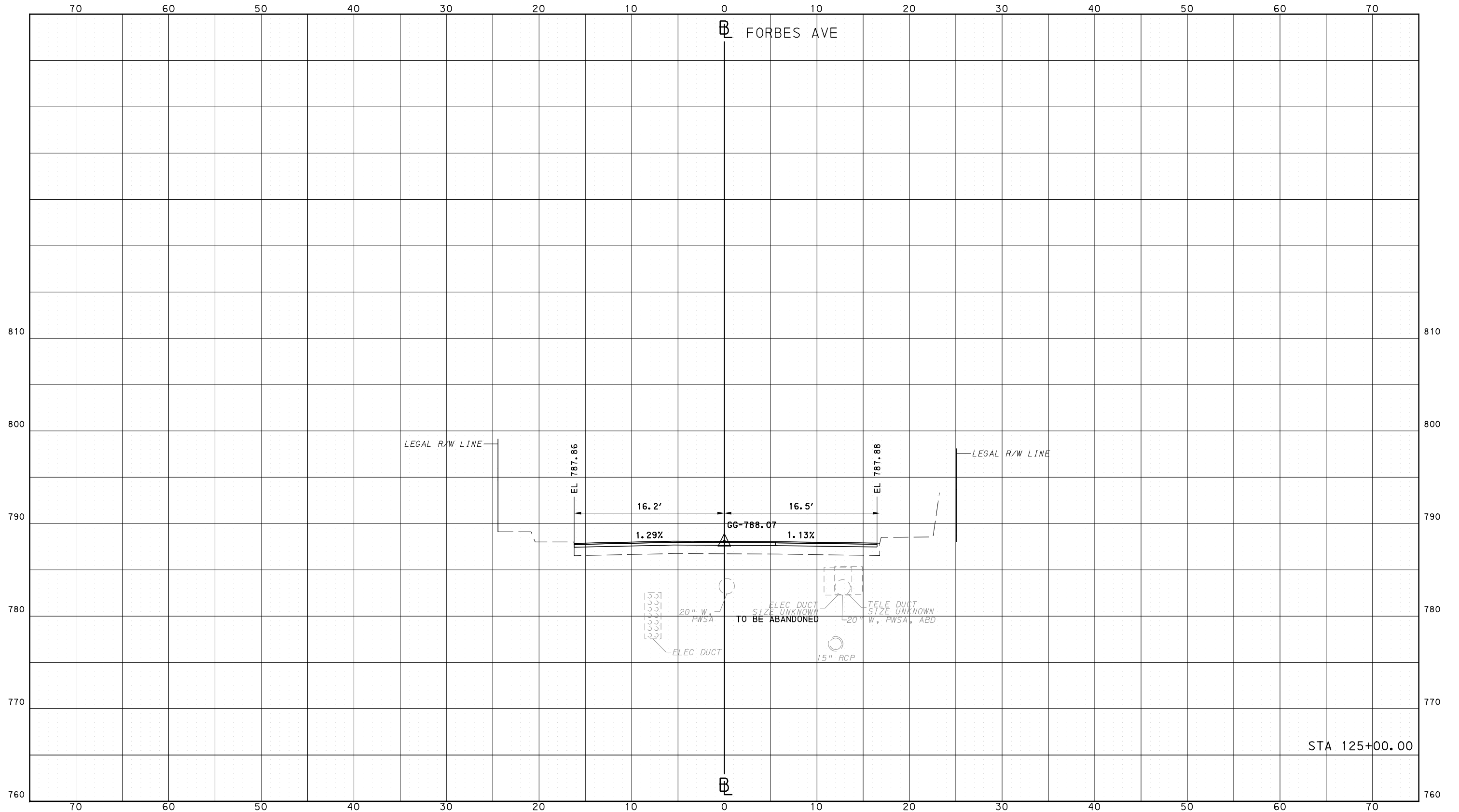
**BUS RAPID TRANSIT**  
 CROSS SECTIONS  
 FORBES AVE - STA 124+50.00

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CONTRACT NO. BRT-001  
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730 Holiday Drive  
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DATE	05/01/24
SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT  
CROSS SECTIONS  
FORBES AVE - STA 125+00.00**

**Port Authority** connecting people to life

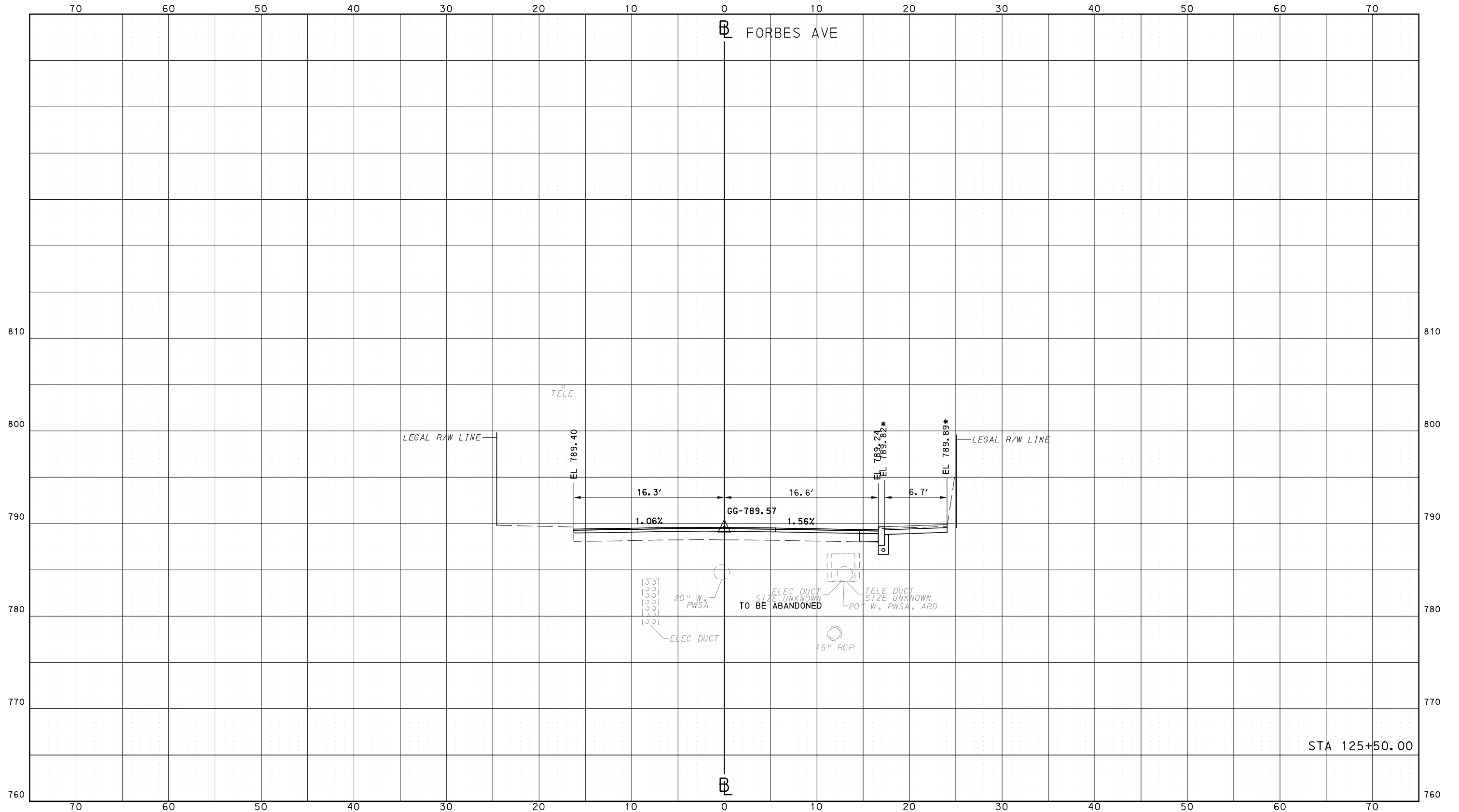
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DWG. NO. XS169
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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS

\*TOP OF CURB ELEVATION AND SIDEWALK SLOPES TO BE  
DETERMINED PER ITEM 01900.001 - DESIGN OF CURB RAMPS



Gulf Tower  
707 Grant Street  
5th Floor  
Pittsburgh, PA 15219



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CHECKED	KCF
IN CHARGE	GEC
DATE	05/01/24
SCALE	0 5 10 FEET

PORT AUTHORITY OF ALLEGHENY COUNTY  
PITTSBURGH PENNSYLVANIA

BUS RAPID TRANSIT  
CROSS SECTIONS  
FORBES AVE - STA 125+50.00



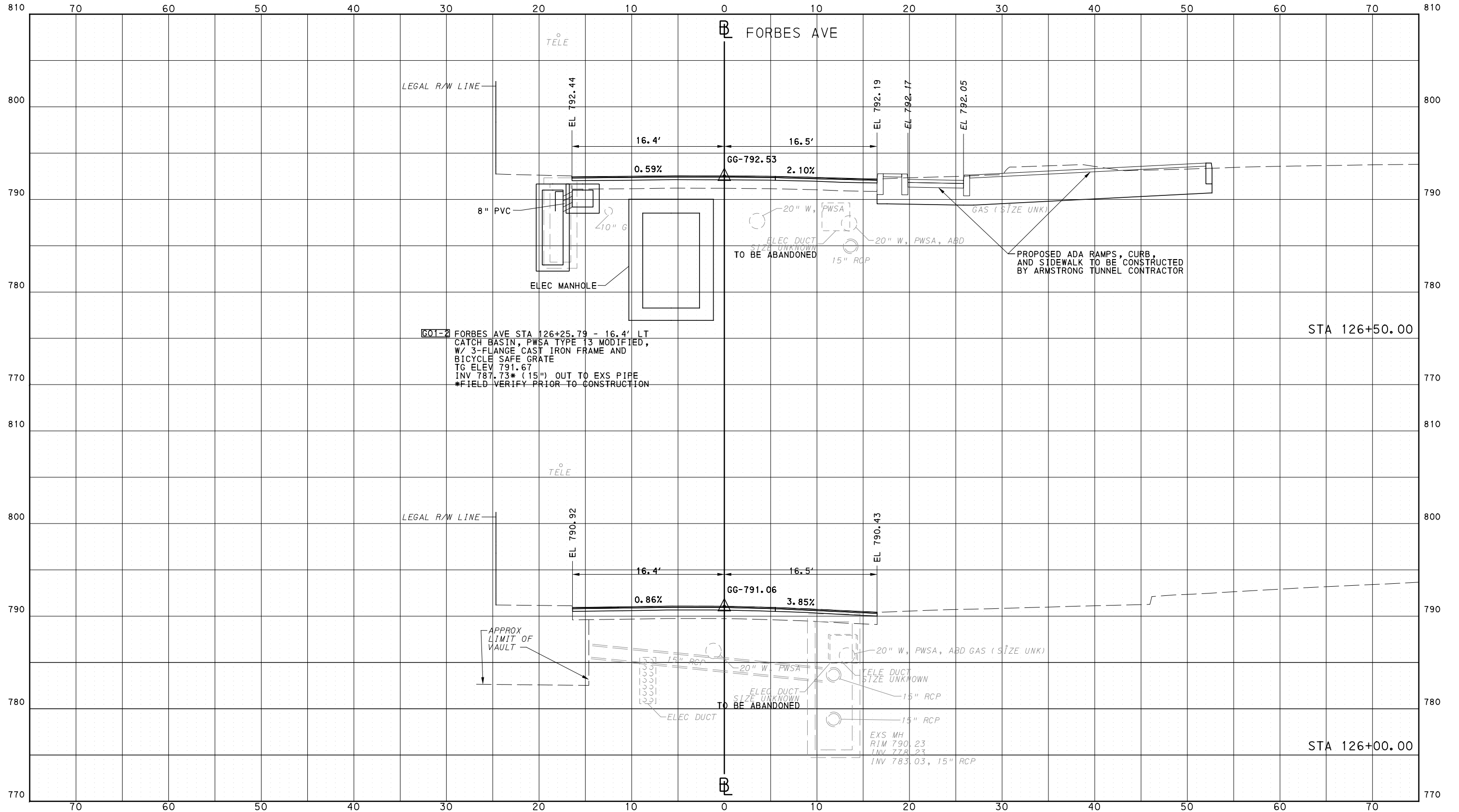
CONTRACT NO. BRT-001

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PORT AUTHORITY OF ALLEGHENY COUNTY  
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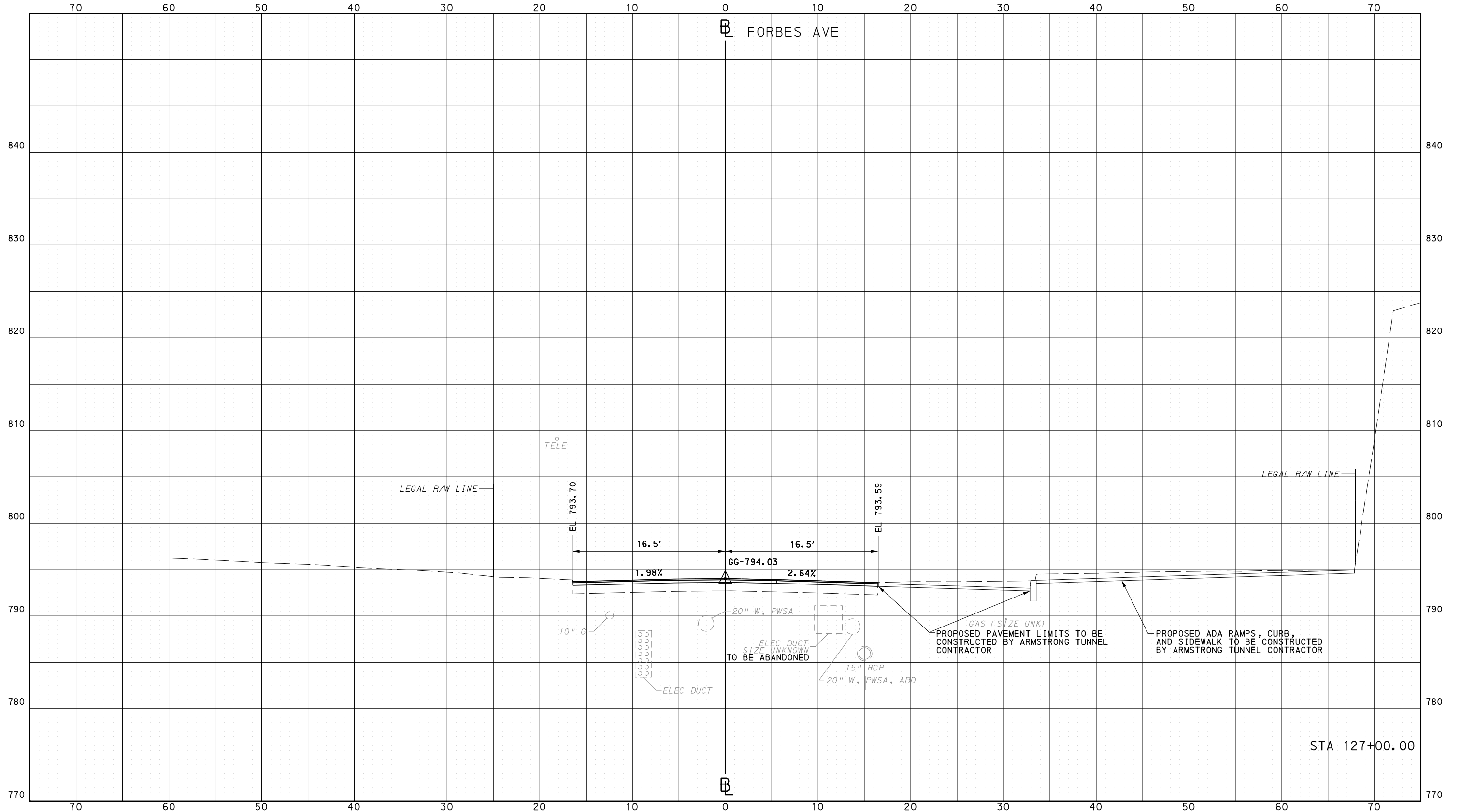
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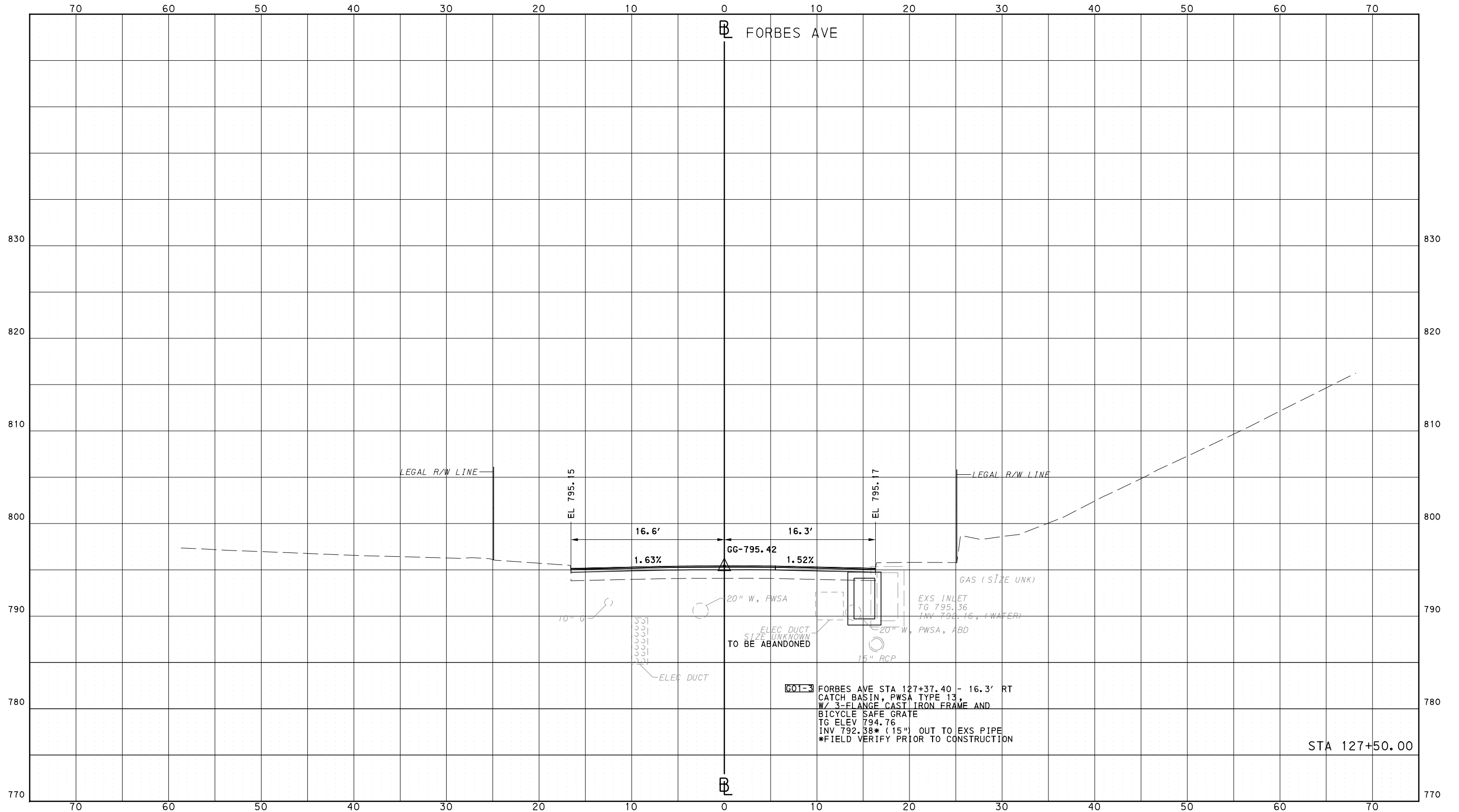
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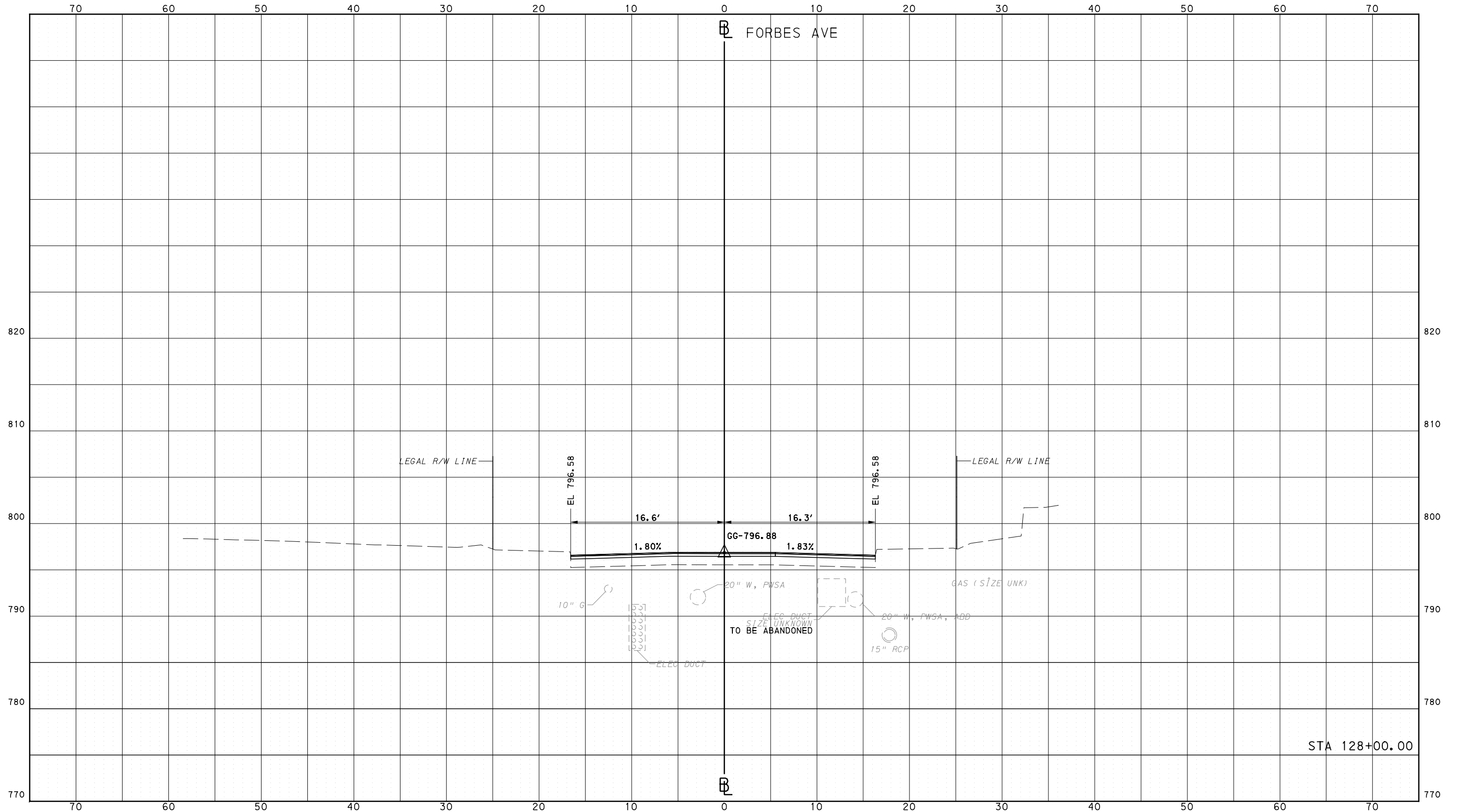
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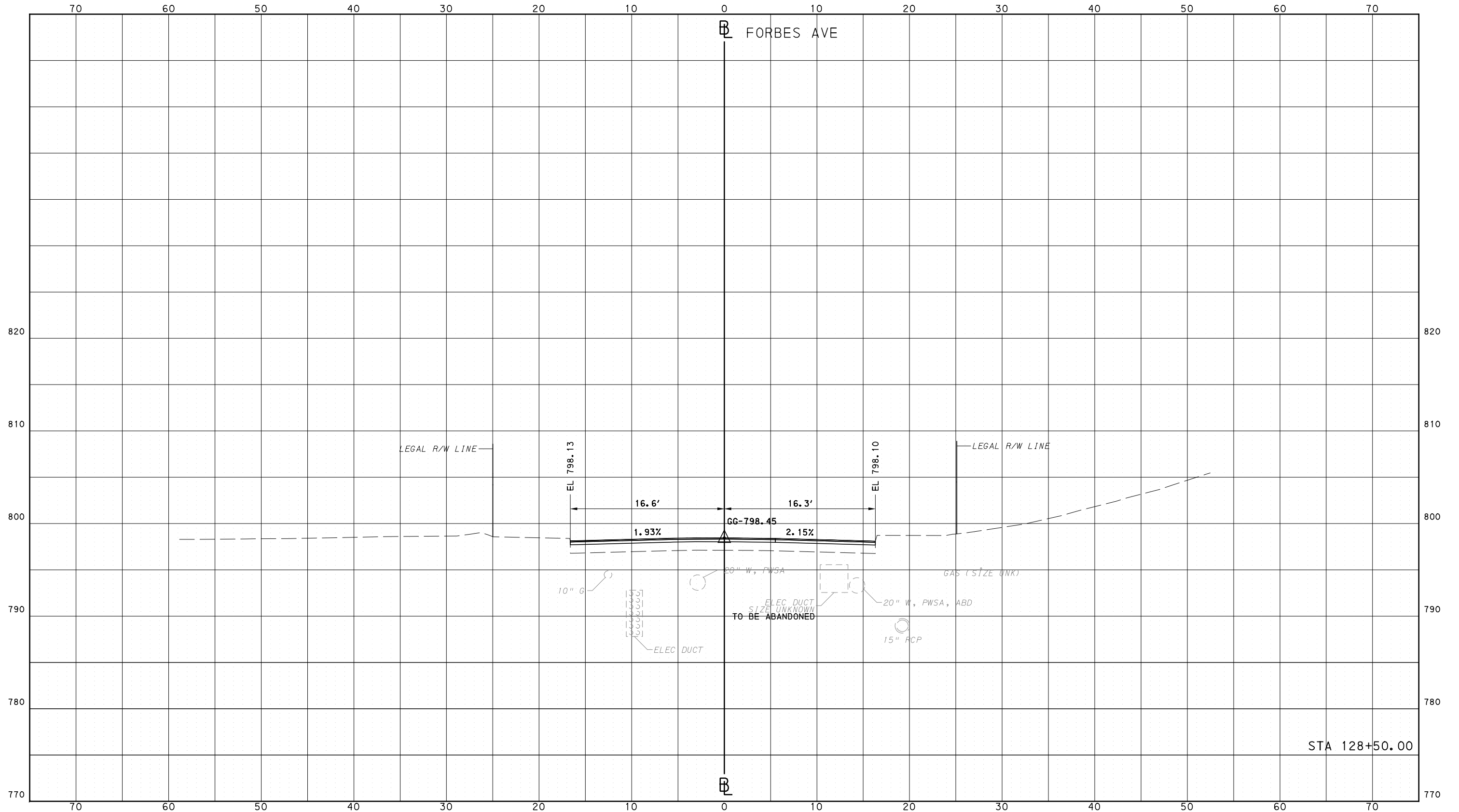
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CROSS SECTIONS  
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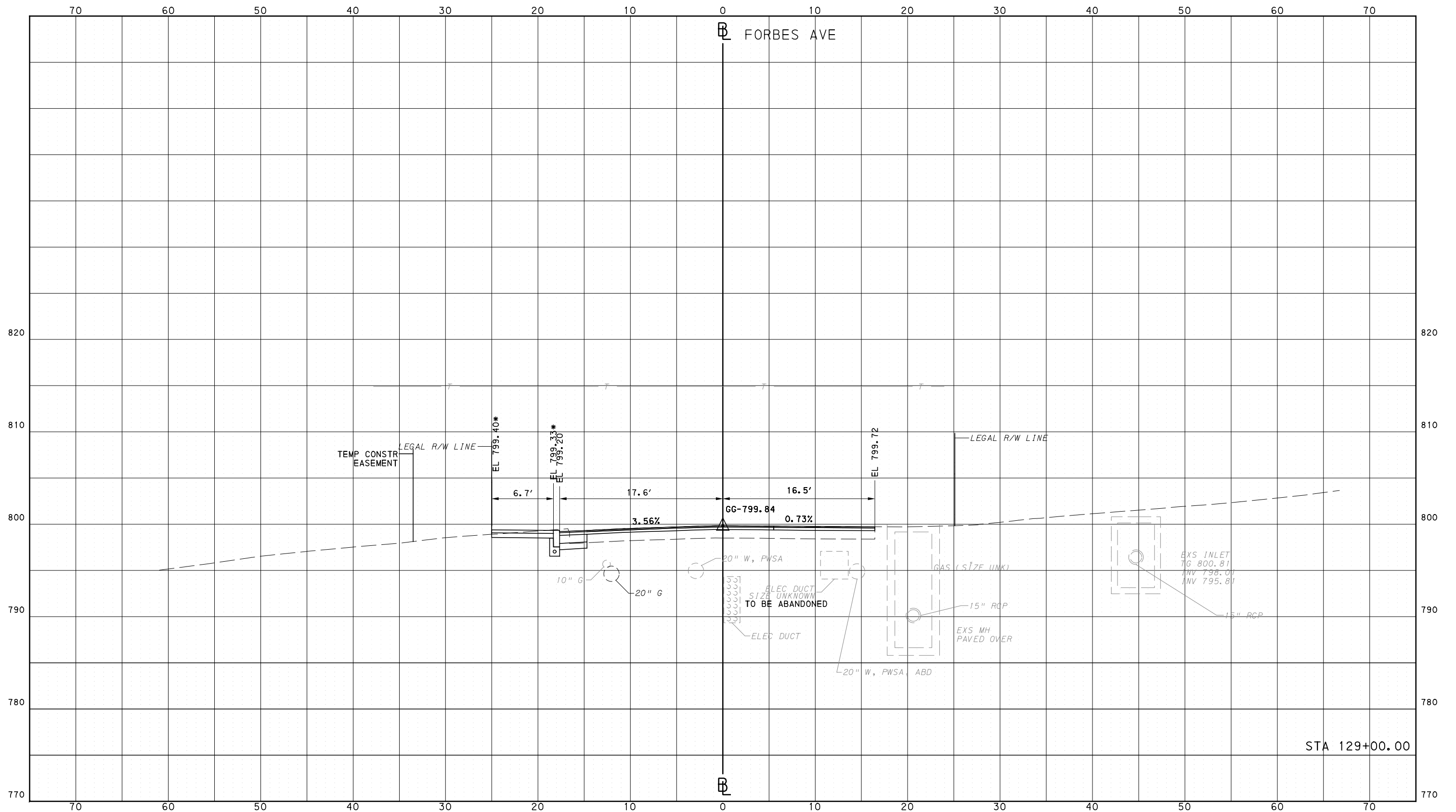
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\*TOP OF CURB ELEVATION AND SIDEWALK SLOPES TO BE DETERMINED PER ITEM 01900.001 - DESIGN OF CURB RAMPS



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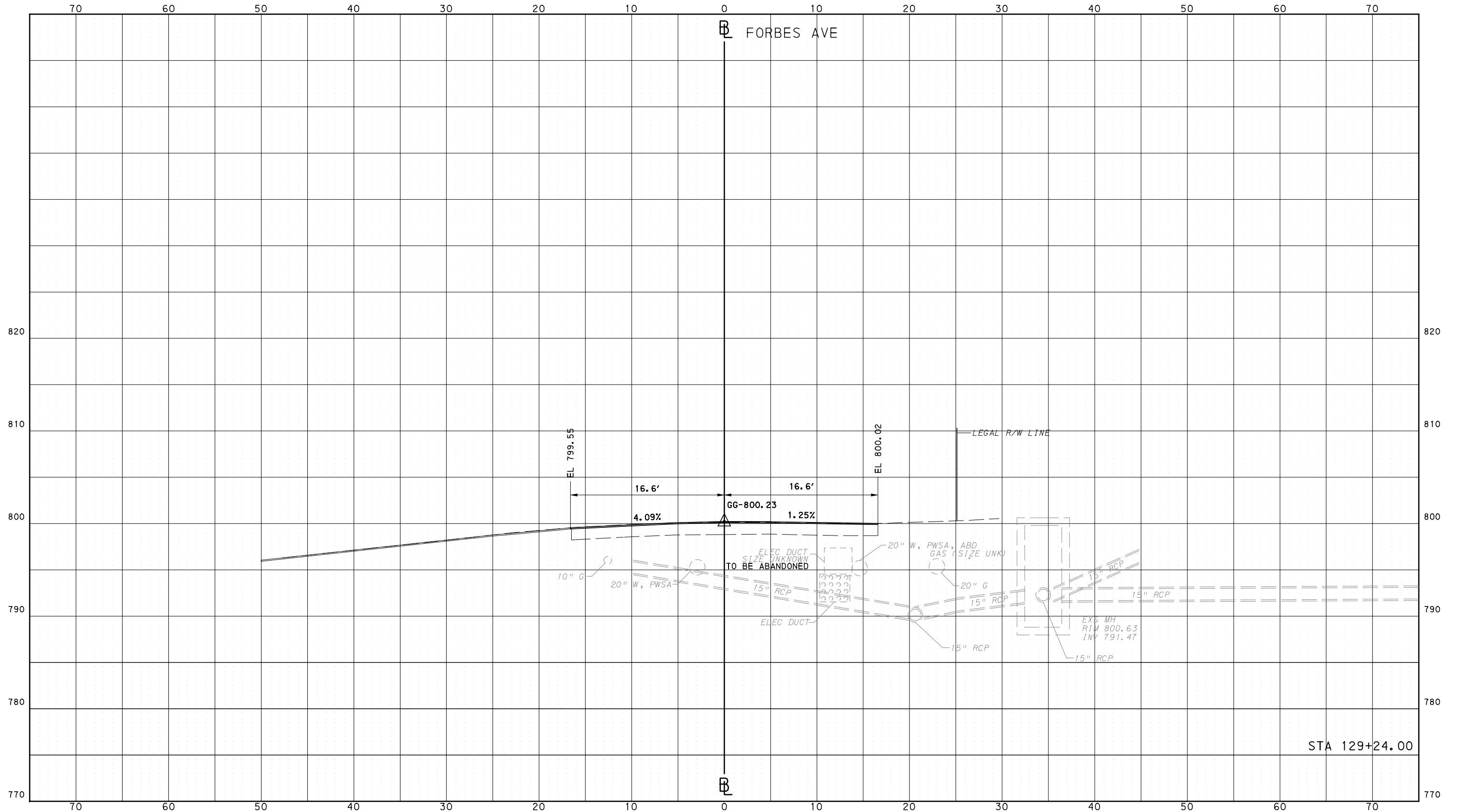
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**BUS RAPID TRANSIT  
CROSS SECTIONS  
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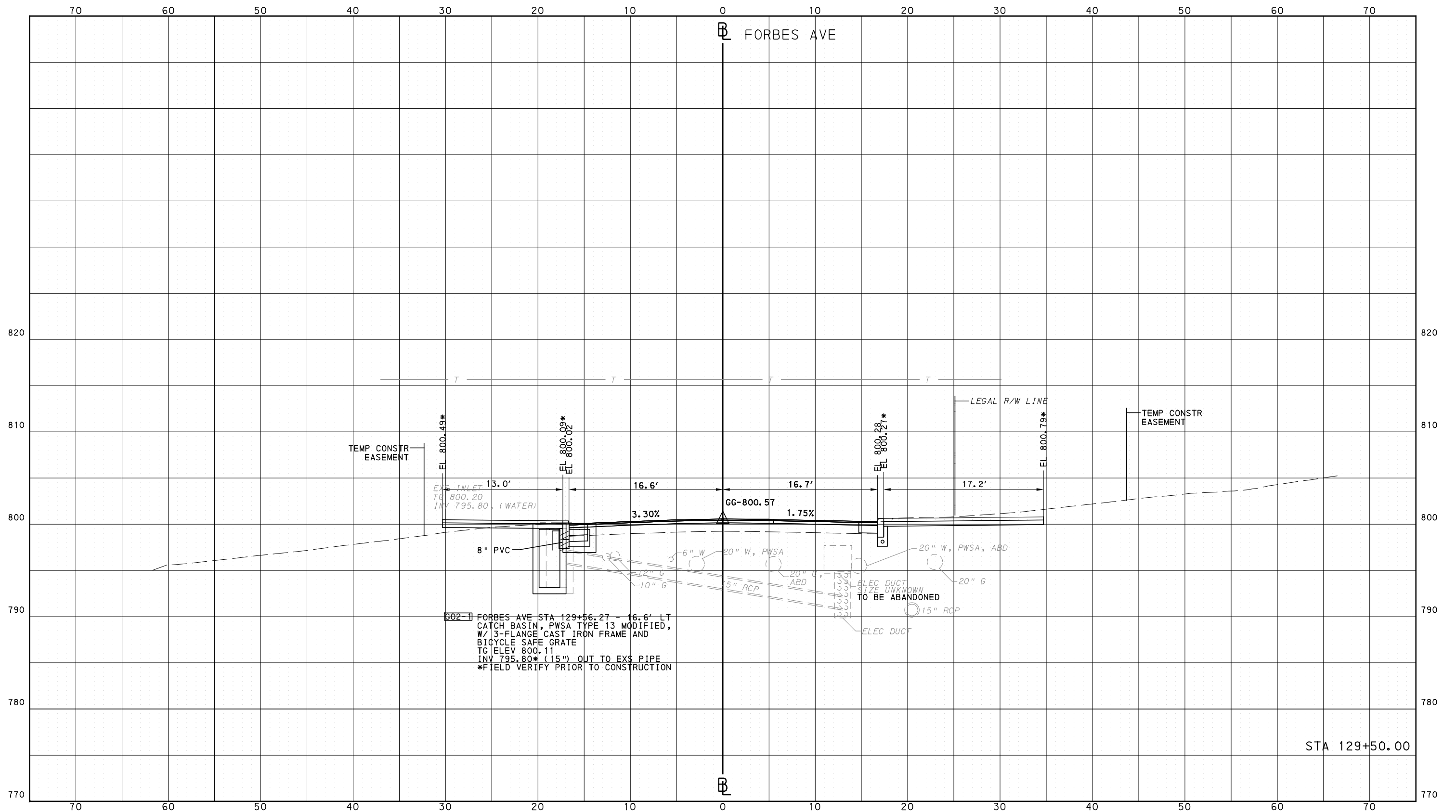
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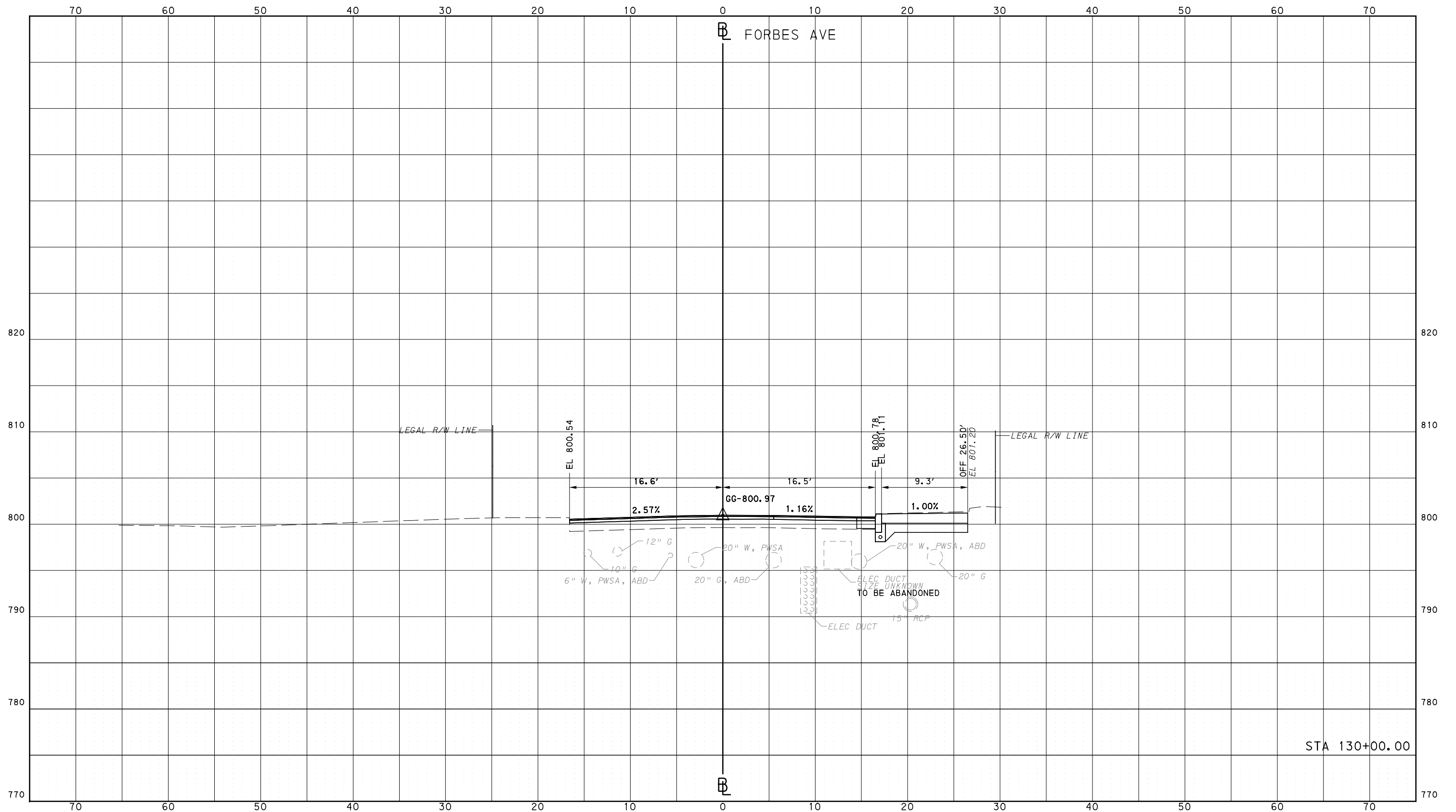
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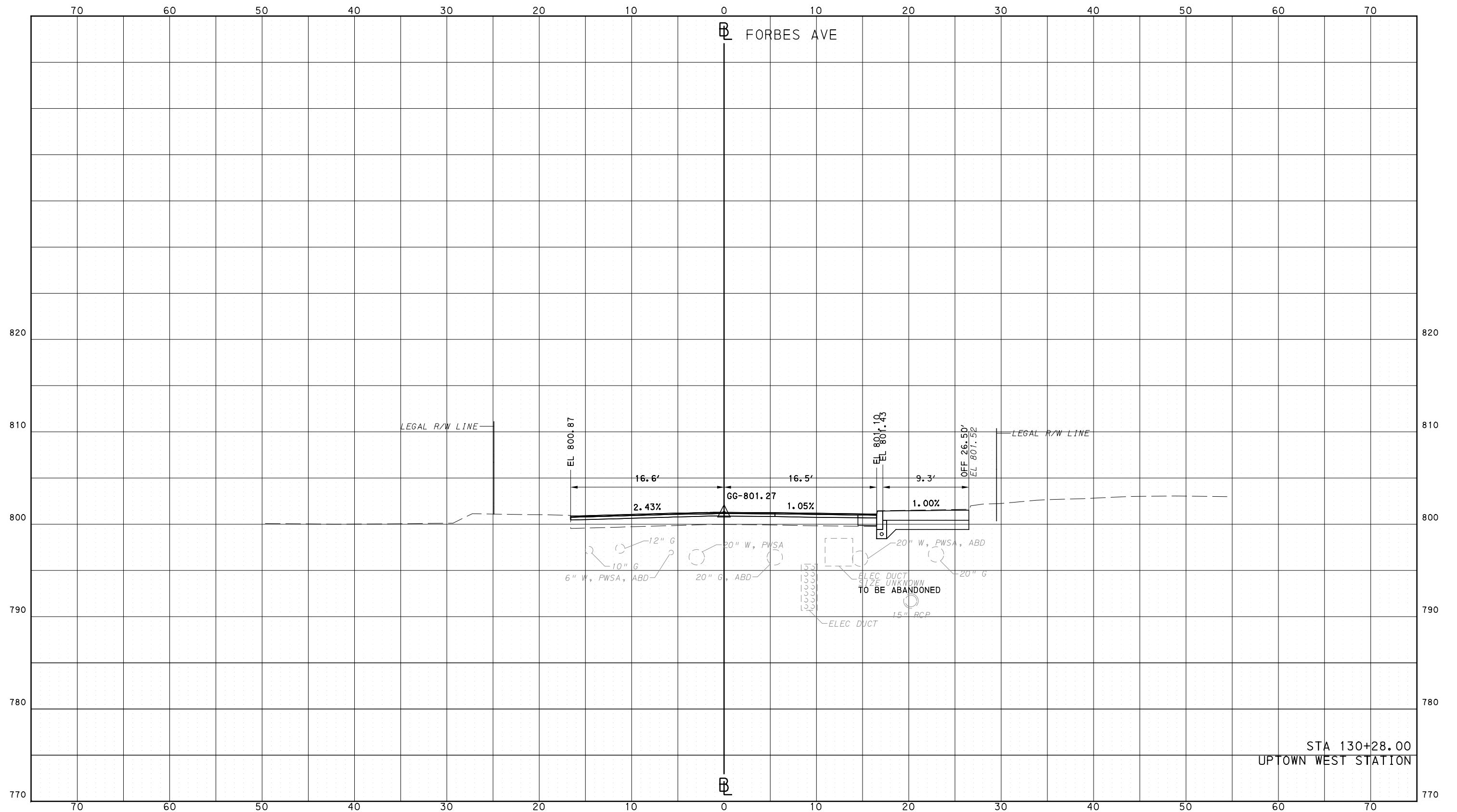
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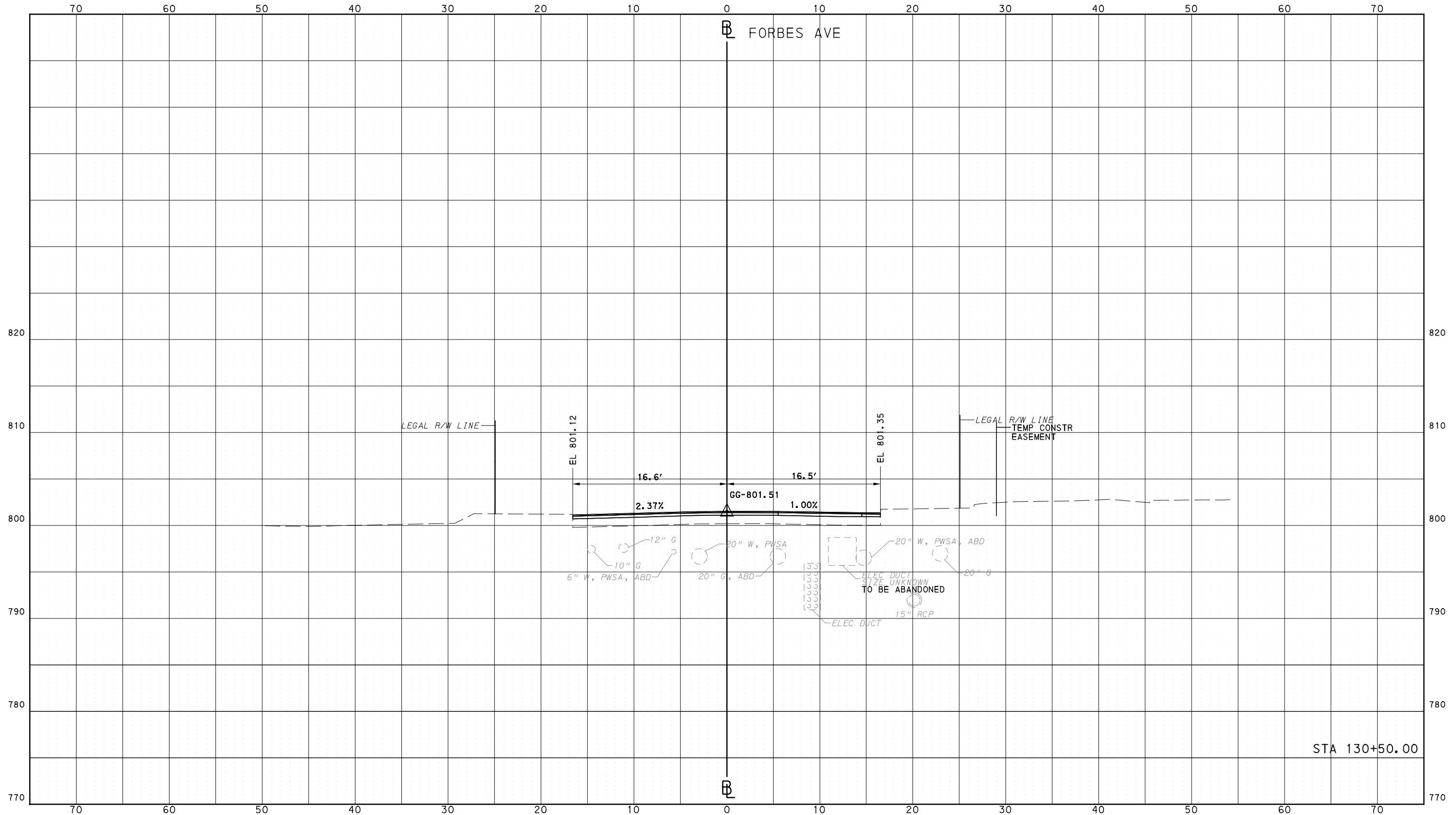


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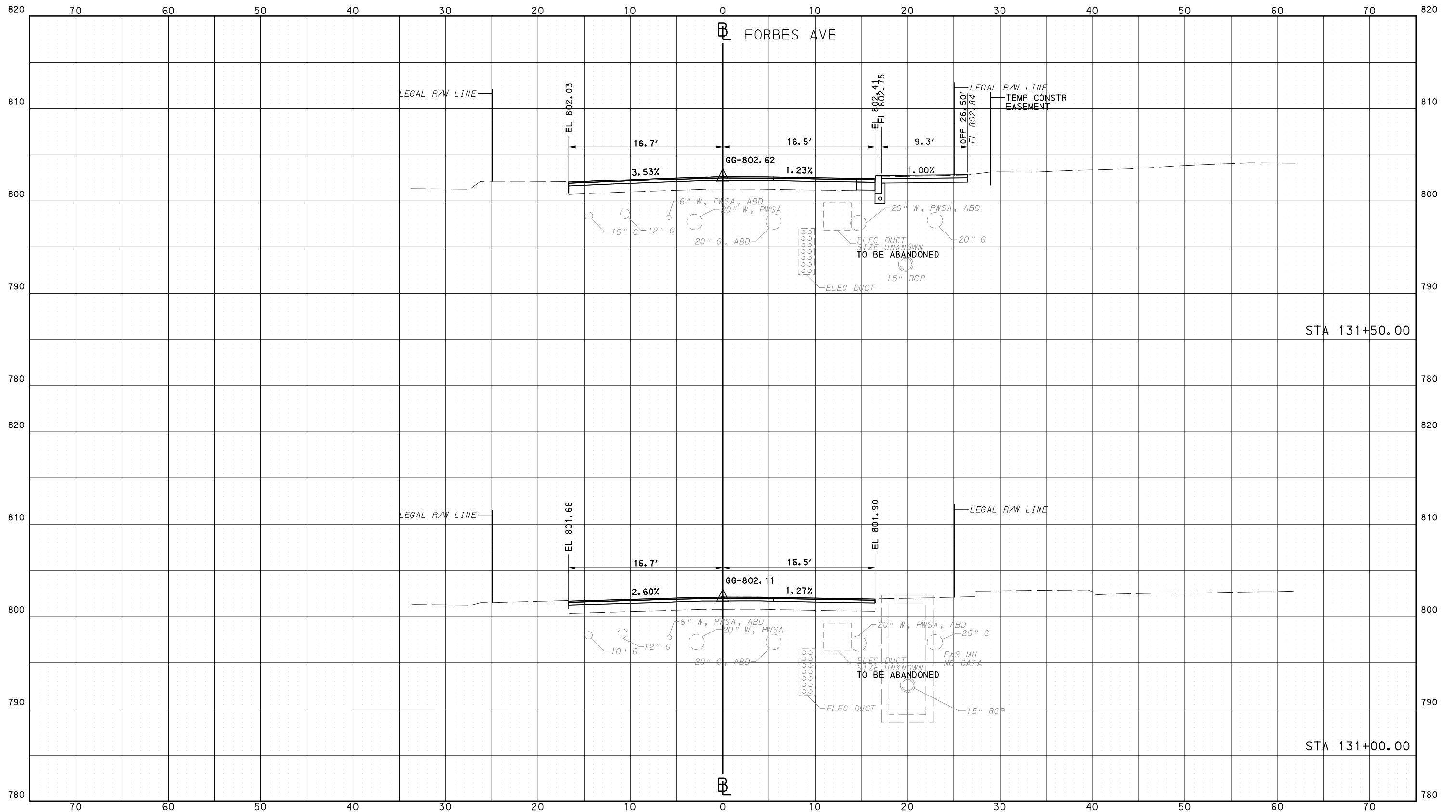
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**BUS RAPID TRANSIT  
CROSS SECTIONS  
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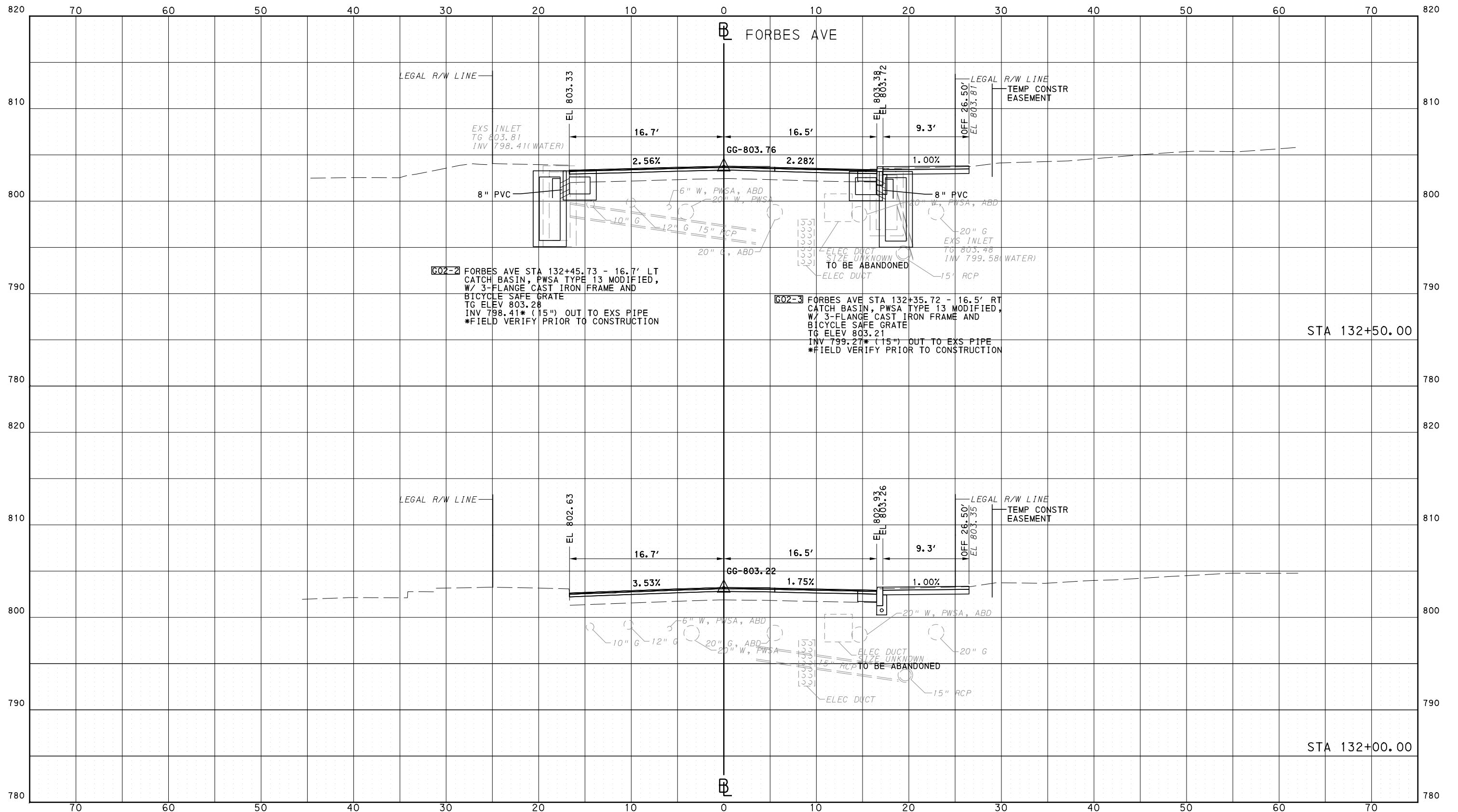
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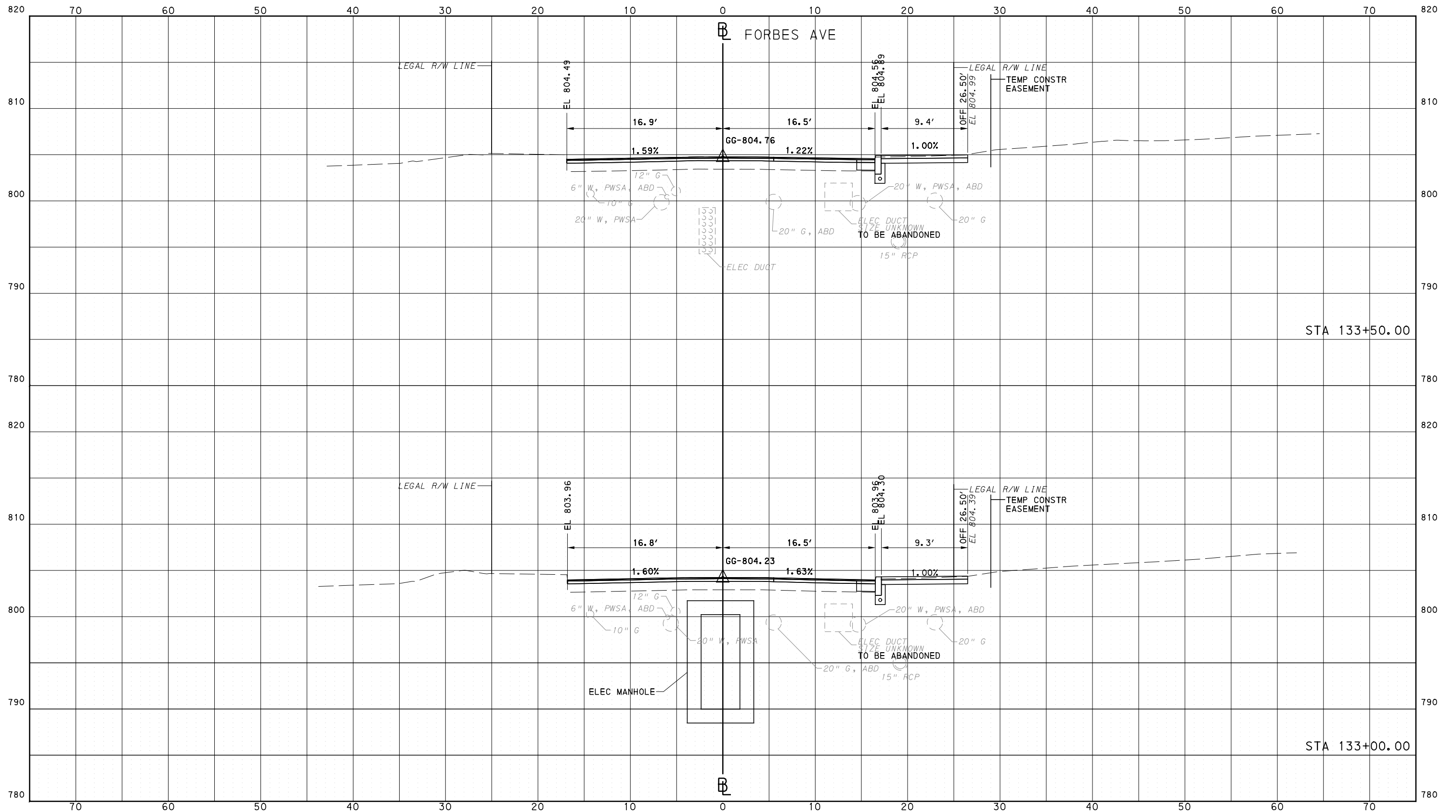


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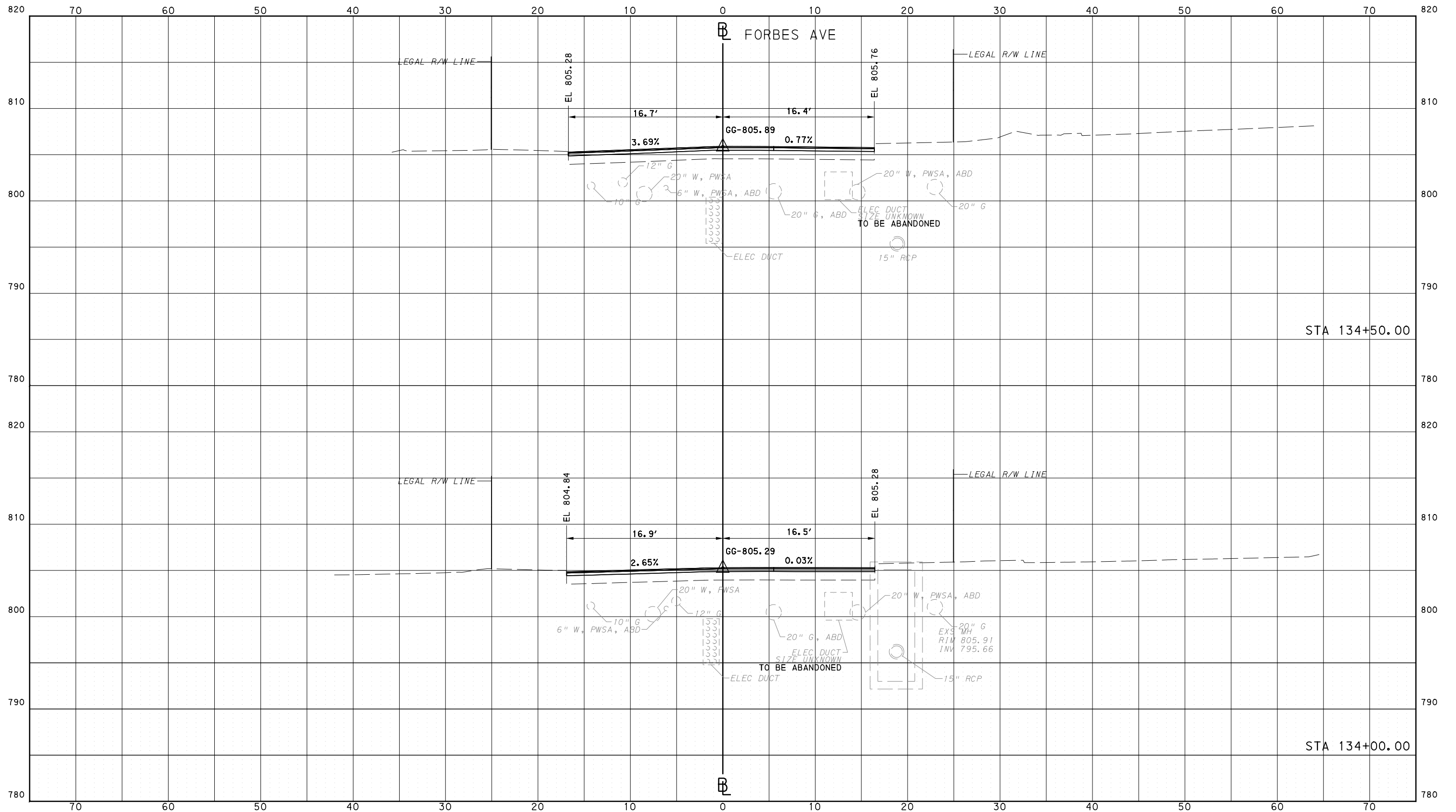
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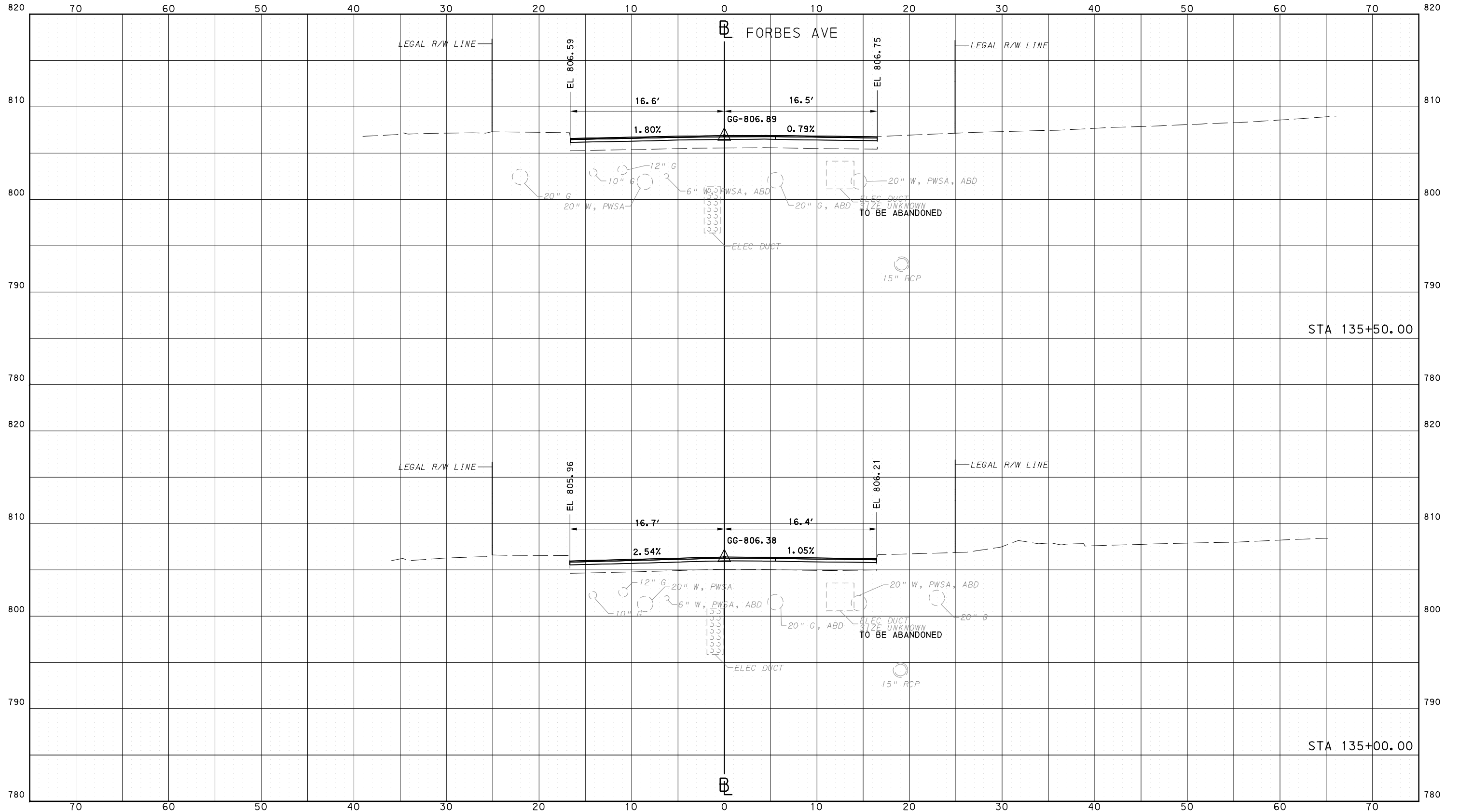
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**(NOT FOR CONSTRUCTION)**

DESIGNED	RRH
DRAWN	DVP
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IN CHARGE	GEC
DATE	05/01/24
SCALE	0 5 10 FEET

PORT AUTHORITY OF ALLEGHENY COUNTY  
PITTSBURGH PENNSYLVANIA

BUS RAPID TRANSIT  
CROSS SECTIONS  
FORBES AVE - STA 135+00.00 TO STA 135+50.00



CONTRACT NO. BRT-001

DWG. NO. XS186

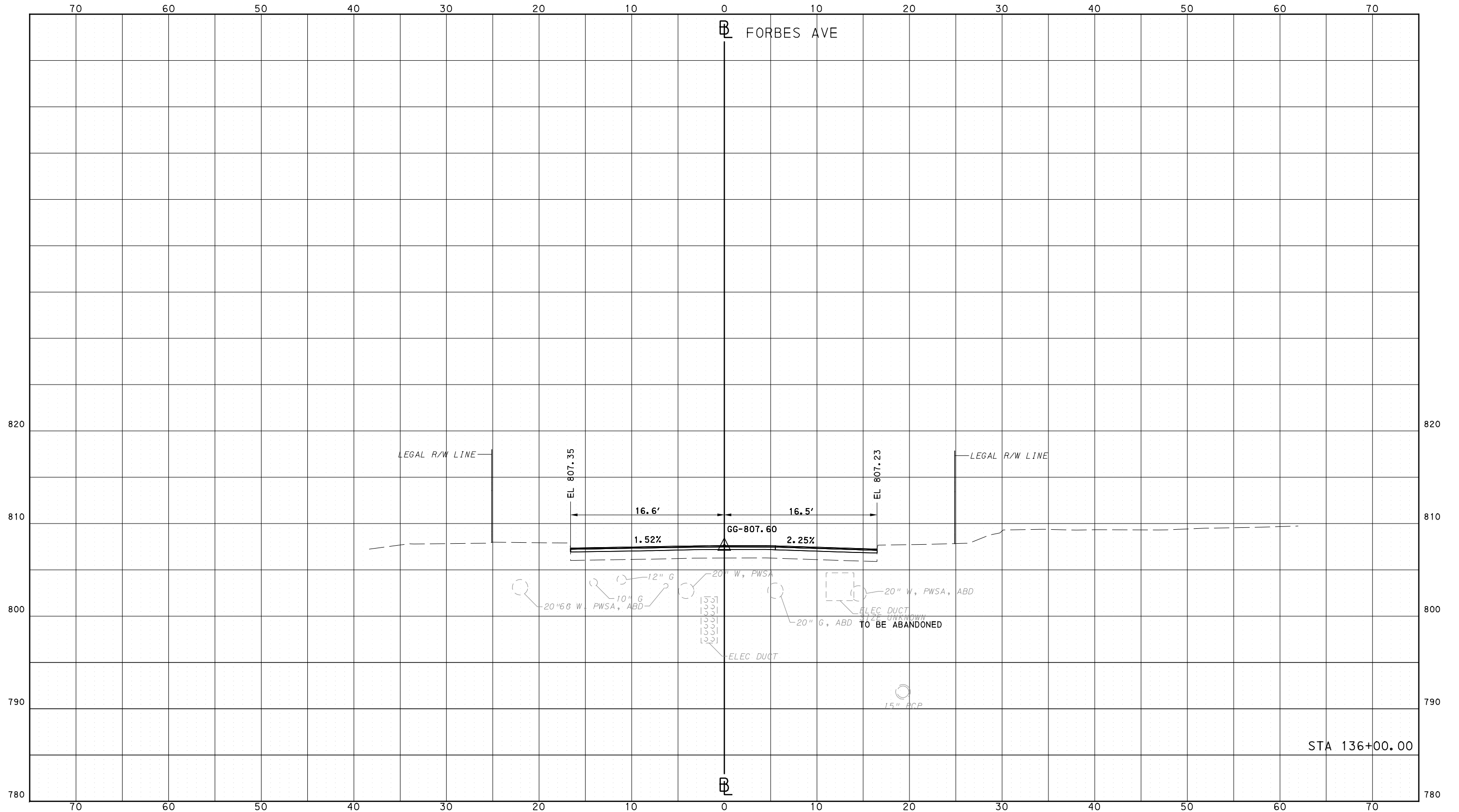
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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS



Gulf Tower  
707 Grant Street  
5th Floor  
Pittsburgh, PA 15219



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IN CHARGE	GEC
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SCALE	0 5 10 FEET

PORT AUTHORITY OF ALLEGHENY COUNTY  
PITTSBURGH PENNSYLVANIA

BUS RAPID TRANSIT  
CROSS SECTIONS  
FORBES AVE - STA 136+00.00



CONTRACT NO. BRT-001

DWG. NO. XS187

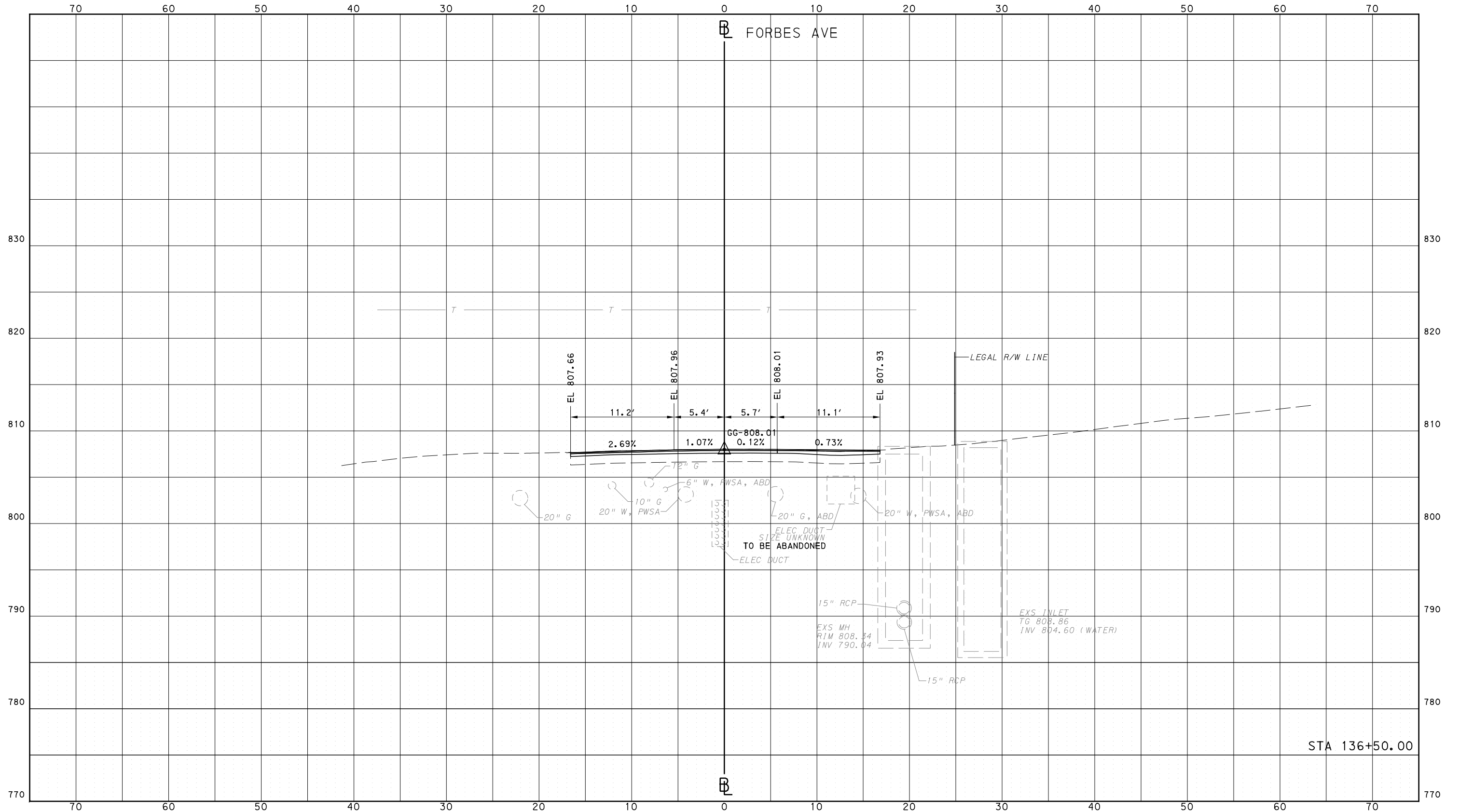
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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS



STA 136+50.00

**AECOM**  
 Gulf Tower  
 707 Grant Street  
 5th Floor  
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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
 PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT**  
 CROSS SECTIONS  
 FORBES AVE - STA 136+50.00

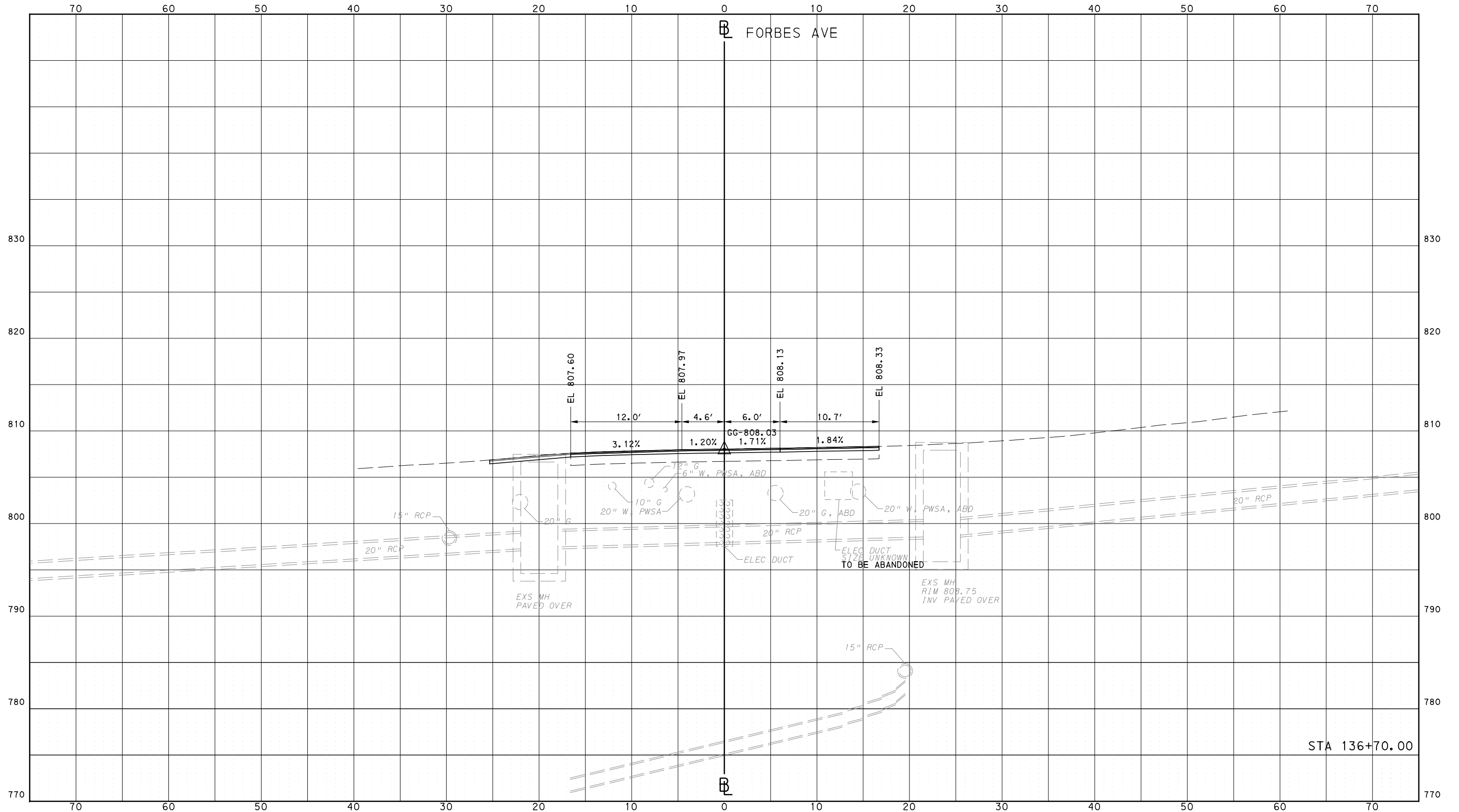
**Port Authority** connecting people to life

CONTRACT NO. BRT-001  
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5th Floor  
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PORT AUTHORITY OF ALLEGHENY COUNTY  
PITTSBURGH PENNSYLVANIA

BUS RAPID TRANSIT  
CROSS SECTIONS  
FORBES AVE - STA 136+70.00

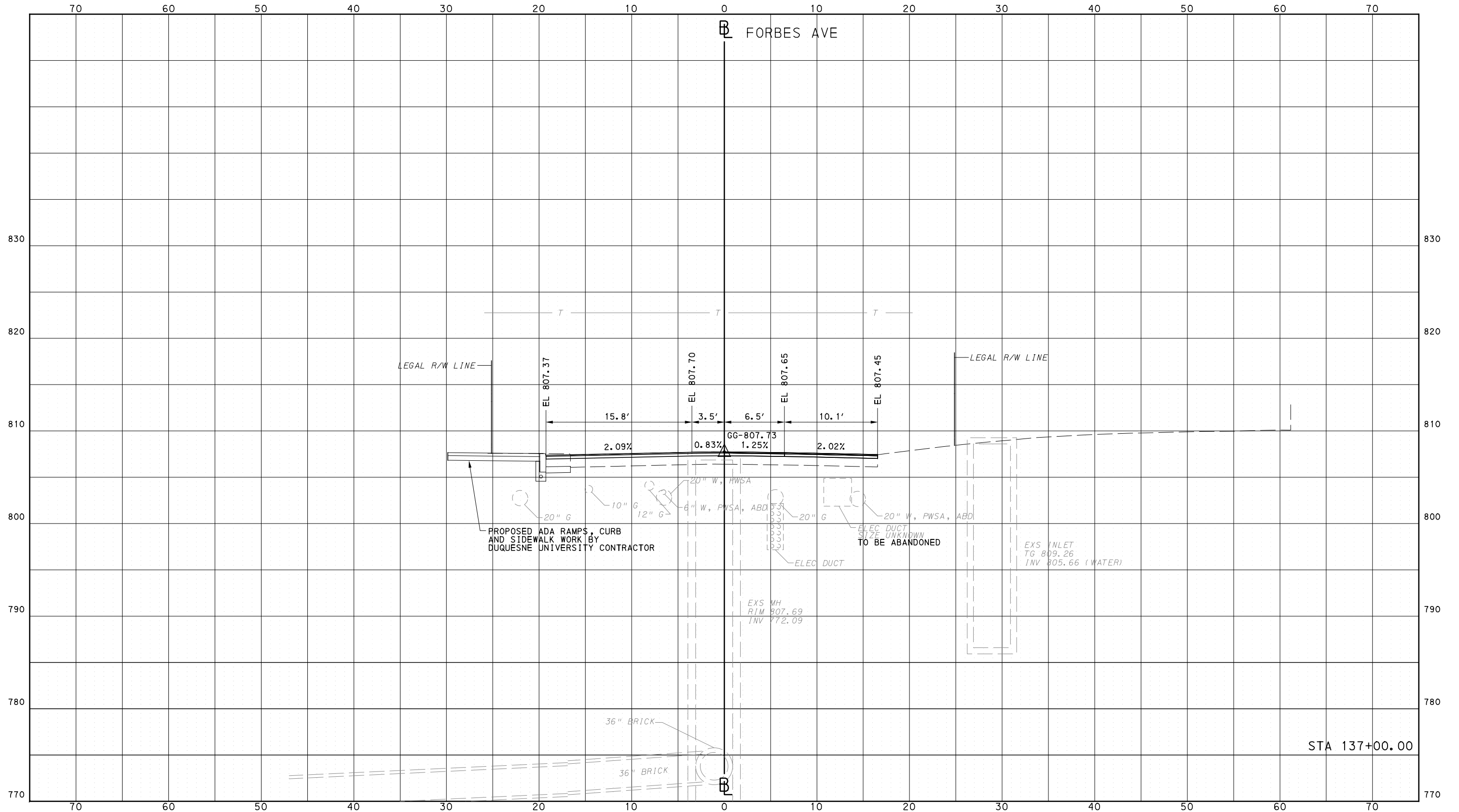


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PORT AUTHORITY OF ALLEGHENY COUNTY  
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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT**  
CROSS SECTIONS  
FORBES AVE - STA 137+00.00

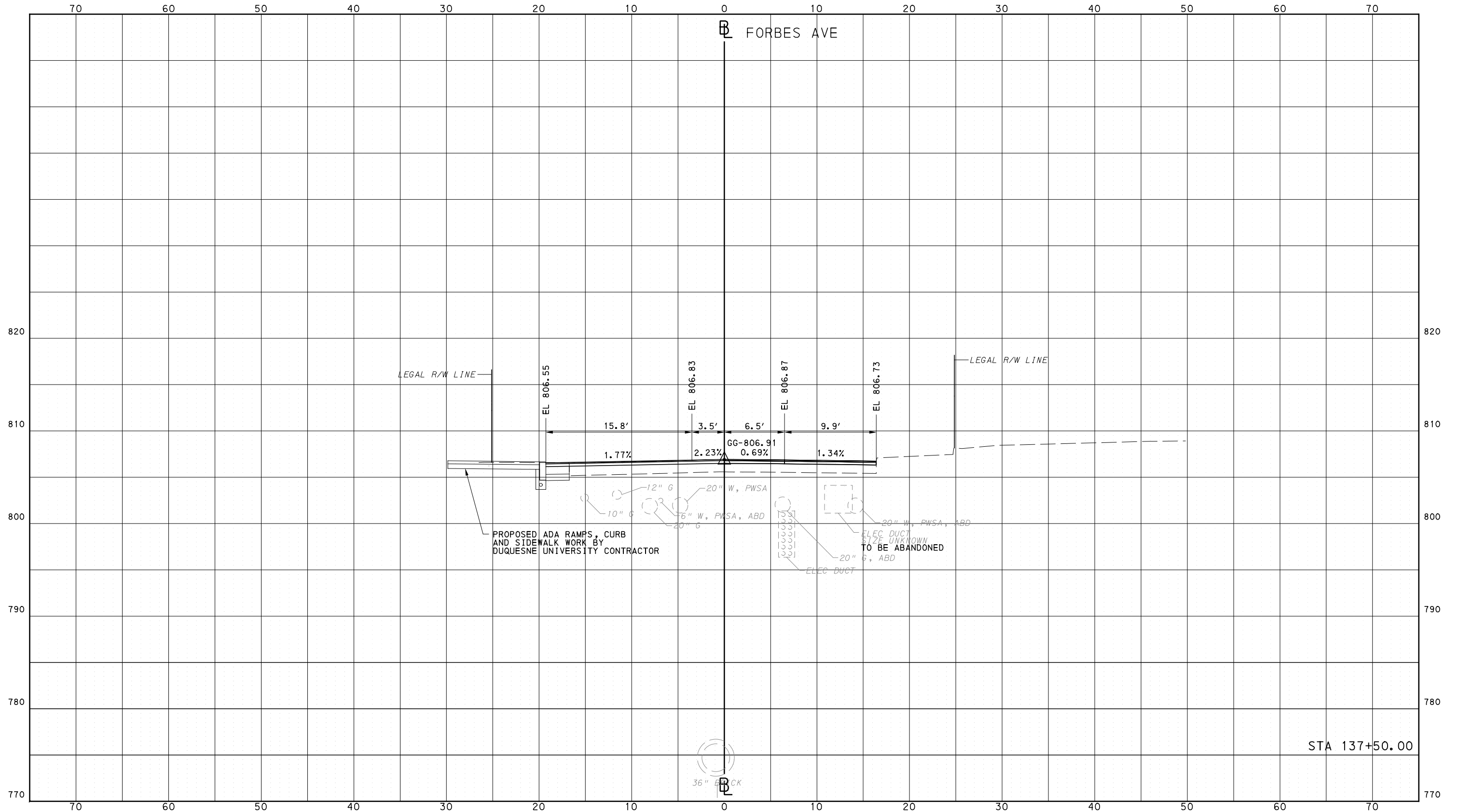
**Port Authority** connecting people to life

CONTRACT NO. BRT-001  
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PORT AUTHORITY OF ALLEGHENY COUNTY  
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STA 137+50.00



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IN CHARGE	GEC
DATE	05/01/24
SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

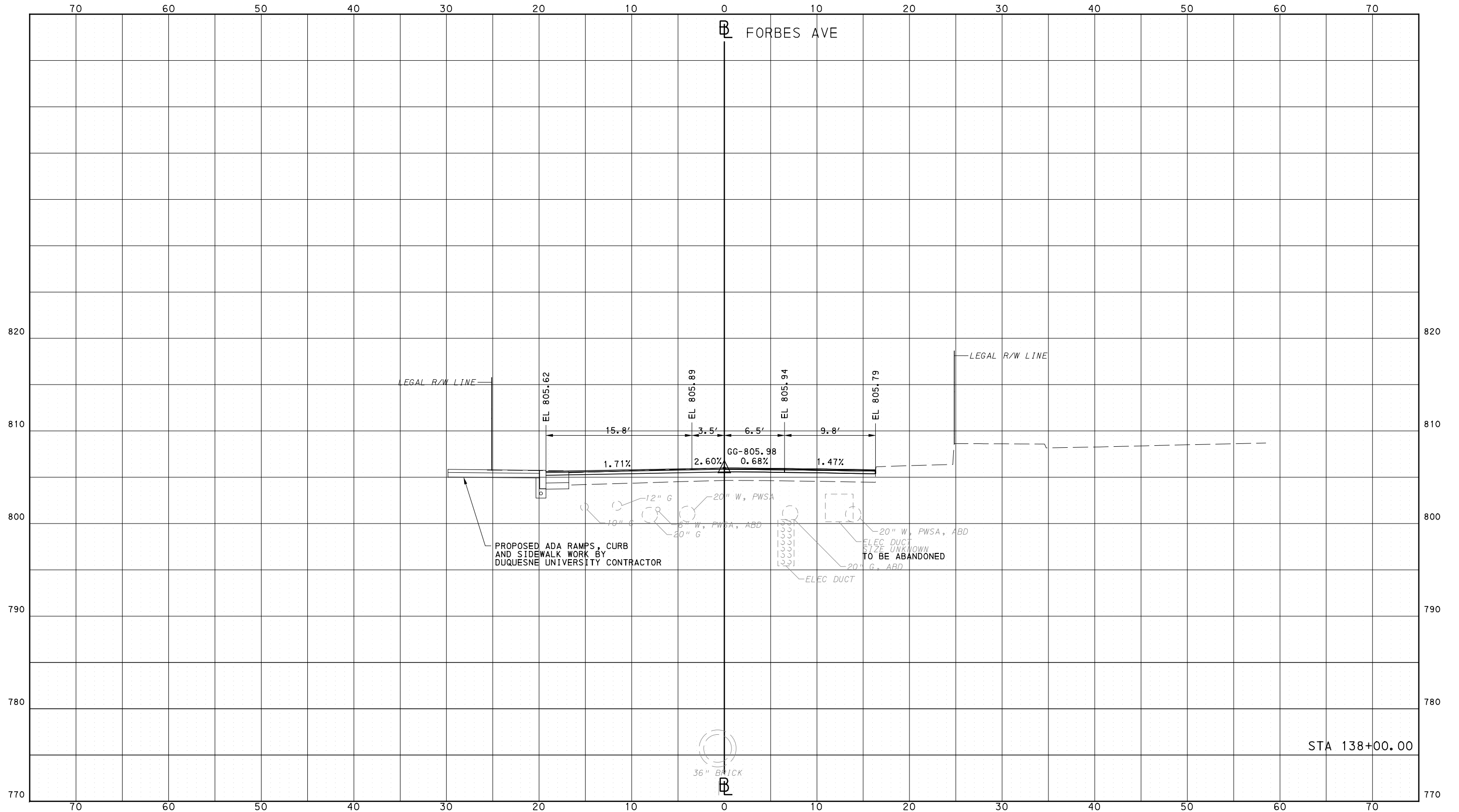
**BUS RAPID TRANSIT  
CROSS SECTIONS  
FORBES AVE - STA 137+50.00**

**Port Authority** connecting people to life

CONTRACT NO. BRT-001
DWG. NO. XS191
SHT. 1397

OPERATOR: "joseph.silich" FILE PATH: c:\pwworking\aescom.com\d0207632\p-brt-07\_xs\_base\_shts\1-50.dgn PLOTTED: 3/23/2024 10:52:36 AM

PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS



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**(NOT FOR CONSTRUCTION)**

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DATE	05/01/24
SCALE	0 5 10 FEET

PORT AUTHORITY OF ALLEGHENY COUNTY  
PITTSBURGH PENNSYLVANIA

BUS RAPID TRANSIT  
CROSS SECTIONS  
FORBES AVE - STA 138+00.00



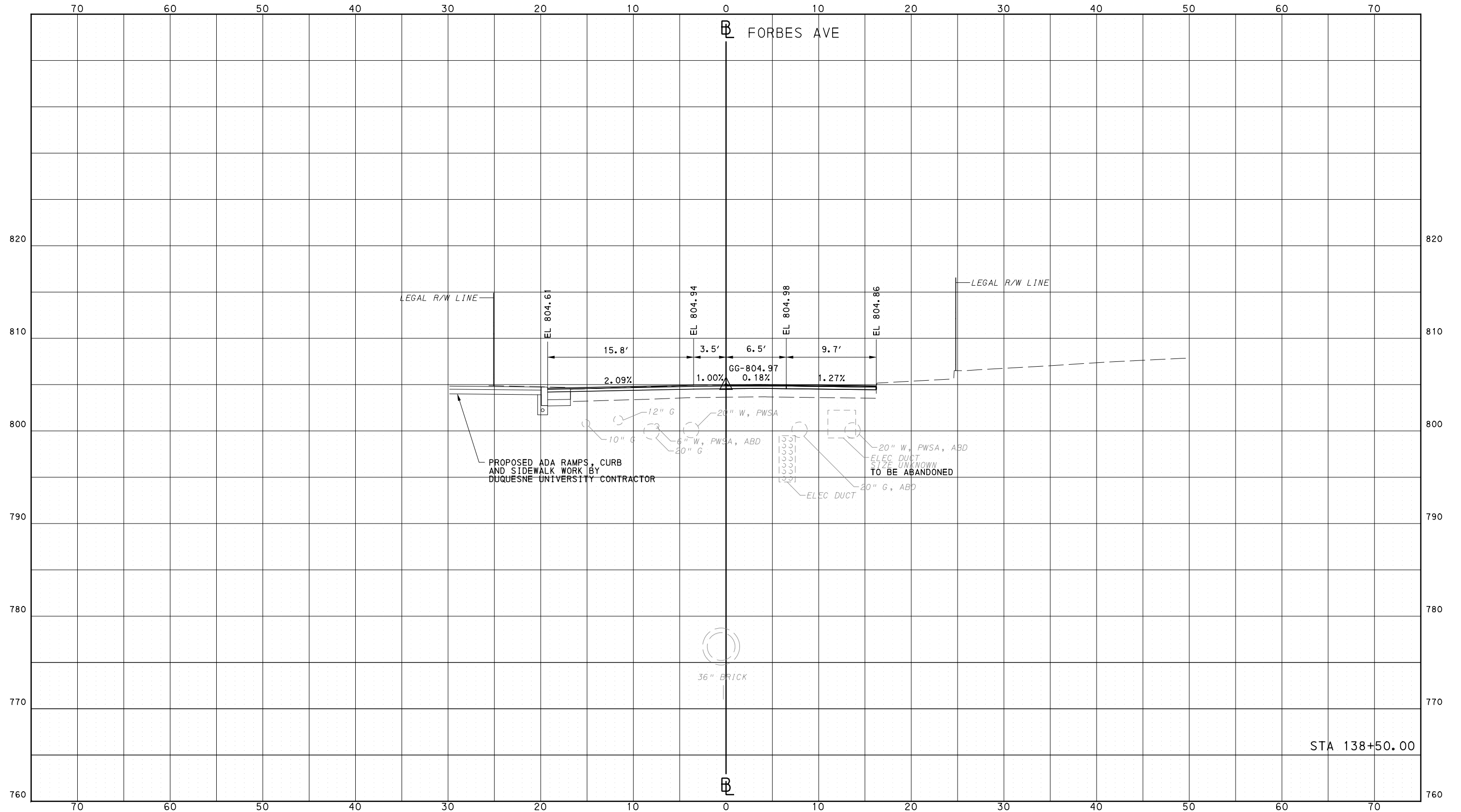
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PORT AUTHORITY OF ALLEGHENY COUNTY  
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DESIGNED	RRH
DRAWN	DVP
CHECKED	KCF
IN CHARGE	GEC
DATE	05/01/24
SCALE	0 5 10 FEET

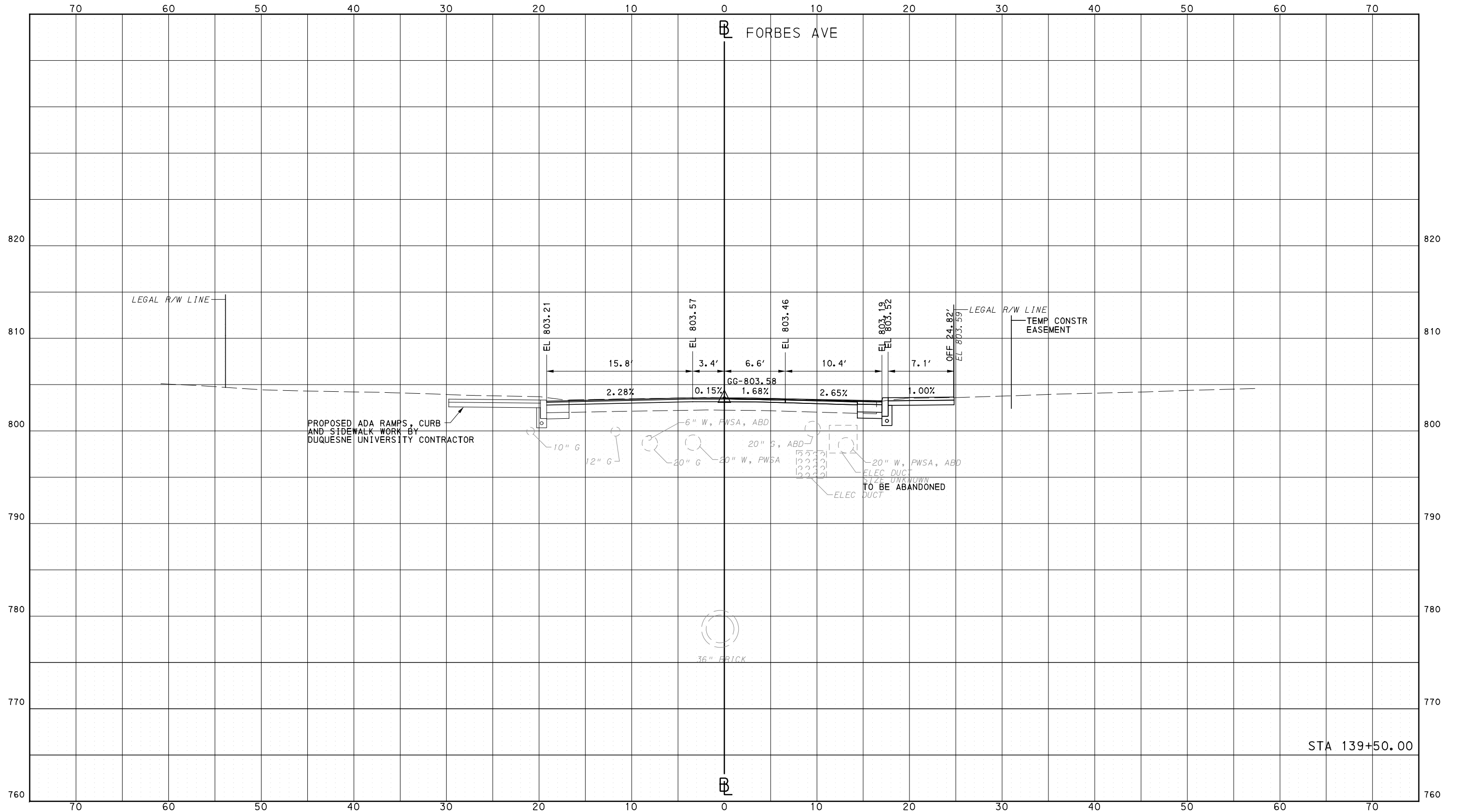
<b>PORT AUTHORITY OF ALLEGHENY COUNTY</b> PITTSBURGH PENNSYLVANIA		
<b>BUS RAPID TRANSIT</b> CROSS SECTIONS FORBES AVE - STA 138+50.00		
<b>Port Authority</b> <small>connecting people to life</small>	CONTRACT NO. BRT-001	SHT. 1399
	DWG. NO. XS193	



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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS



Gulf Tower  
707 Grant Street  
5th Floor  
Pittsburgh, PA 15219



GANNETT FLEMING, INC.  
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Suite 400  
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Pittsburgh, PA. 15220

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IN CHARGE	GEC
DATE	05/01/24
SCALE	0 5 10 FEET

PORT AUTHORITY OF ALLEGHENY COUNTY  
PITTSBURGH PENNSYLVANIA

BUS RAPID TRANSIT  
CROSS SECTIONS  
FORBES AVE - STA 139+50.00



CONTRACT NO. BRT-001

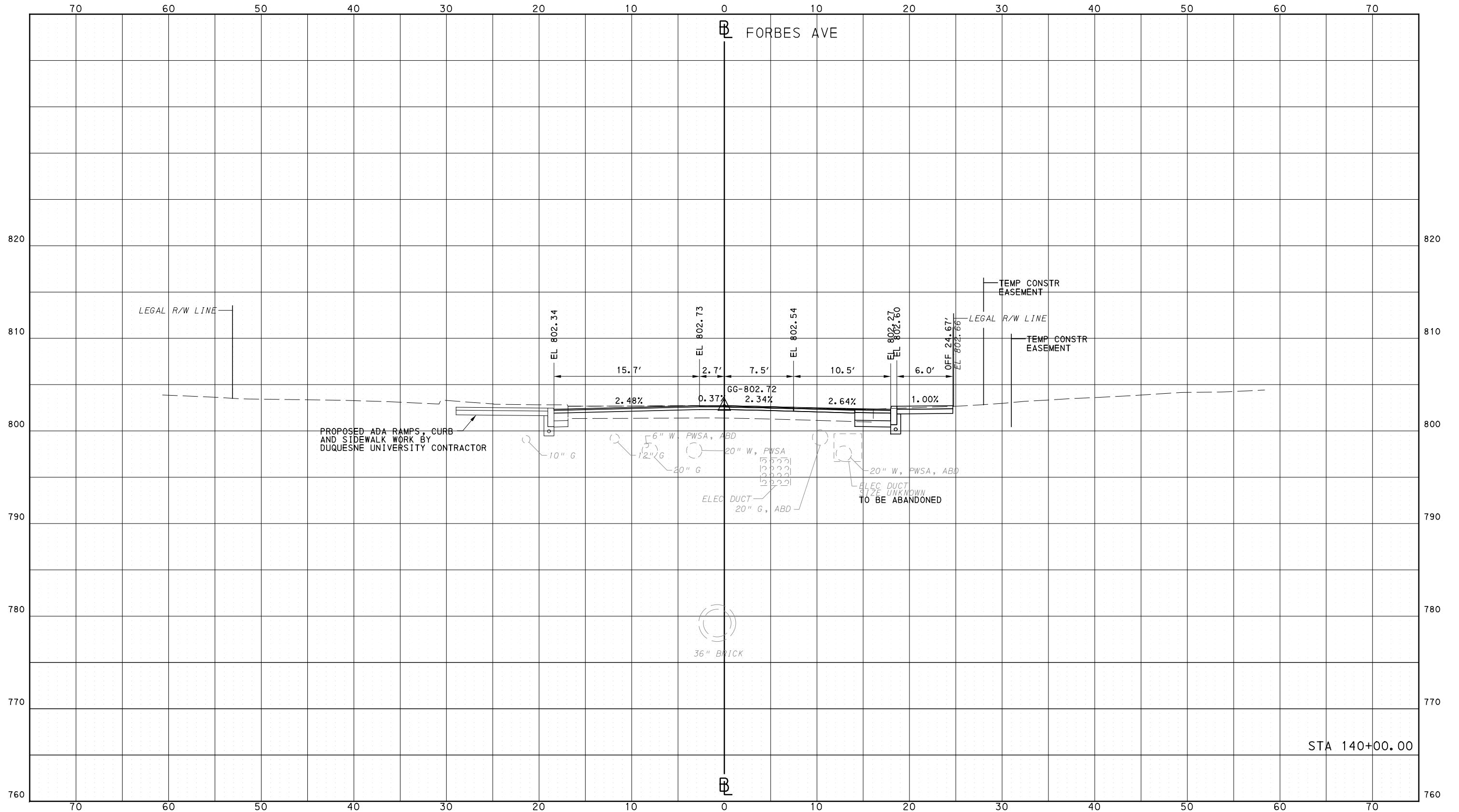
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Pittsburgh, PA. 15220

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IN CHARGE	GEC
DATE	05/01/24
SCALE	0 5 10 FEET

PORT AUTHORITY OF ALLEGHENY COUNTY  
PITTSBURGH PENNSYLVANIA

BUS RAPID TRANSIT  
CROSS SECTIONS  
FORBES AVE - STA 140+00.00



CONTRACT NO. BRT-001

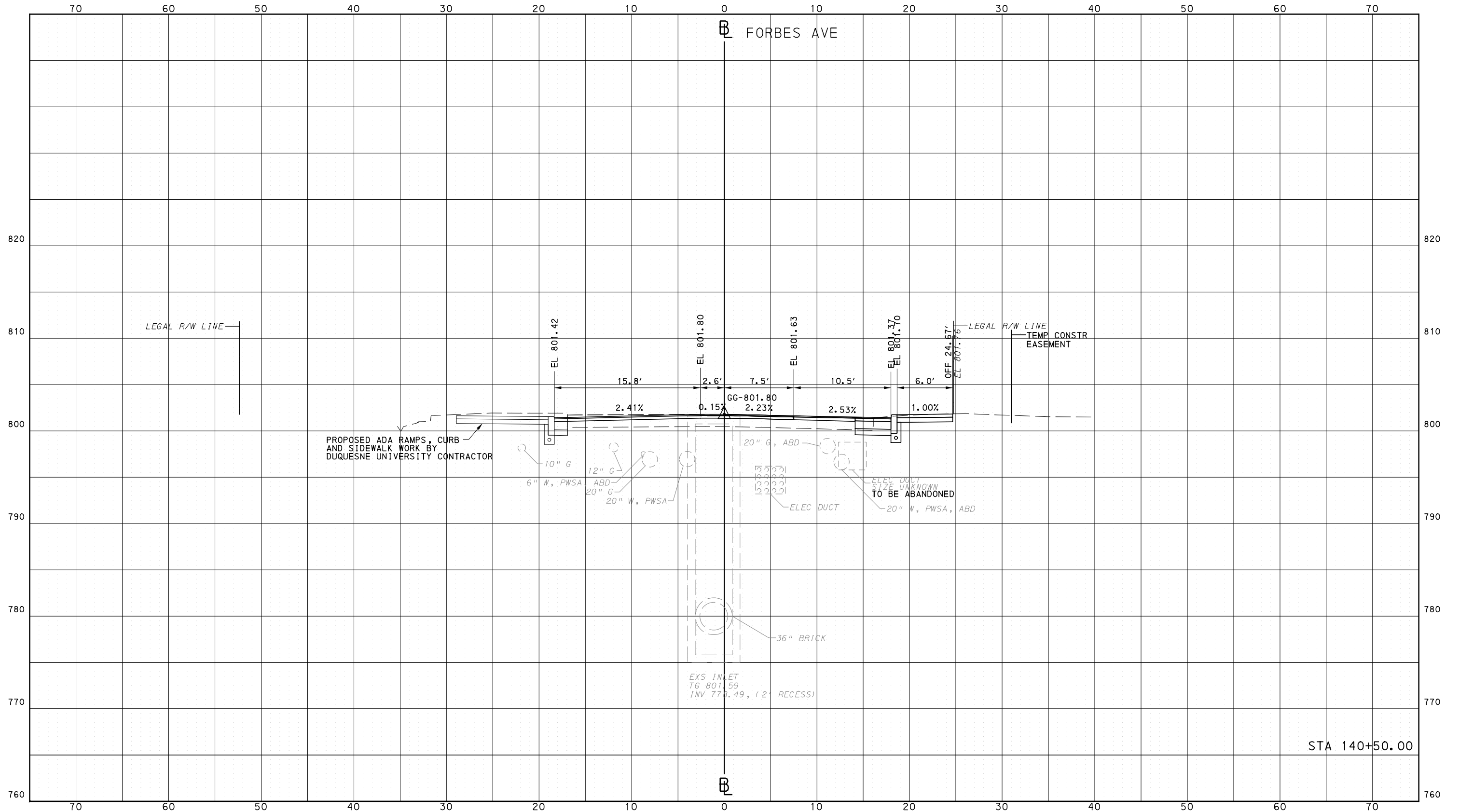
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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS



**AECOM**  
Gulf Tower  
707 Grant Street  
5th Floor  
Pittsburgh, PA 15219

**GANNETT FLEMING**  
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DESIGNED	RRH
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IN CHARGE	GEC
DATE	05/01/24
SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

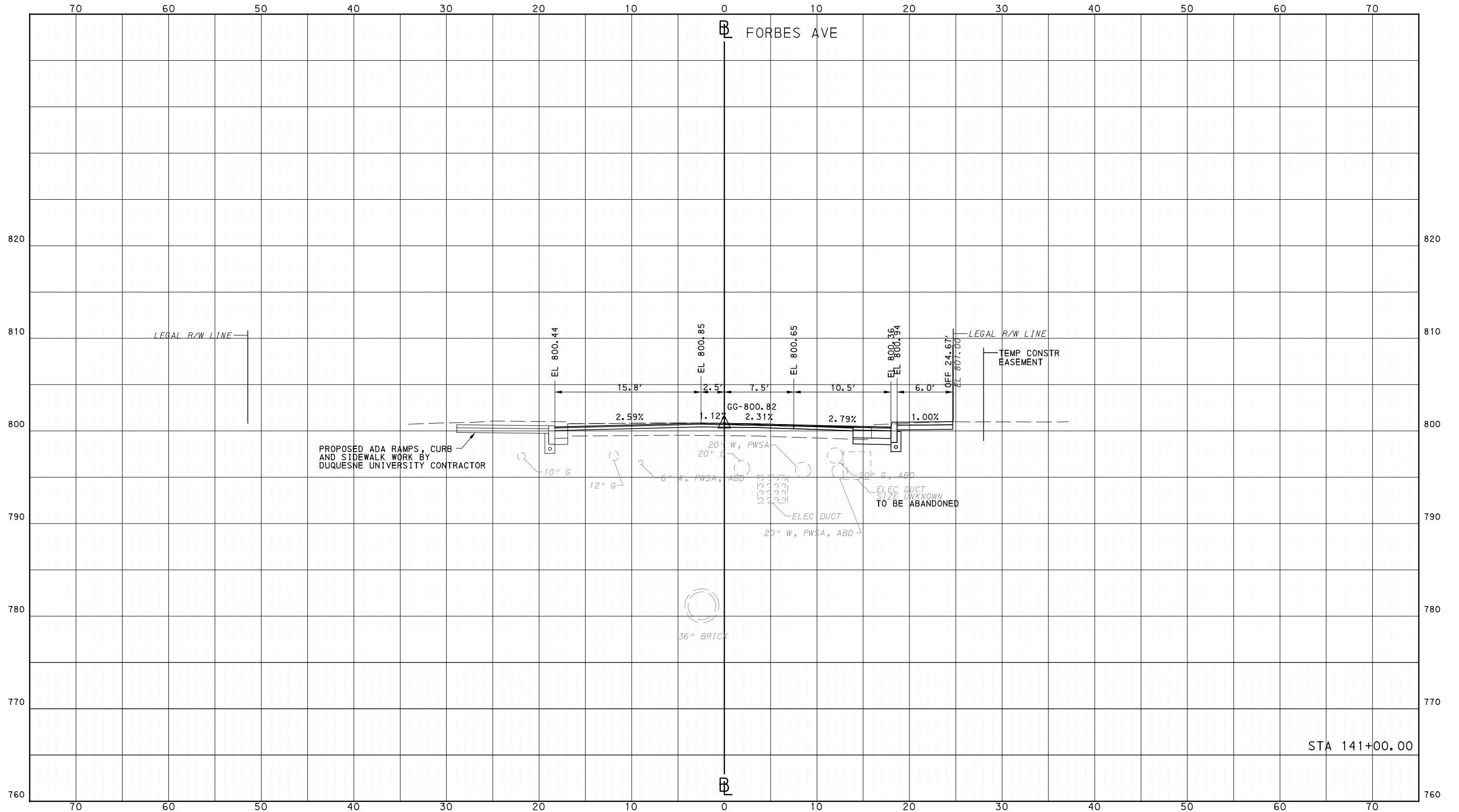
**BUS RAPID TRANSIT**  
CROSS SECTIONS  
FORBES AVE - STA 140+50.00

**Port Authority** connecting people to life

CONTRACT NO. BRT-001  
DWG. NO. XS197 SHT. 1403

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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT  
CROSS SECTIONS  
FORBES AVE - STA 141+00.00**

**Port Authority** connecting people to life

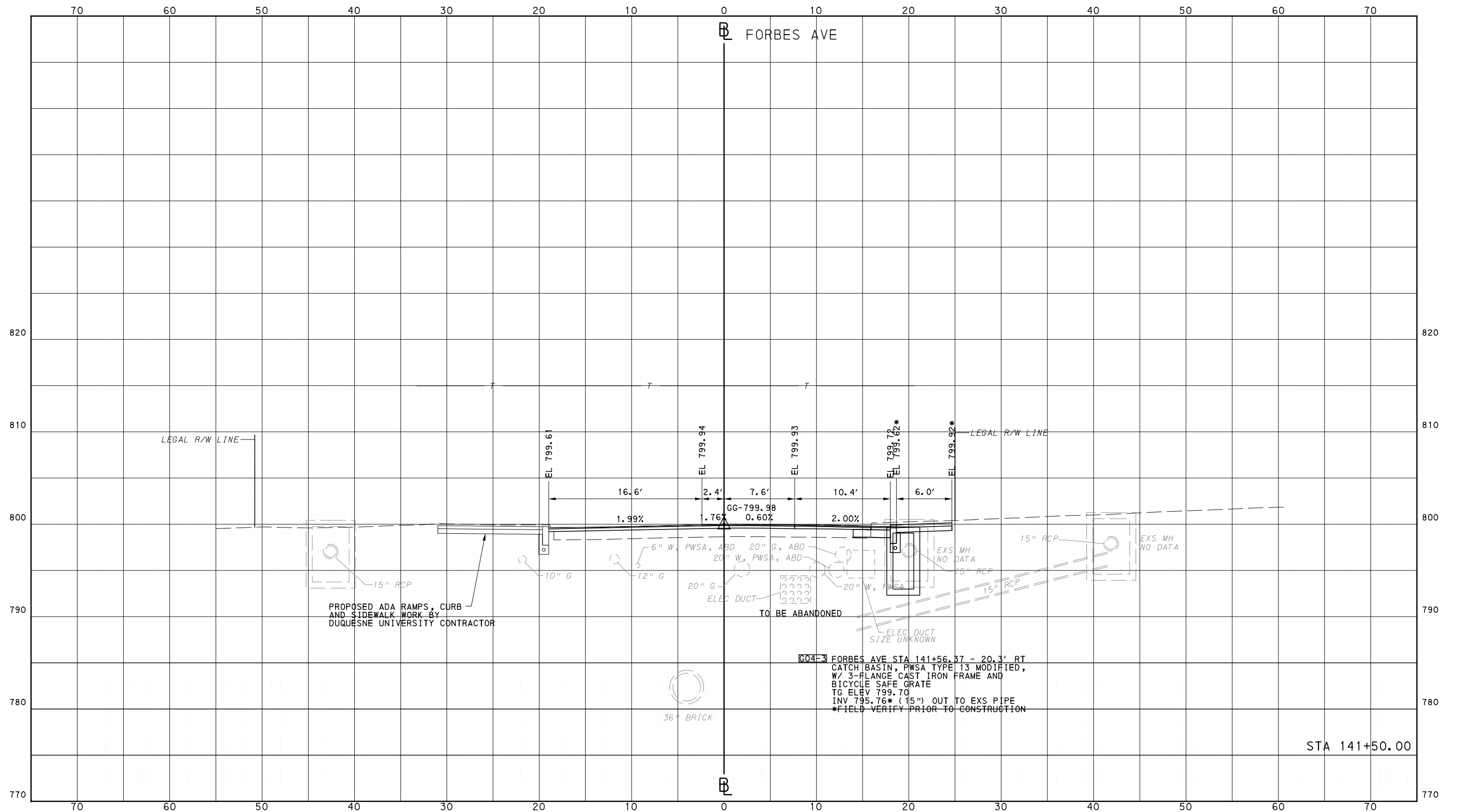
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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS

\*TOP OF CURB ELEVATION AND SIDEWALK SLOPES TO BE DETERMINED PER ITEM 01900.001 - DESIGN OF CURB RAMPS



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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
 PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT**  
 CROSS SECTIONS  
 FORBES AVE - STA 141+50.00

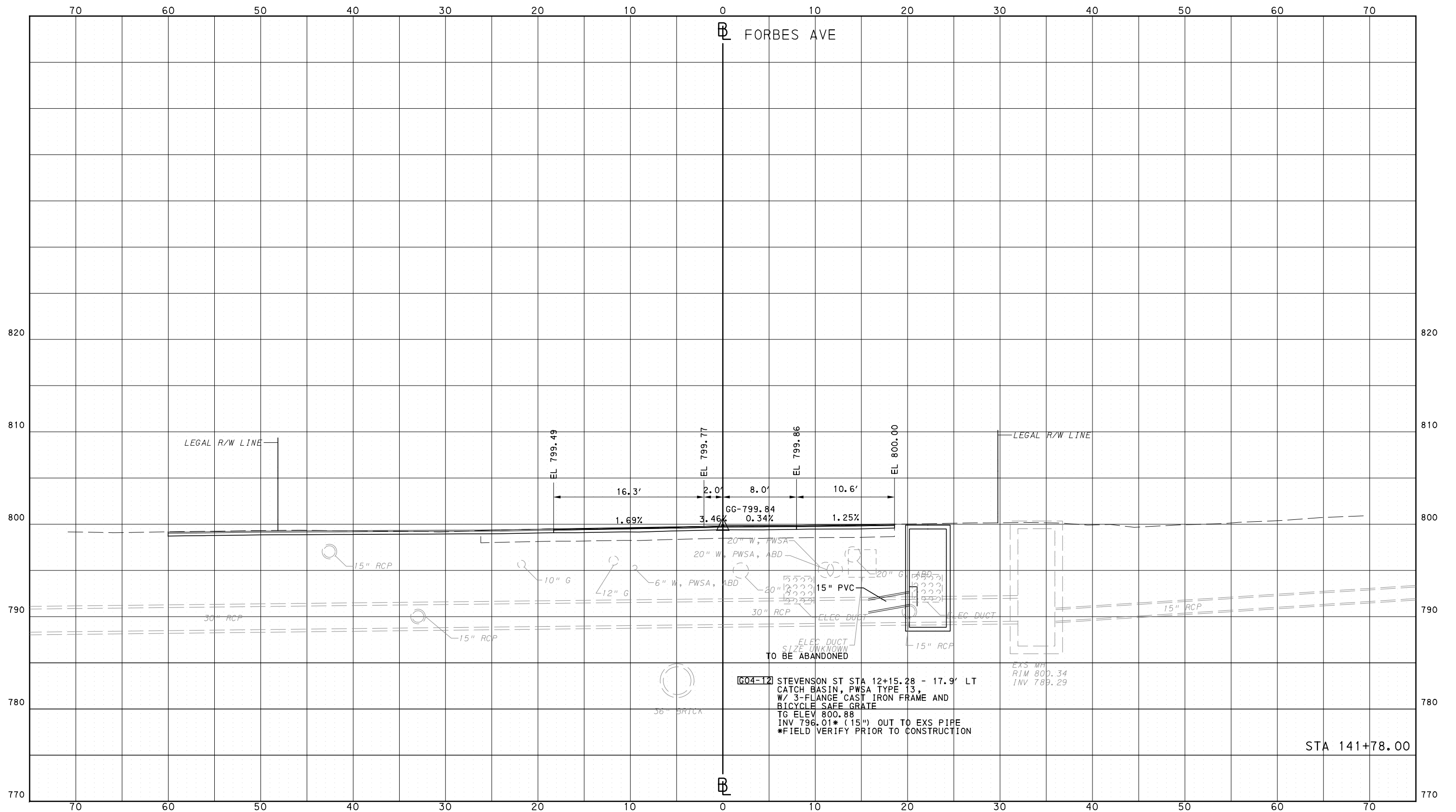
**Port Authority** connecting people to life

CONTRACT NO. BRT-001  
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 PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT**  
 CROSS SECTIONS  
 FORBES AVE - STA 141+78.00

**Port Authority** connecting people to life

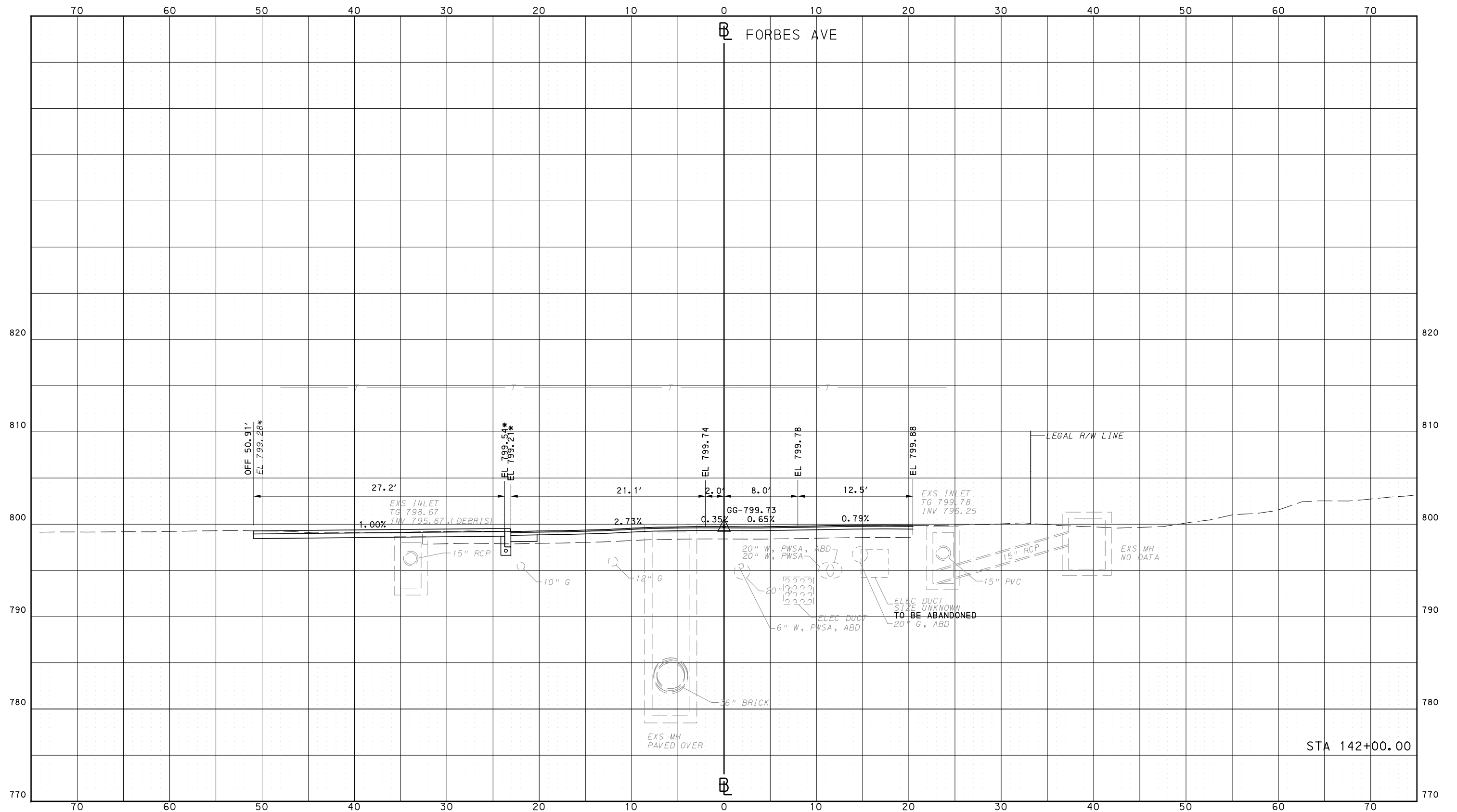
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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS

\*TOP OF CURB ELEVATION AND SIDEWALK SLOPES TO BE DETERMINED PER ITEM 01900.001 - DESIGN OF CURB RAMPS



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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
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**BUS RAPID TRANSIT**  
 CROSS SECTIONS  
 FORBES AVE - STA 142+00.00

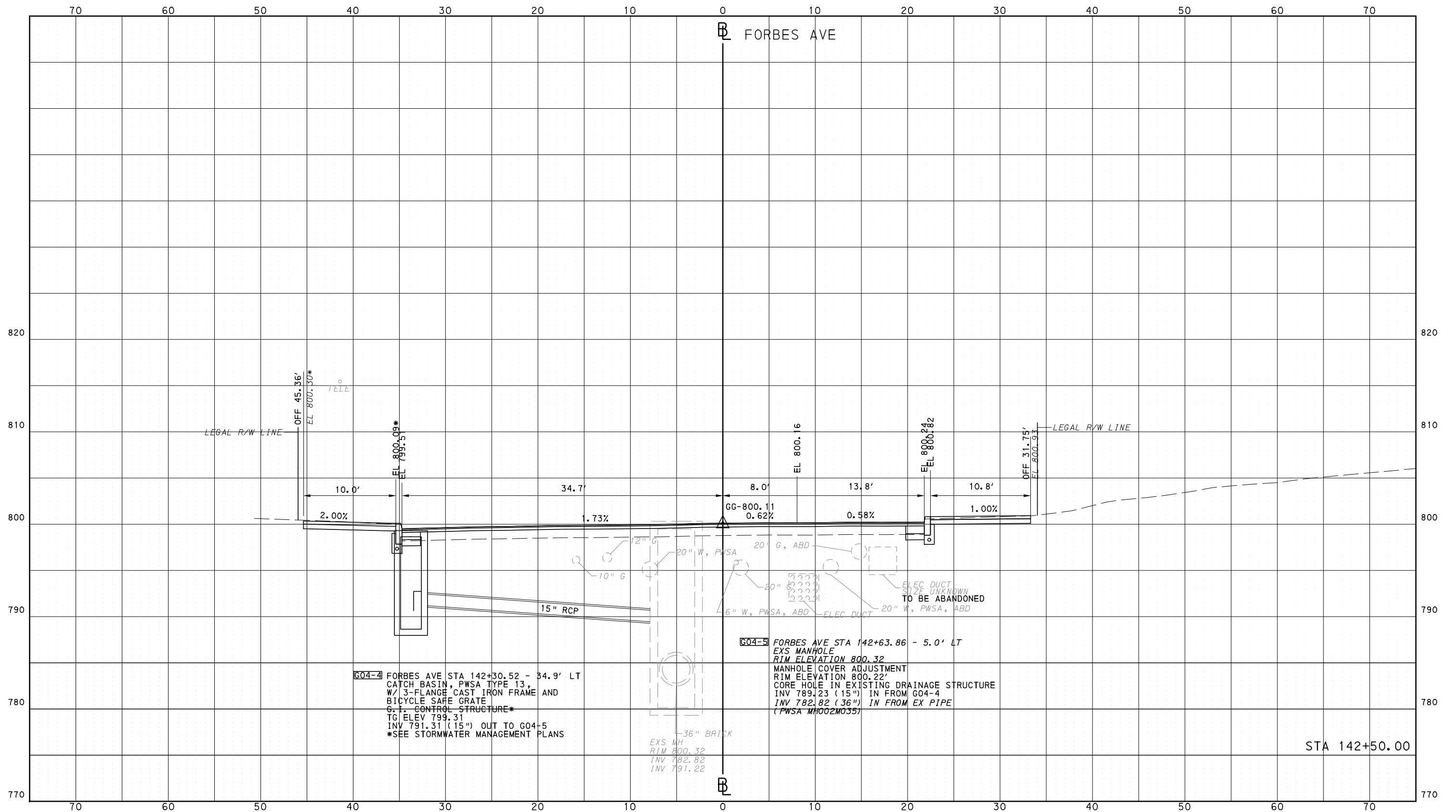
**Port Authority** connecting people to life

CONTRACT NO. BRT-001  
 DWG. NO. XS201 SHT. 1407

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PORT AUTHORITY OF ALLEGHENY COUNTY  
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\*TOP OF CURB ELEVATION AND SIDEWALK SLOPES TO BE  
 DETERMINED PER ITEM 01900.001 - DESIGN OF CURB RAMPS



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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
 PITTSBURGH PENNSYLVANIA

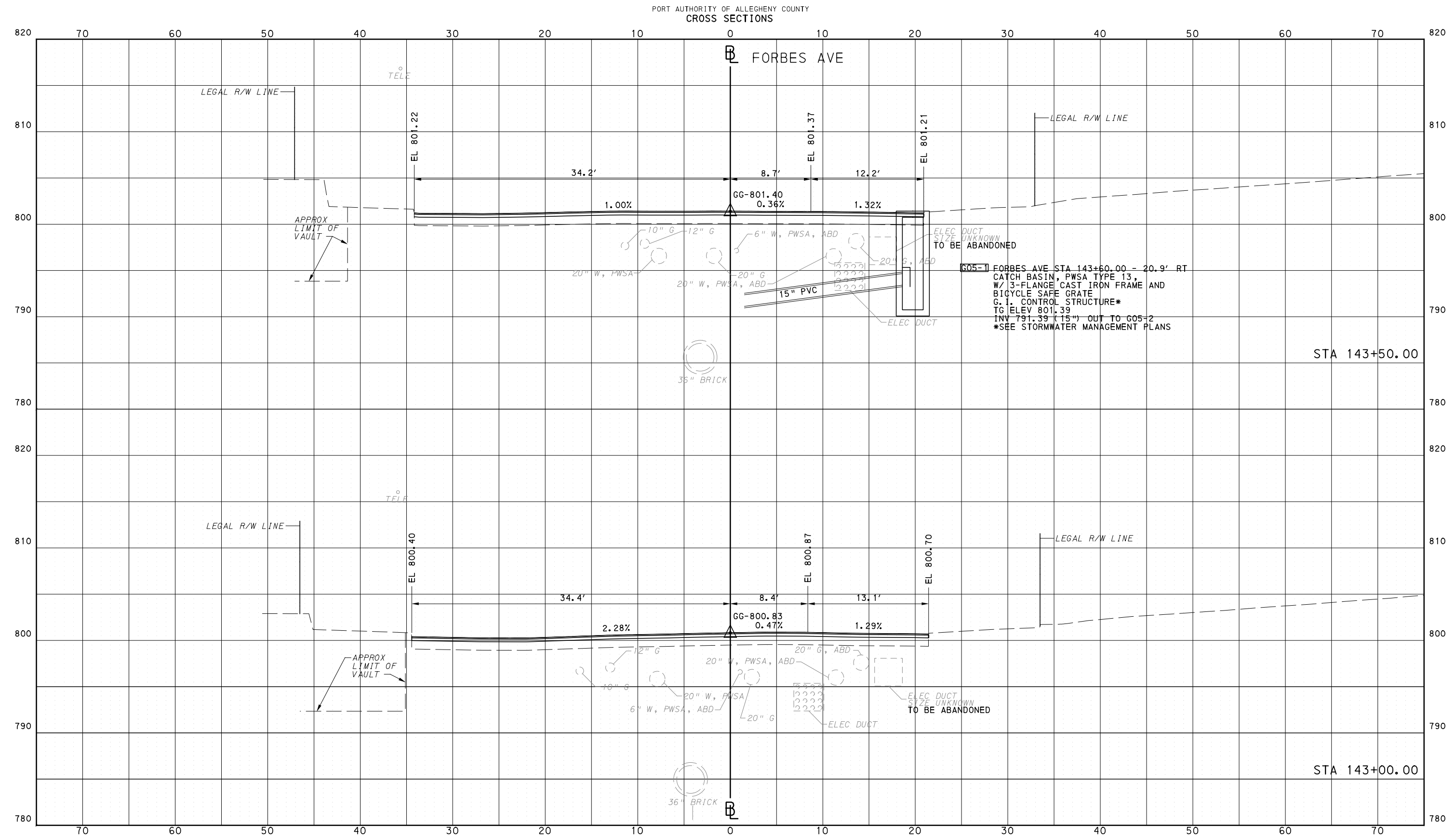
**BUS RAPID TRANSIT**  
 CROSS SECTIONS  
 FORBES AVE - STA 142+50.00

**Port Authority**  
 connecting people to life

CONTRACT NO. BRT-001  
 DWG. NO. XS202 SHT. 1408



OPERATOR: "joseph.s.litch" FILE PATH: c:\pwork\ing\escom\ds16\_md\joseph.s.litch\escom.com\d0207632\p-brt-07\_xs\_base\_shts1-50.dgn PLOTTED: 3/23/2024 10:54:40 AM



Gulf Tower  
 707 Grant Street  
 5th Floor  
 Pittsburgh, PA 15219

GANNETT FLEMING, INC.  
 Foster Plaza 8  
 Suite 400  
 730 Holiday Drive  
 Pittsburgh, PA. 15220

NO.	DATE	DESCRIPTION
REVISIONS		

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(NOT FOR CONSTRUCTION)

DESIGNED	RRH
DRAWN	DVP
CHECKED	KCF
IN CHARGE	GEC
DATE	05/01/24
SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
 PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT**  
**CROSS SECTIONS**  
**FORBES AVE - STA 143+00.00 TO STA 143+50.00**

**Port Authority**  
connecting people to life

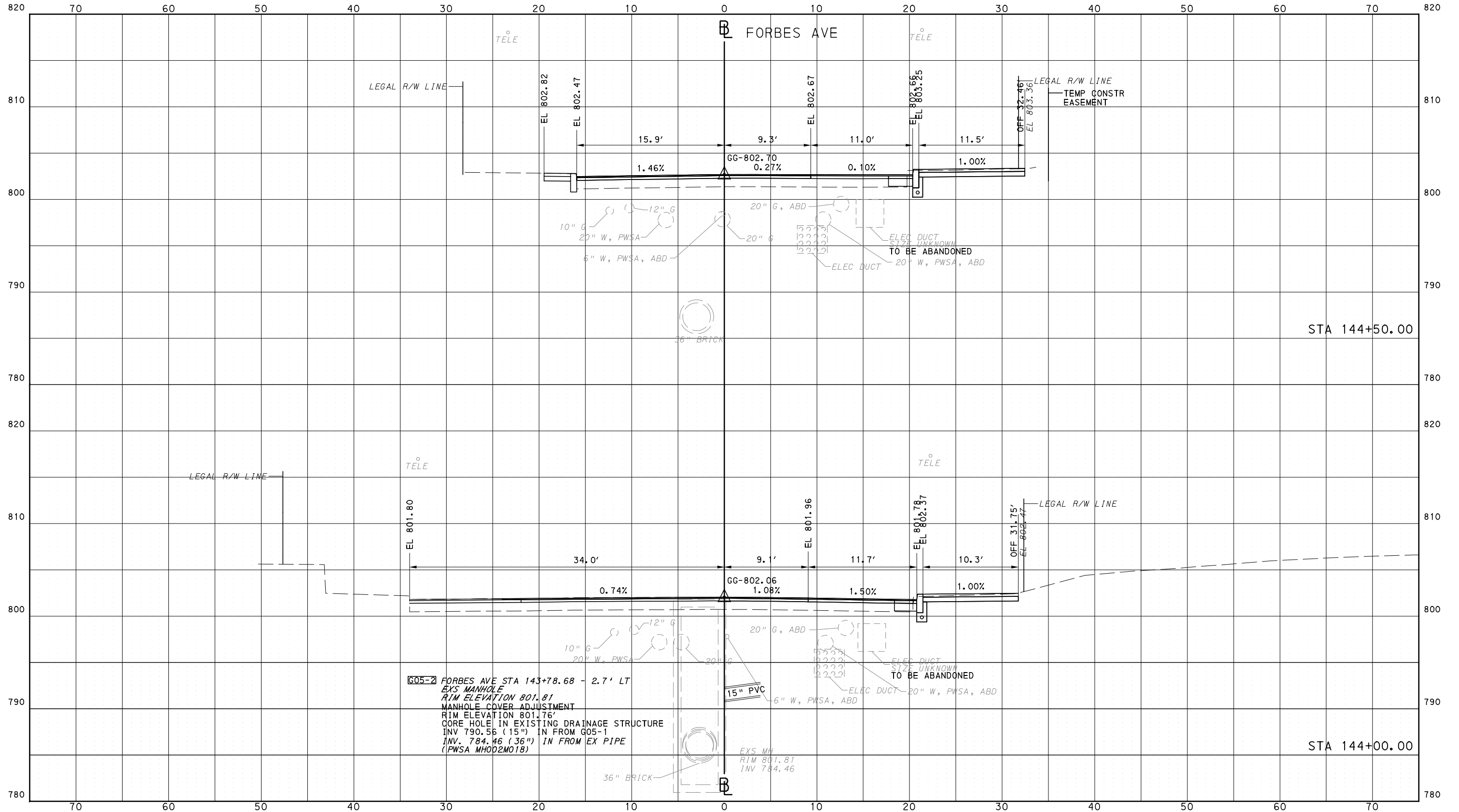
CONTRACT NO. BRT-001
DWG. NO. XS203
SHT. 1409



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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS



Gulf Tower  
707 Grant Street  
5th Floor  
Pittsburgh, PA 15219



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IN CHARGE	GEC
DATE	05/01/24
SCALE	0 5 10 FEET

PORT AUTHORITY OF ALLEGHENY COUNTY  
PITTSBURGH PENNSYLVANIA

BUS RAPID TRANSIT  
CROSS SECTIONS  
FORBES AVE - STA 144+00.00 TO STA 144+50.00



CONTRACT NO. BRT-001

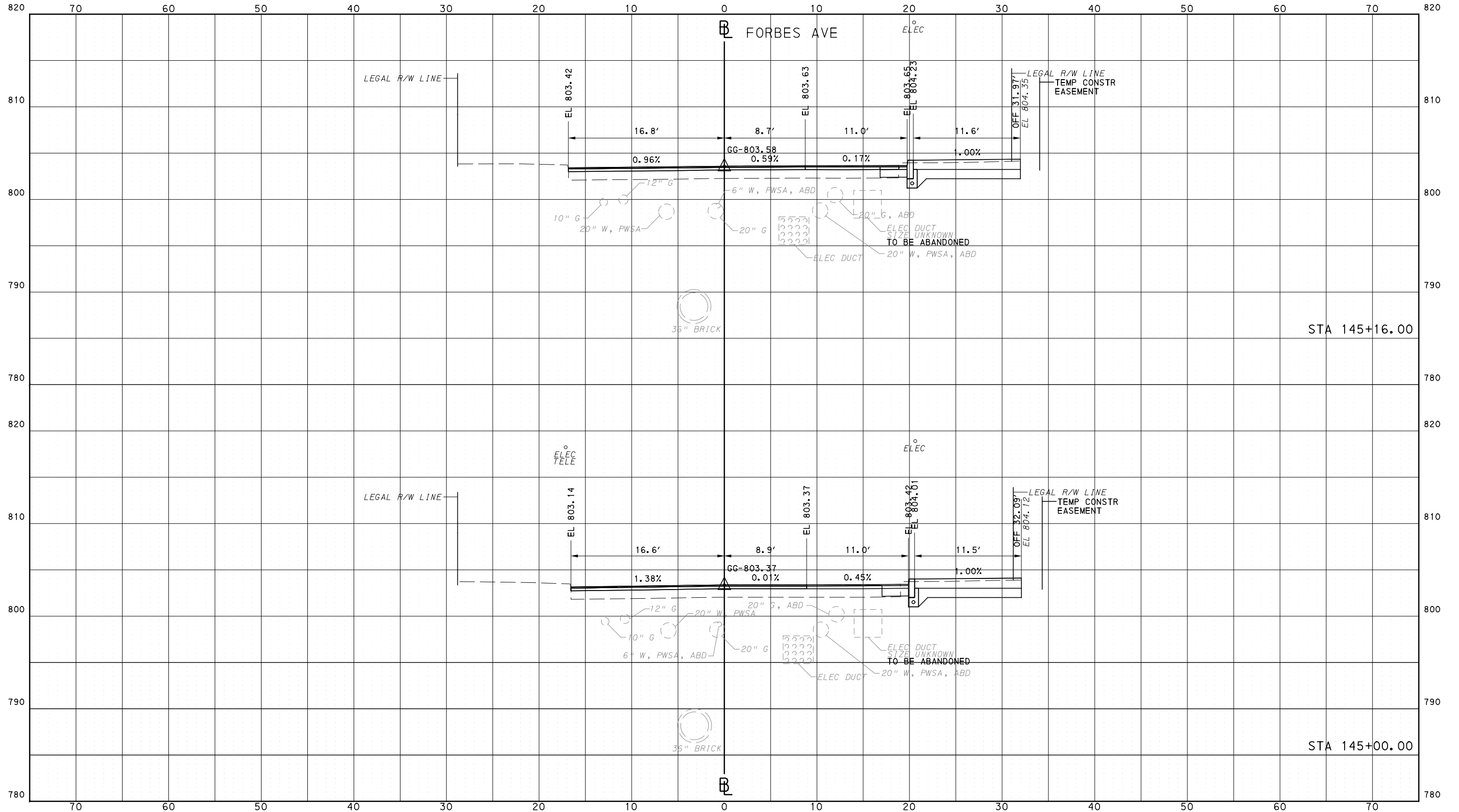
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PORT AUTHORITY OF ALLEGHENY COUNTY  
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DESIGNED	RRH
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IN CHARGE	GEC
DATE	05/01/24
SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT**  
CROSS SECTIONS  
FORBES AVE - STA 145+00.00 TO STA 145+16.00

**Port Authority** connecting people to life

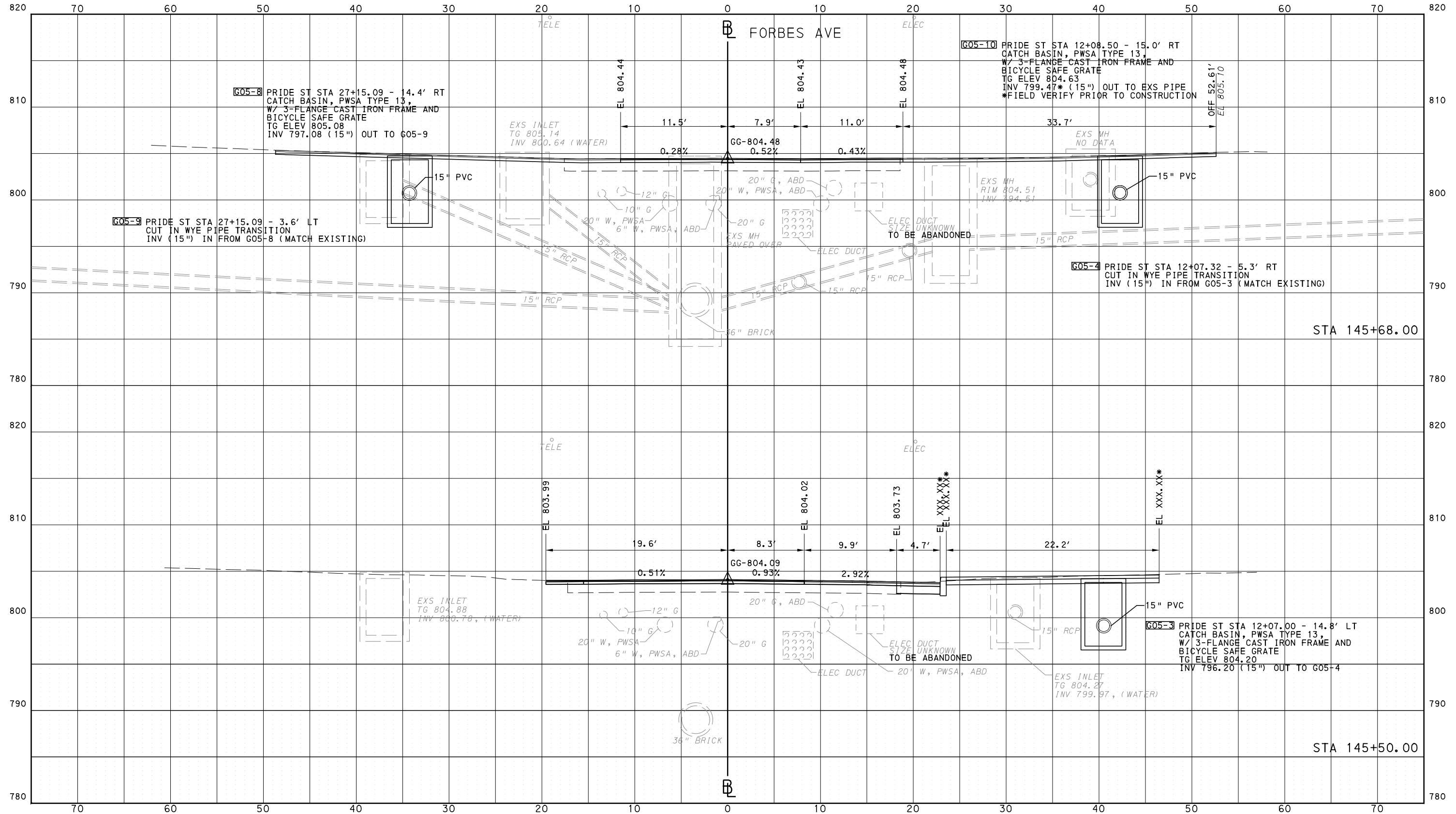
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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS

\*TOP OF CURB ELEVATION AND SIDEWALK SLOPES TO BE  
DETERMINED PER ITEM 01900.001 - DESIGN OF CURB RAMPS



Gulf Tower  
707 Grant Street  
5th Floor  
Pittsburgh, PA 15219



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730 Holiday Drive  
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SCALE	0 5 10 FEET

PORT AUTHORITY OF ALLEGHENY COUNTY  
PITTSBURGH PENNSYLVANIA

BUS RAPID TRANSIT  
CROSS SECTIONS  
FORBES AVE - STA 145+50.00 TO STA 145+68.00



CONTRACT NO. BRT-001

DWG. NO. XS206

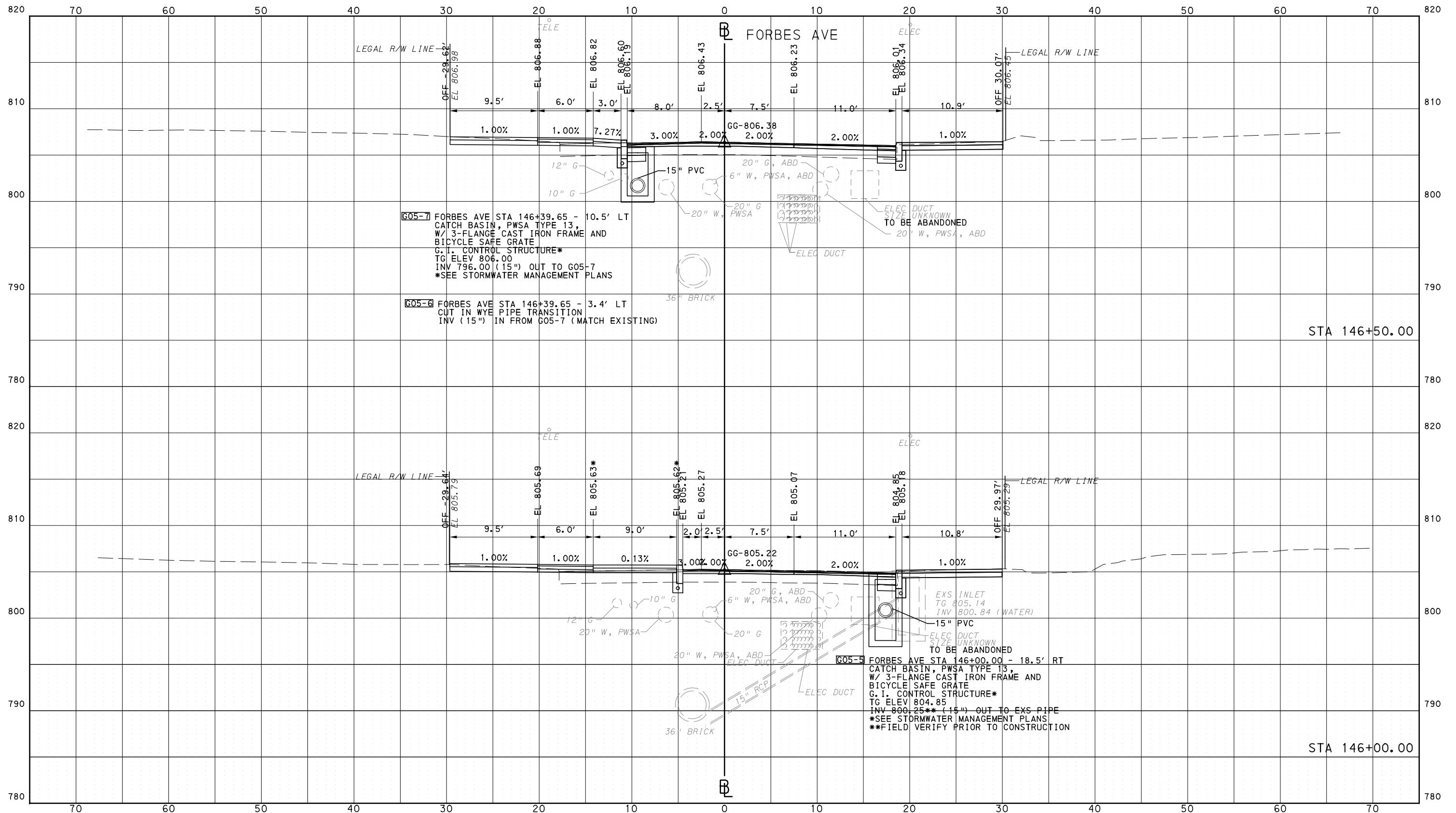
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PORT AUTHORITY OF ALLEGHENY COUNTY  
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PORT AUTHORITY OF ALLEGHENY COUNTY  
PITTSBURGH PENNSYLVANIA

BUS RAPID TRANSIT  
CROSS SECTIONS  
FORBES AVE - STA 146+00.00 TO STA 146+50.00



CONTRACT NO. BRT-001

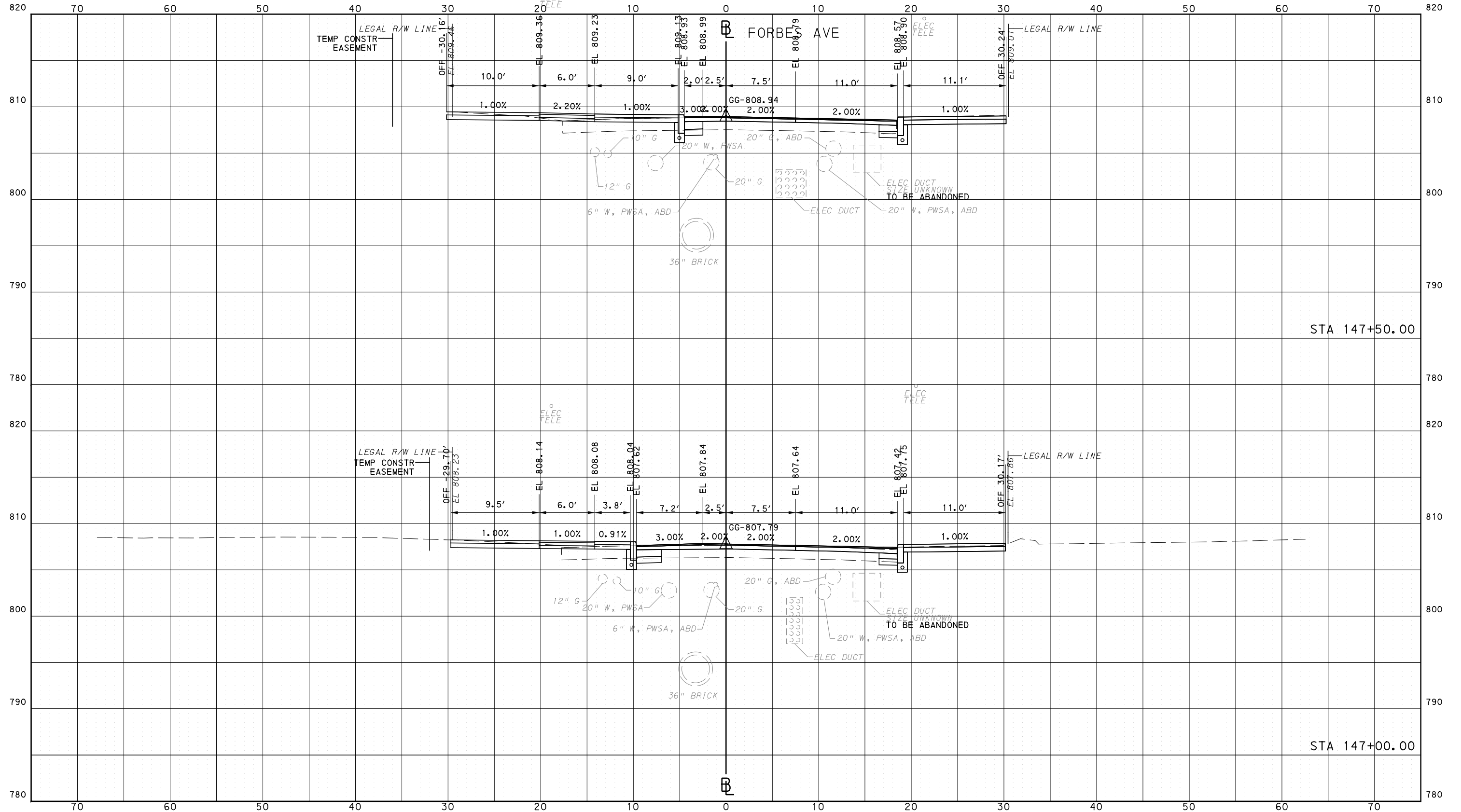
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PORT AUTHORITY OF ALLEGHENY COUNTY  
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DATE	05/01/24
SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT**  
CROSS SECTIONS  
FORBES AVE - STA 147+00.00 TO STA 147+50.00

**Port Authority** connecting people to life™

CONTRACT NO. BRT-001  
DWG. NO. XS208 SHT. 1414

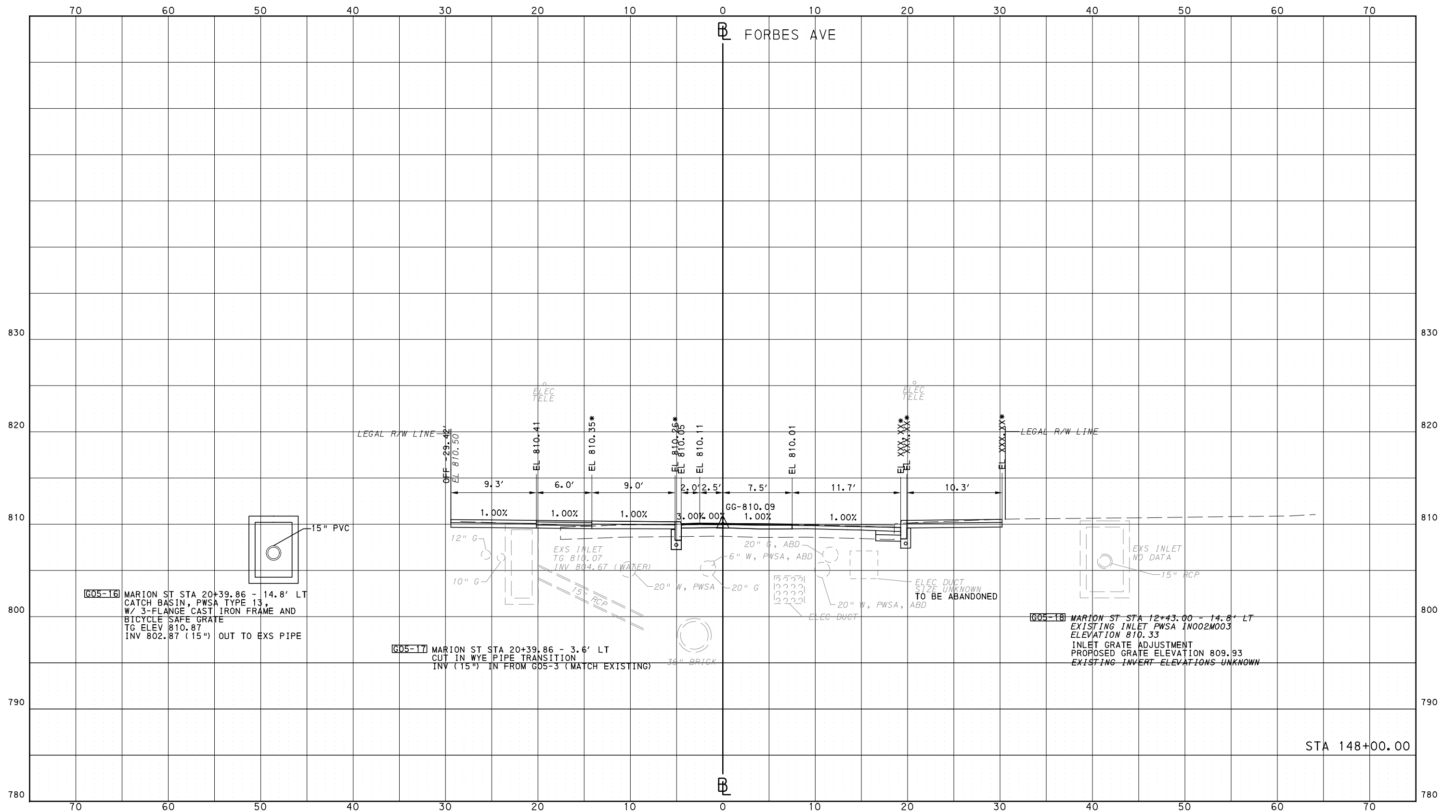


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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS

\*TOP OF CURB ELEVATION AND SIDEWALK SLOPES TO BE DETERMINED PER ITEM 01900.001 - DESIGN OF CURB RAMPS



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IN CHARGE	GEC
DATE	05/01/24
SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT**  
CROSS SECTIONS  
FORBES AVE - STA 148+00.00

**Port Authority** connecting people to life

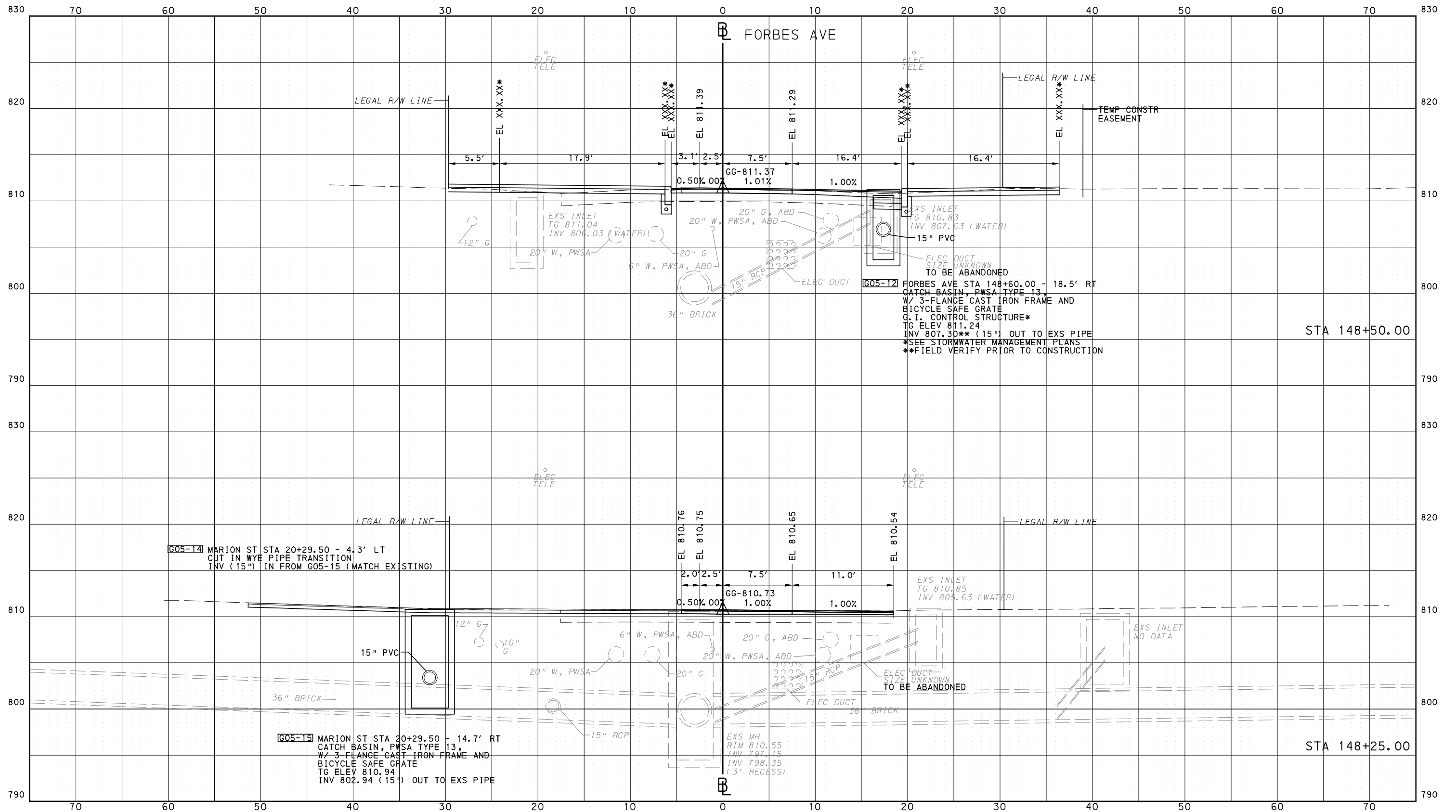
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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS

\*TOP OF CURB ELEVATION AND SIDEWALK SLOPES TO BE DETERMINED PER ITEM 01900.001 - DESIGN OF CURB RAMPS



**AECOM**  
Gulf Tower  
707 Grant Street  
5th Floor  
Pittsburgh, PA 15219

**GANNETT FLEMING**  
GANNETT FLEMING, INC.  
Foster Plaza 8  
Suite 400  
730 Holiday Drive  
Pittsburgh, PA. 15220

NO.	DATE	DESCRIPTION
REVISIONS		

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CHECKED	KCF
IN CHARGE	GEC
DATE	05/01/24
SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT**  
CROSS SECTIONS  
FORBES AVE - STA 148+25.00 TO STA 148+50.00

**Port Authority** connecting people to life

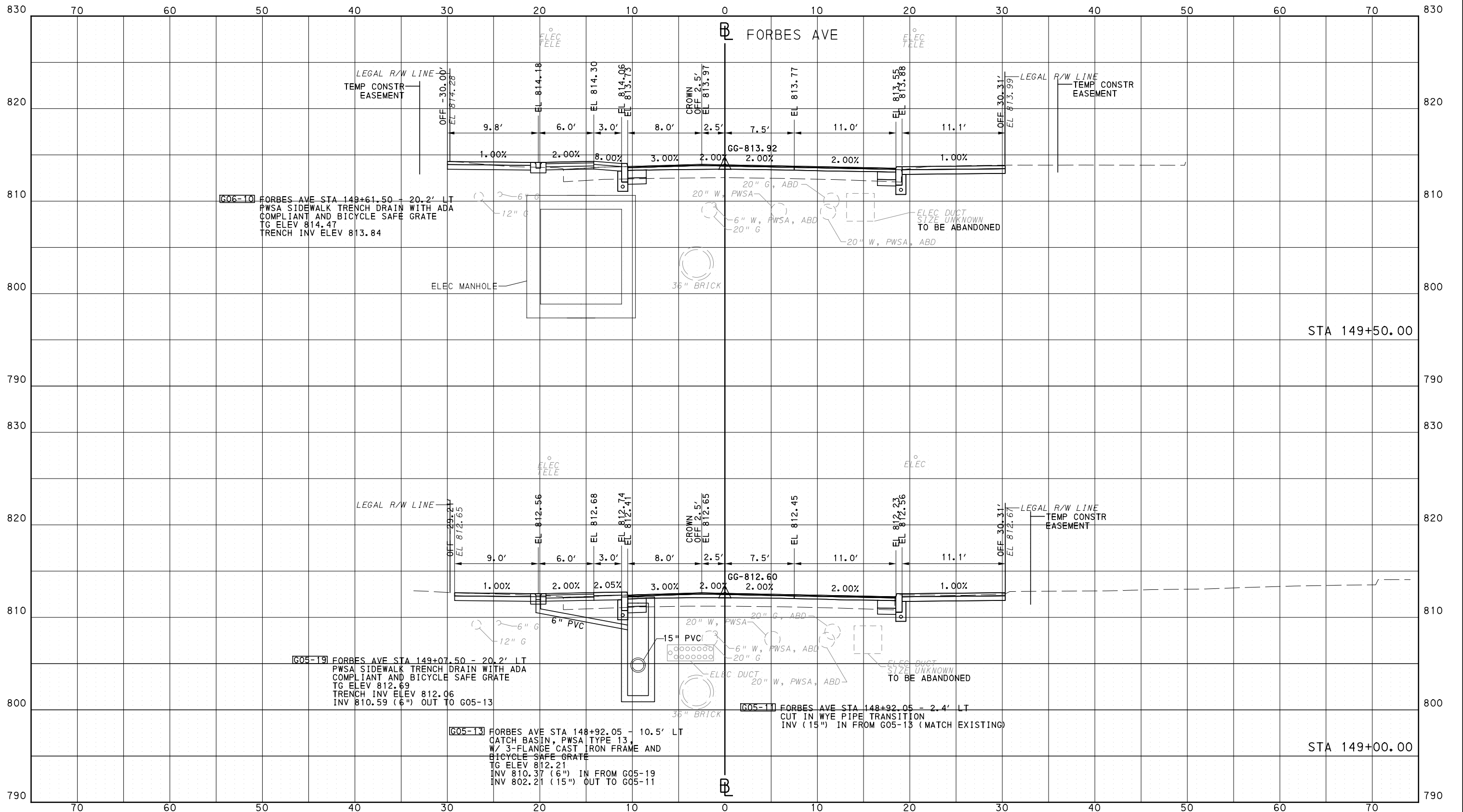
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DRAWN	DVP
CHECKED	KCF
IN CHARGE	GEC
DATE	05/01/24
SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT**  
CROSS SECTIONS  
FORBES AVE - STA 149+00.00 TO STA 149+50.00

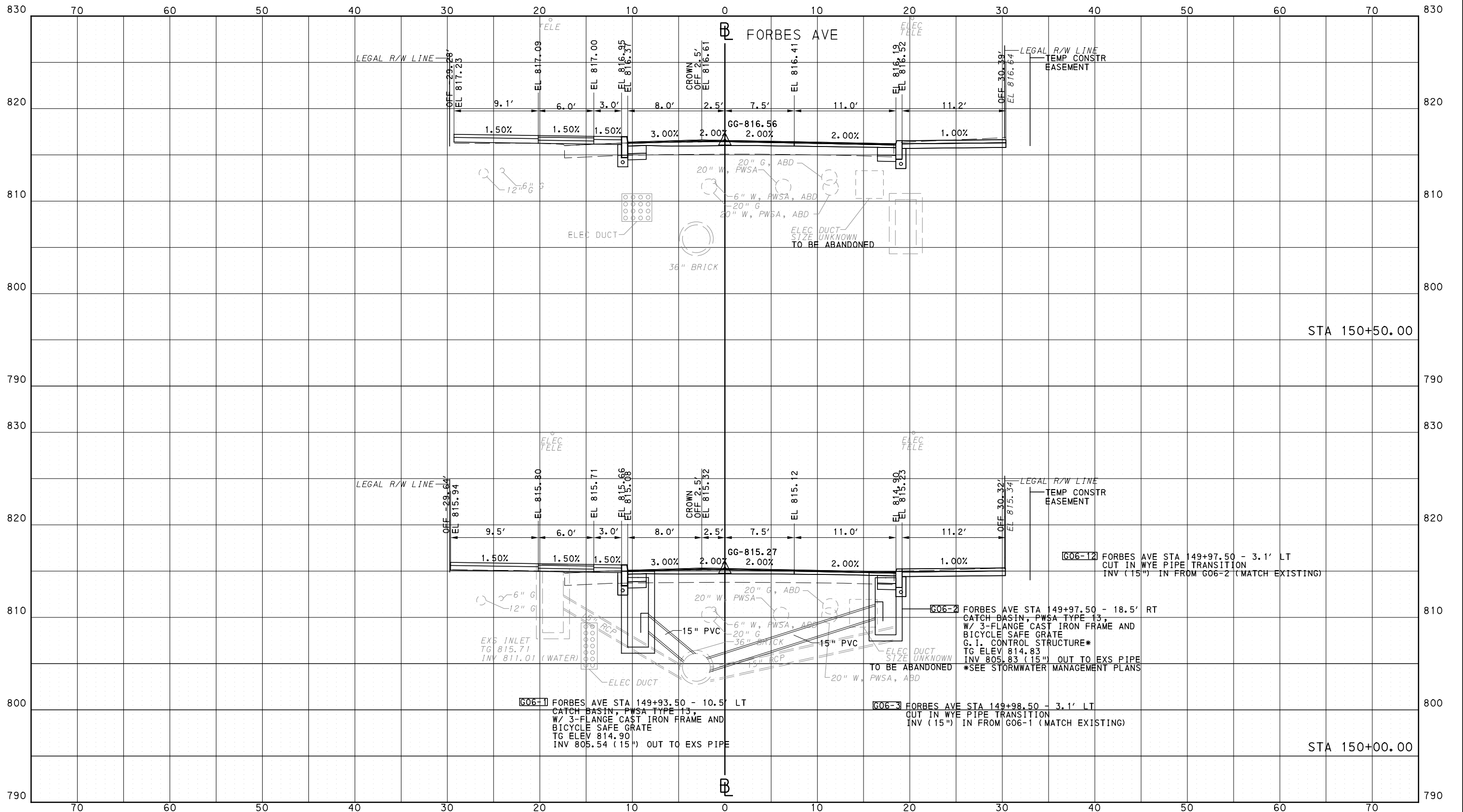
**Port Authority**  
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CONTRACT NO. BRT-001	
DWG. NO. XS211	SHT. 1417

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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS



Gulf Tower  
707 Grant Street  
5th Floor  
Pittsburgh, PA 15219



GANNETT FLEMING, INC.  
Foster Plaza 8  
Suite 400  
730 Holiday Drive  
Pittsburgh, PA. 15220

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DESIGNED	RRH
DRAWN	DVP
CHECKED	KCF
IN CHARGE	GEC
DATE	05/01/24
SCALE	0 5 10 FEET

PORT AUTHORITY OF ALLEGHENY COUNTY  
PITTSBURGH PENNSYLVANIA

BUS RAPID TRANSIT  
CROSS SECTIONS  
FORBES AVE - STA 150+00.00 TO STA 150+50.00

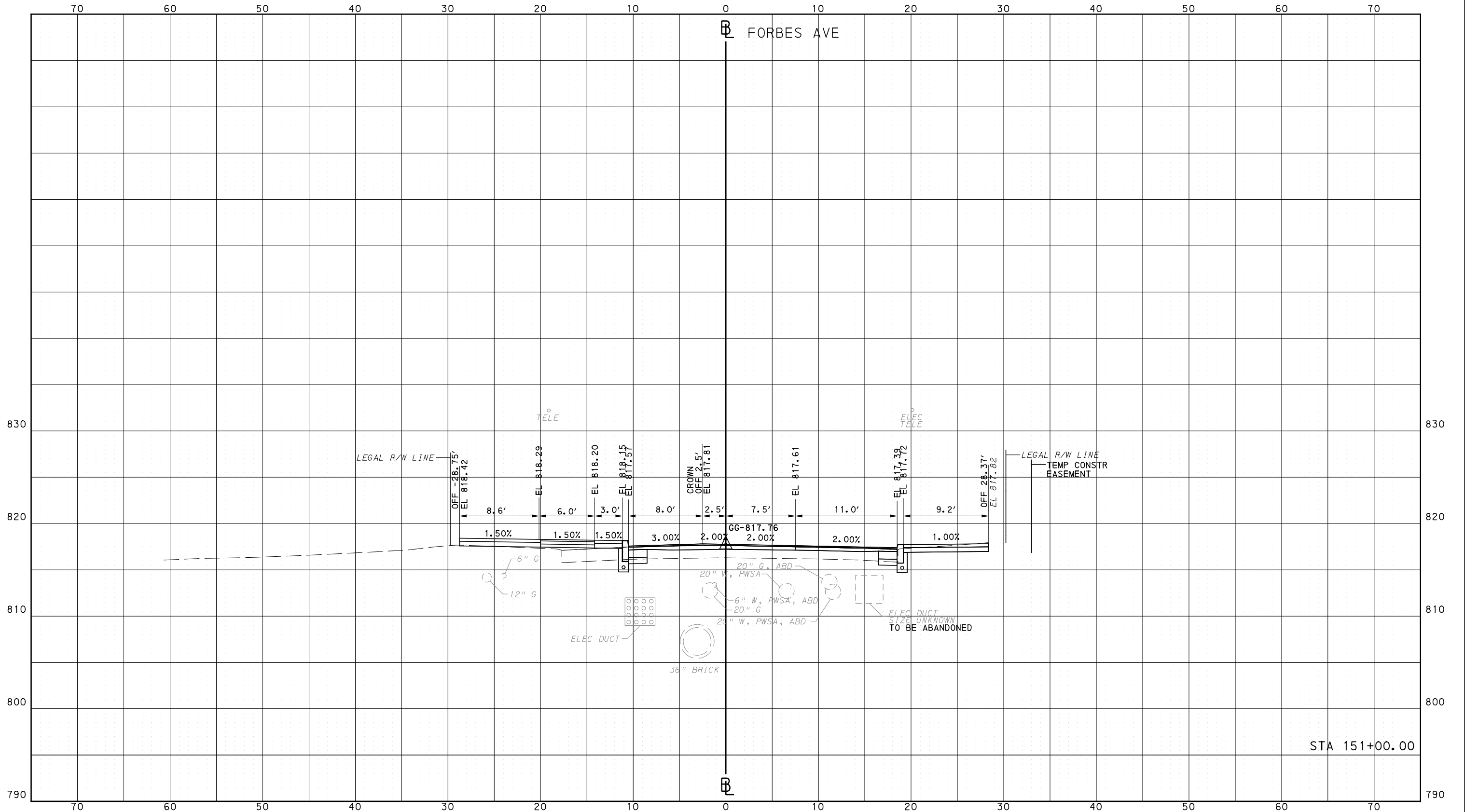


CONTRACT NO. BRT-001

DWG. NO. XS212 SHT. 1418

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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS



STA 151+00.00

**AECOM**  
Gulf Tower  
707 Grant Street  
5th Floor  
Pittsburgh, PA 15219

**GANNETT FLEMING**  
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IN CHARGE	GEC
DATE	05/01/24
SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

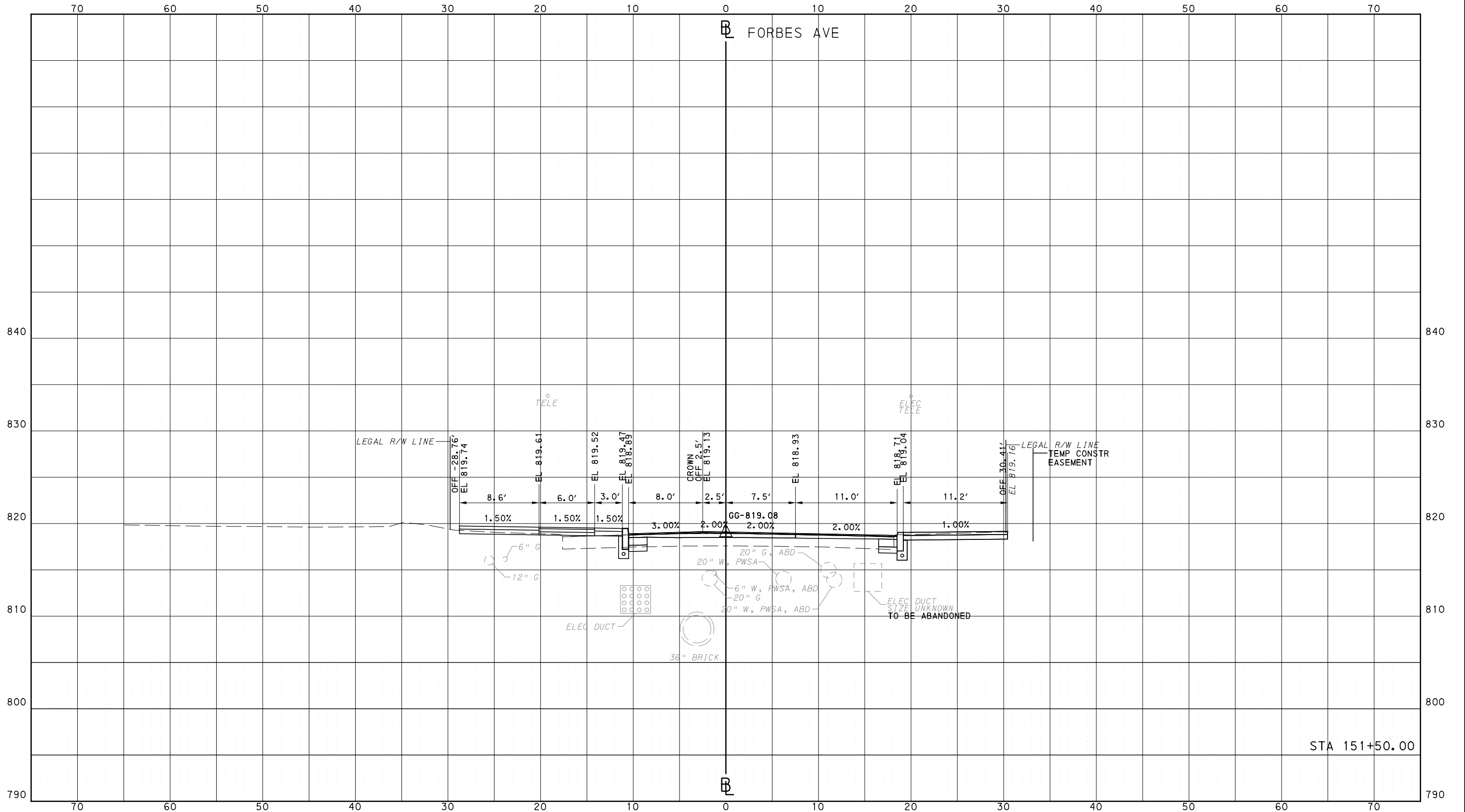
**BUS RAPID TRANSIT  
CROSS SECTIONS  
FORBES AVE - STA 151+00.00**

**Port Authority** connecting people to life

CONTRACT NO. BRT-001
DWG. NO. XS213
SHT. 1419

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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS



STA 151+50.00

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Gulf Tower  
707 Grant Street  
5th Floor  
Pittsburgh, PA 15219

**GANNETT FLEMING**  
GANNETT FLEMING, INC.  
Foster Plaza 8  
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DESIGNED	RRH
DRAWN	DVP
CHECKED	KCF
IN CHARGE	GEC
DATE	05/01/24
SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

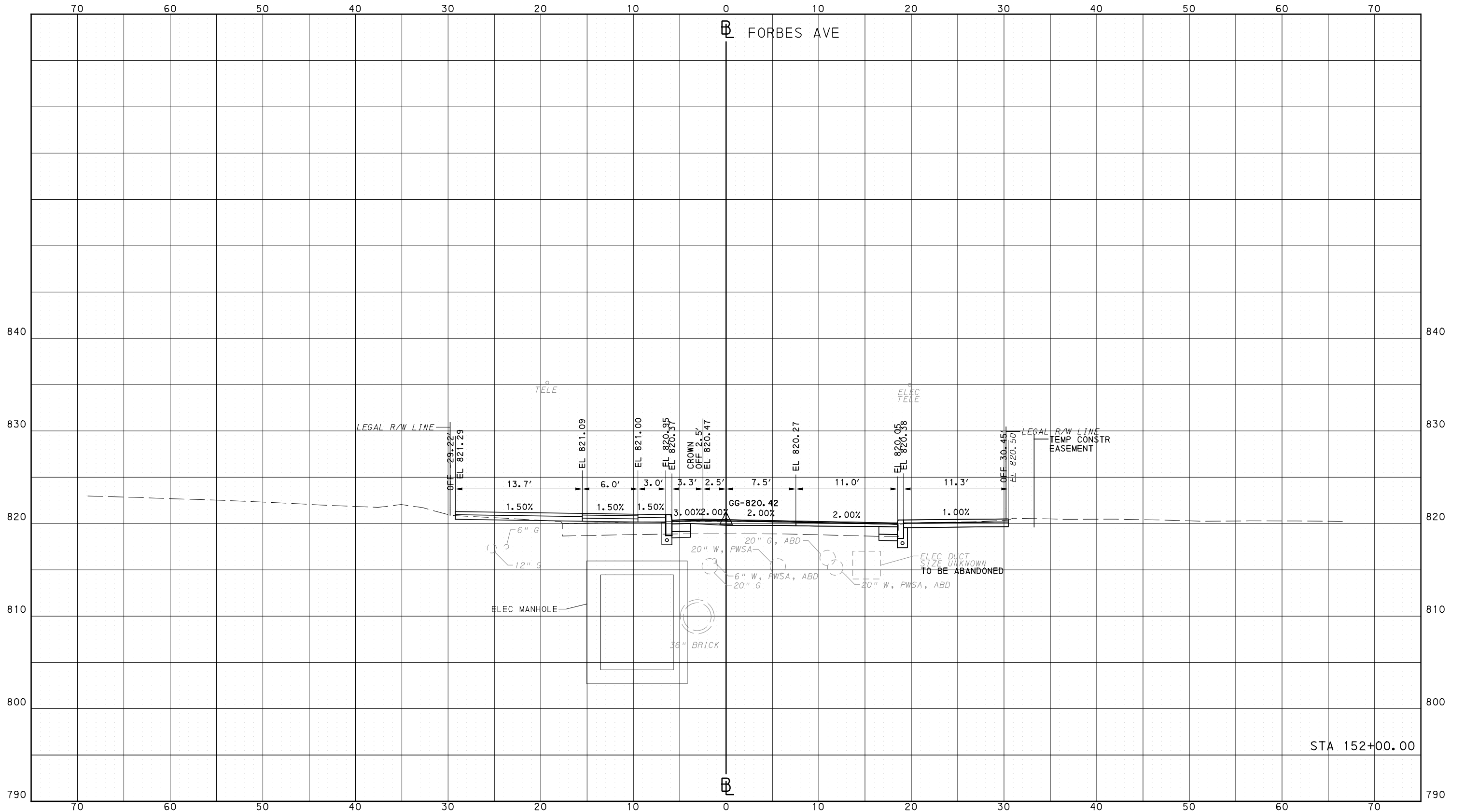
**BUS RAPID TRANSIT  
CROSS SECTIONS  
FORBES AVE - STA 151+50.00**

**Port Authority** connecting people to life

CONTRACT NO. BRT-001
DWG. NO. XS214
SHT. 1420

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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS



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707 Grant Street  
5th Floor  
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Suite 400  
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Pittsburgh, PA. 15220

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PORT AUTHORITY OF ALLEGHENY COUNTY  
PITTSBURGH PENNSYLVANIA

BUS RAPID TRANSIT  
CROSS SECTIONS  
FORBES AVE - STA 152+00.00

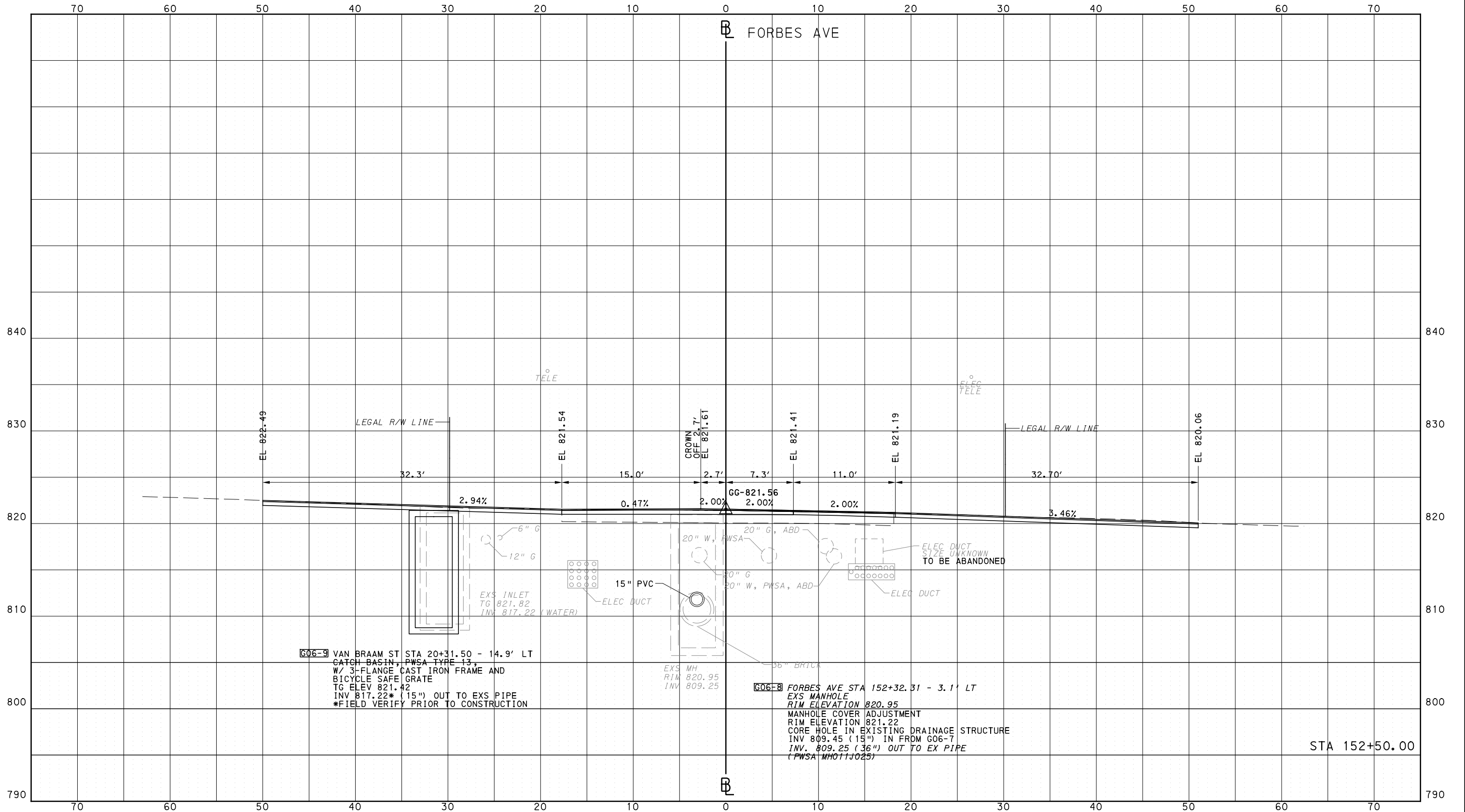


CONTRACT NO. BRT-001  
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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS



**G06-9** VAN BRAAM ST STA 20+31.50 - 14.9' LT  
 CATCH BASIN, PWSA TYPE 13,  
 W/ 3-FLANGE CAST IRON FRAME AND  
 BICYCLE SAFE GRATE  
 TG ELEV 821.42  
 INV 817.22\* (15") OUT TO EXS PIPE  
 \*FIELD VERIFY PRIOR TO CONSTRUCTION

EXS MH  
 RIM 820.95  
 INV 809.25

**G06-8** FORBES AVE STA 152+32.31 - 3.1' LT  
 EXS MANHOLE  
 RIM ELEVATION 820.95  
 MANHOLE COVER ADJUSTMENT  
 RIM ELEVATION 821.22  
 CORE HOLE IN EXISTING DRAINAGE STRUCTURE  
 INV 809.45 (15") IN FROM G06-7  
 INV. 809.25 (36") OUT TO EX PIPE  
 (PWSA MHO11J025)

STA 152+50.00



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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT  
CROSS SECTIONS  
FORBES AVE - STA 152+50.00**

**Port Authority** connecting people to life

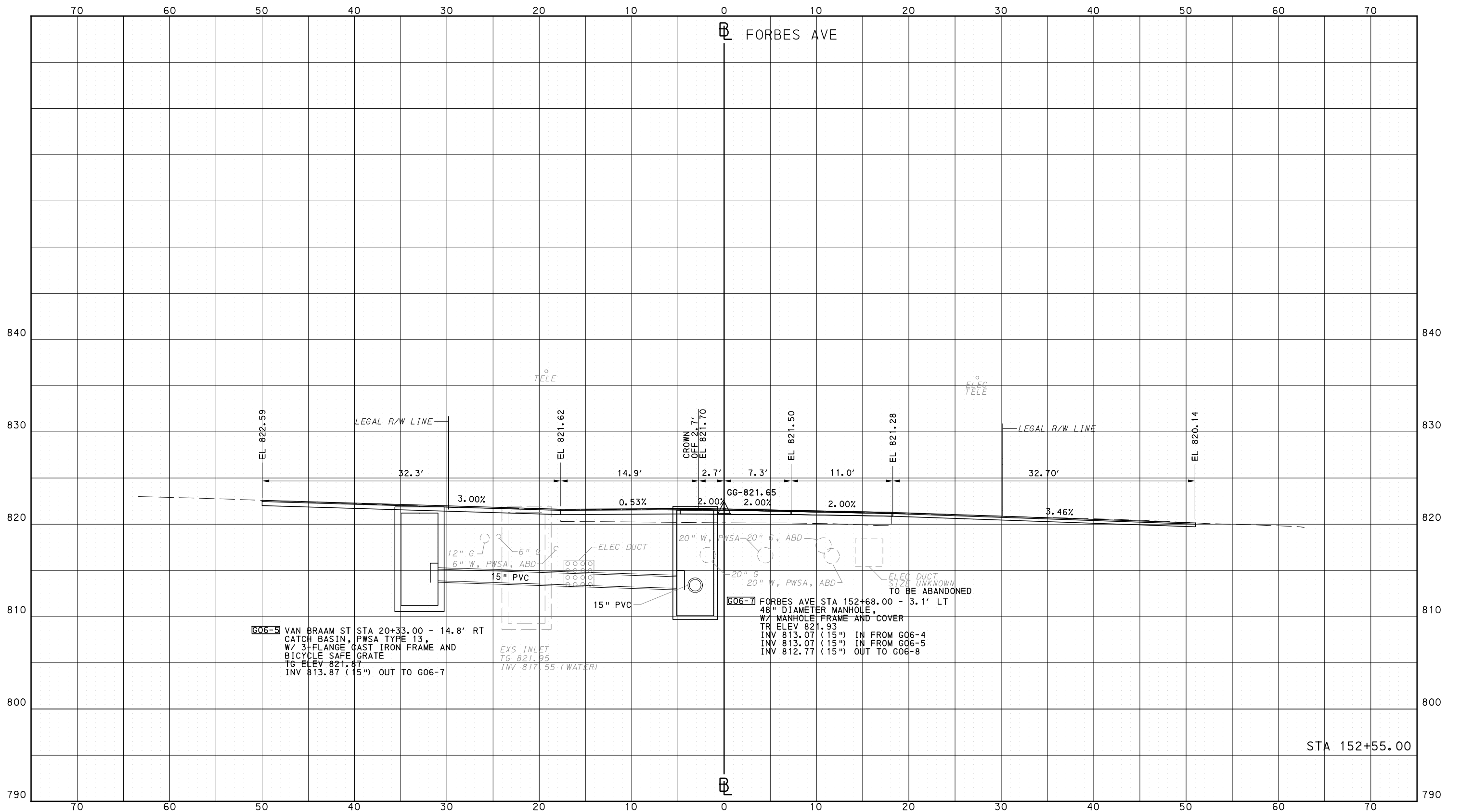
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DWG. NO. XS216
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PORT AUTHORITY OF ALLEGHENY COUNTY  
PITTSBURGH PENNSYLVANIA

BUS RAPID TRANSIT  
CROSS SECTIONS  
FORBES AVE - STA 152+55.00



CONTRACT NO. BRT-001

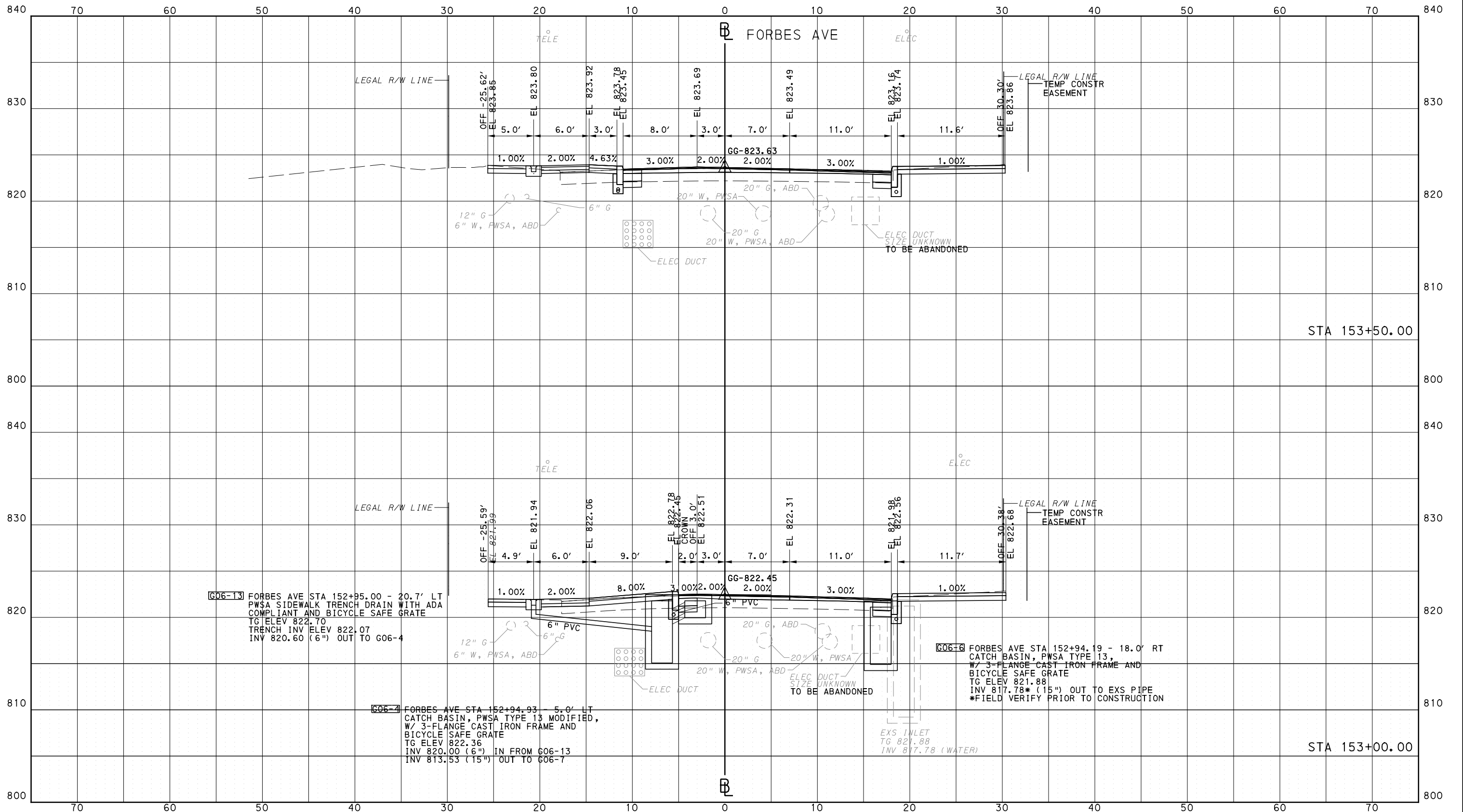
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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS



Gulf Tower  
707 Grant Street  
5th Floor  
Pittsburgh, PA 15219



GANNETT FLEMING, INC.  
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Suite 400  
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(NOT FOR CONSTRUCTION)

DESIGNED	RRH
DRAWN	DVP
CHECKED	KCF
IN CHARGE	GEC
DATE	05/01/24
SCALE	0 5 10 FEET

PORT AUTHORITY OF ALLEGHENY COUNTY  
PITTSBURGH PENNSYLVANIA

BUS RAPID TRANSIT  
CROSS SECTIONS  
FORBES AVE - STA 153+00.00 TO STA 153+50.00



CONTRACT NO. BRT-001

DWG. NO. XS218

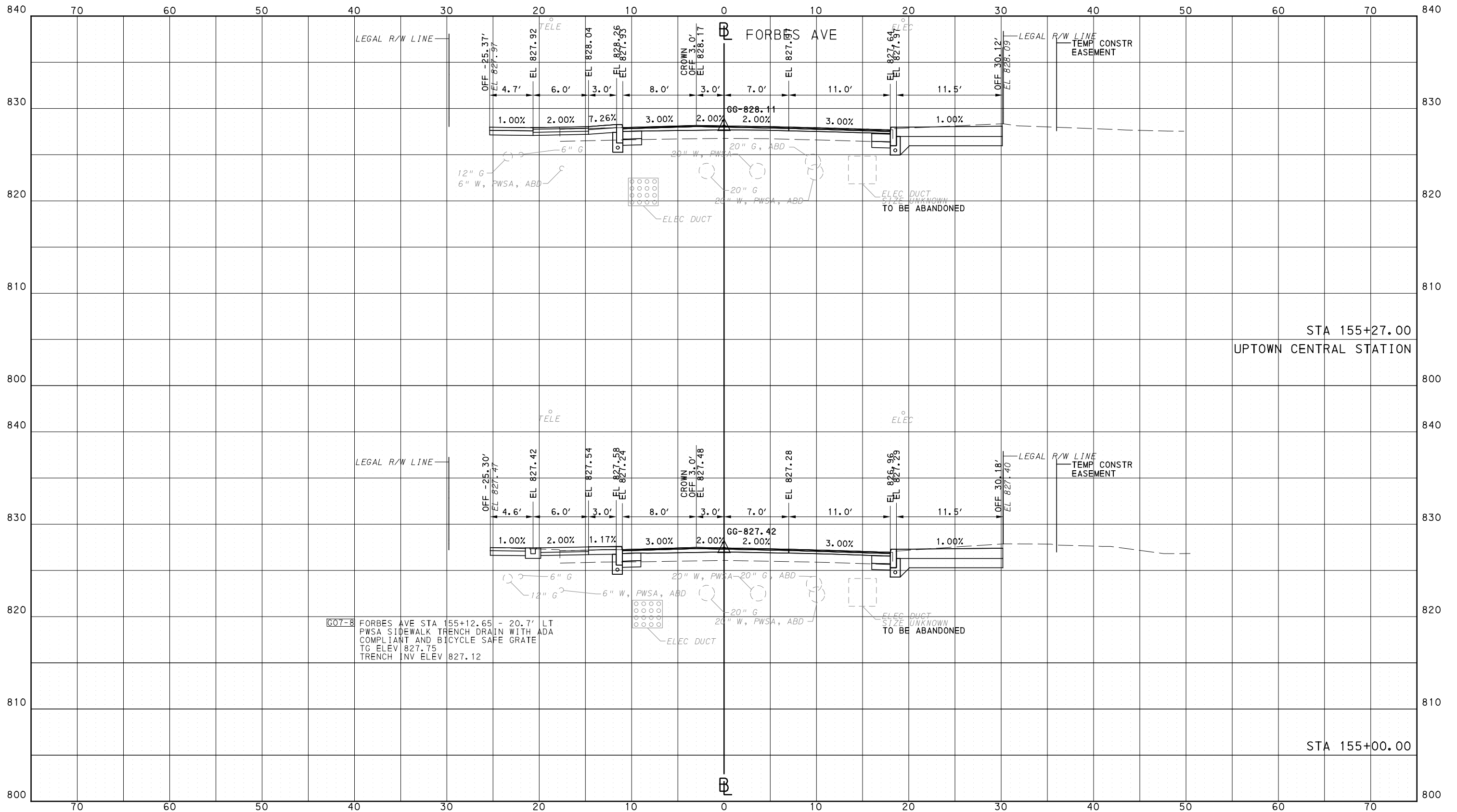
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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS



G07-8 FORBES AVE STA 155+12.65 - 20.7' LT  
PWSA SIDEWALK TRENCH DRAIN WITH ADA  
COMPLIANT AND BICYCLE SAFE GRATE  
TG ELEV 827.75  
TRENCH INV ELEV 827.12



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SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

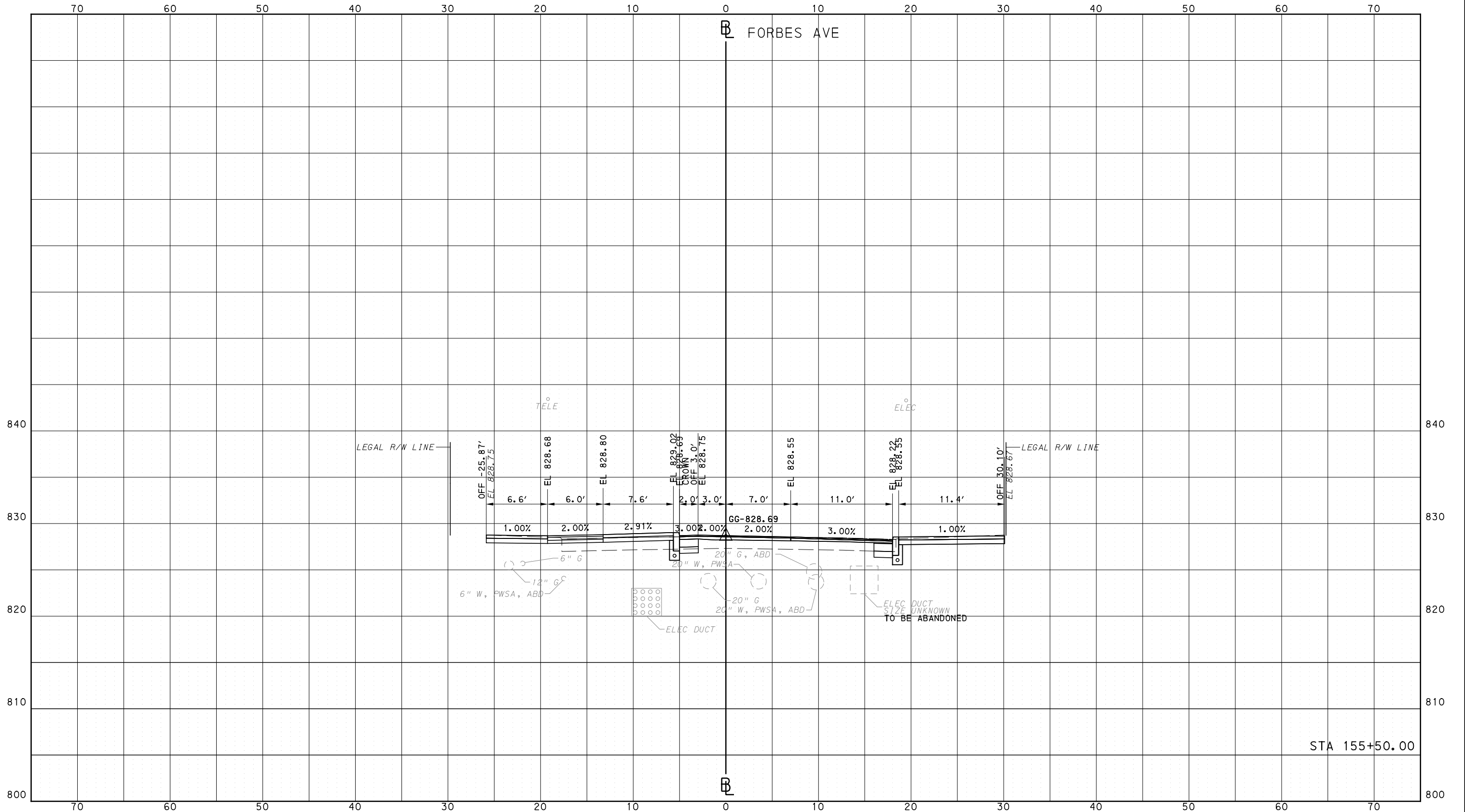
**BUS RAPID TRANSIT  
CROSS SECTIONS  
FORBES AVE - STA 155+00.00 TO STA 155+27.00**

**Port Authority** connecting people to life™

CONTRACT NO. BRT-001  
DWG. NO. XS220 SHT. 1426

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PORT AUTHORITY OF ALLEGHENY COUNTY  
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 Gulf Tower  
 707 Grant Street  
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**GANNETT FLEMING**  
 GANNETT FLEMING, INC.  
 Foster Plaza 8  
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(NOT FOR CONSTRUCTION)

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DATE	05/01/24
SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT  
CROSS SECTIONS  
FORBES AVE - STA 155+50.00**

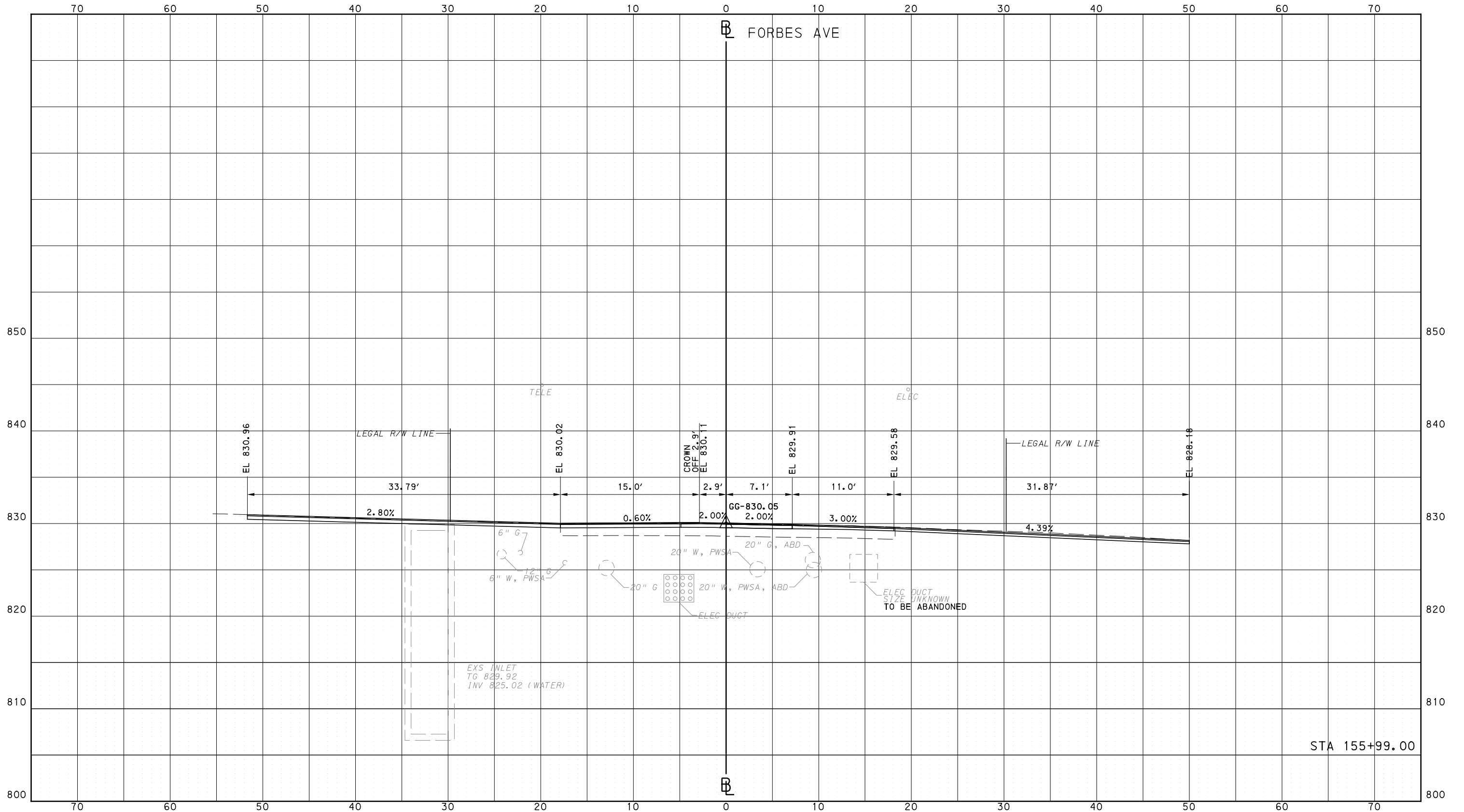
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CONTRACT NO. BRT-001
DWG. NO. XS221
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CROSS SECTIONS



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5th Floor  
Pittsburgh, PA 15219



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Foster Plaza 8  
Suite 400  
730 Holiday Drive  
Pittsburgh, PA. 15220

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PORT AUTHORITY OF ALLEGHENY COUNTY  
PITTSBURGH PENNSYLVANIA

BUS RAPID TRANSIT  
CROSS SECTIONS  
FORBES AVE - STA 155+99.00



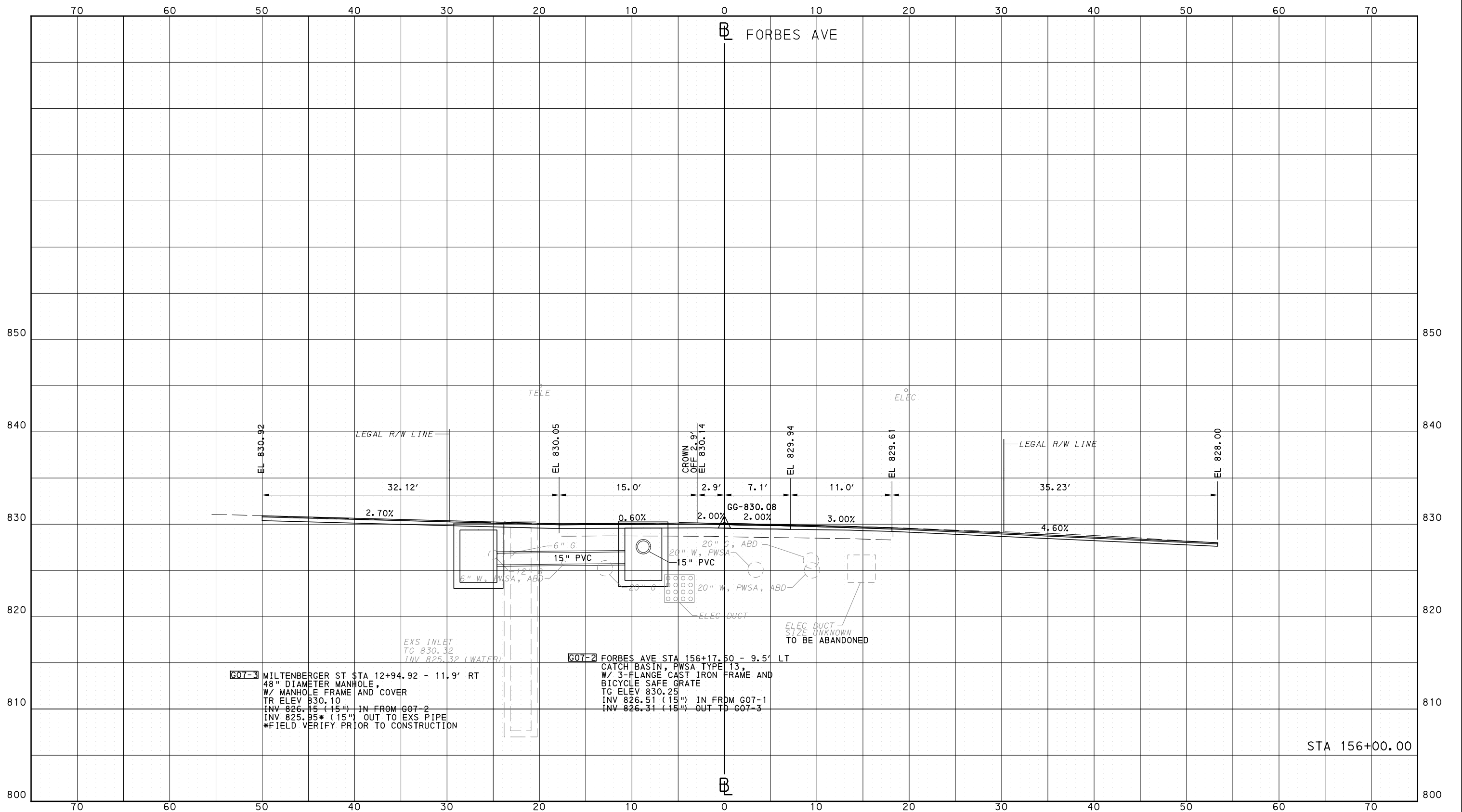
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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS



**G07-3** MILTENBERGER ST STA 12+94.92 - 11.9' RT  
 48" DIAMETER MANHOLE,  
 W/ MANHOLE FRAME AND COVER  
 TR ELEV 830.10  
 INV 826.15 (15") IN FROM G07-2  
 INV 825.95\* (15") OUT TO EXS PIPE  
 \*FIELD VERIFY PRIOR TO CONSTRUCTION

**G07-2** FORBES AVE STA 156+17.50 - 9.5' LT  
 CATCH BASIN, PWSA TYPE 13,  
 W/ 3-FLANGE CAST IRON FRAME AND  
 BICYCLE SAFE GRATE  
 TG ELEV 830.25  
 INV 826.51 (15") IN FROM G07-1  
 INV 826.31 (15") OUT TO G07-3



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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
 PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT**  
 CROSS SECTIONS  
 FORBES AVE - STA 156+00.00

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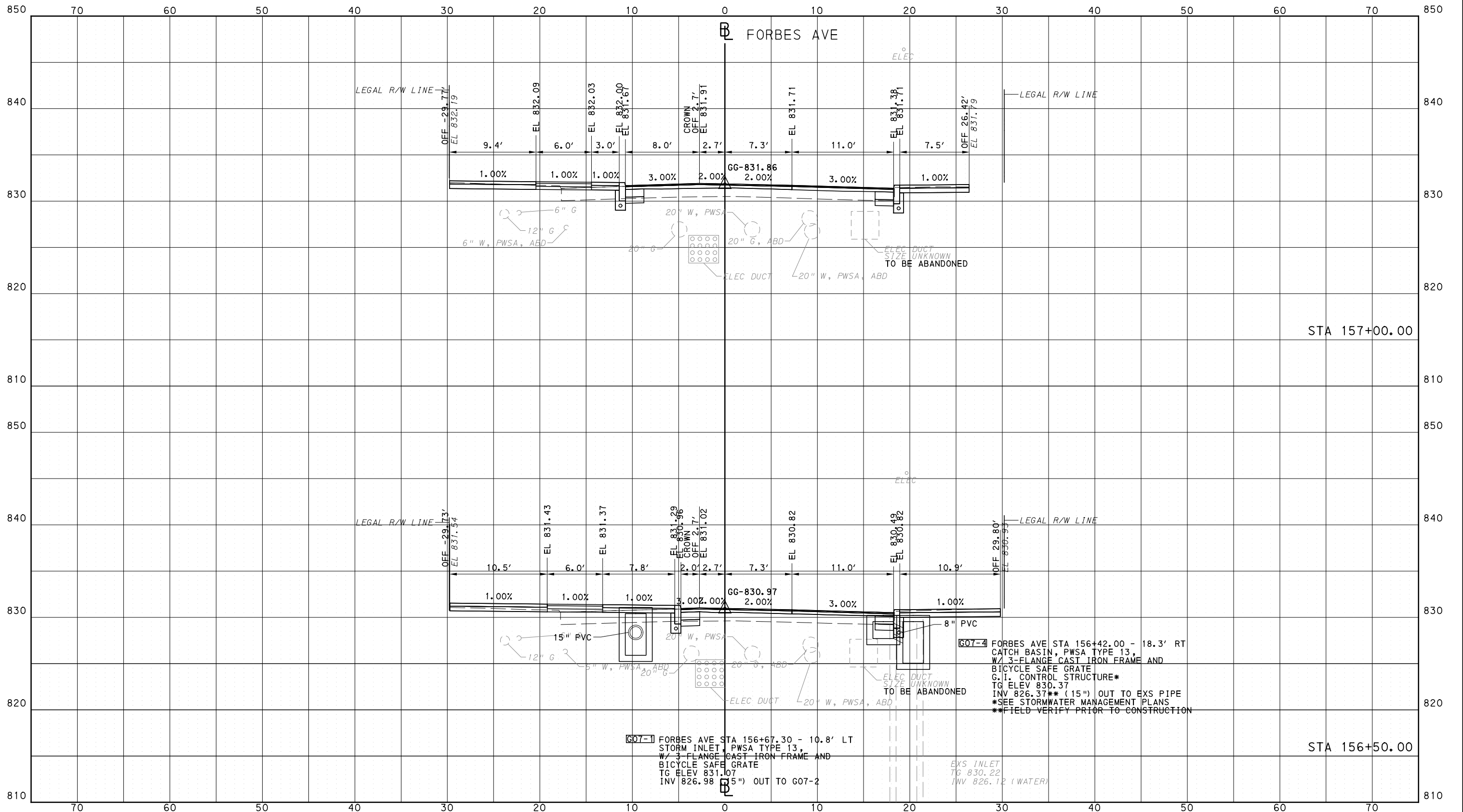
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PORT AUTHORITY OF ALLEGHENY COUNTY  
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Pittsburgh, PA 15219



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Pittsburgh, PA. 15220

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IN CHARGE	GEC
DATE	05/01/24
SCALE	0 5 10 FEET

PORT AUTHORITY OF ALLEGHENY COUNTY  
PITTSBURGH PENNSYLVANIA

BUS RAPID TRANSIT  
CROSS SECTIONS  
FORBES AVE - STA 156+50.00 TO STA 157+00.00



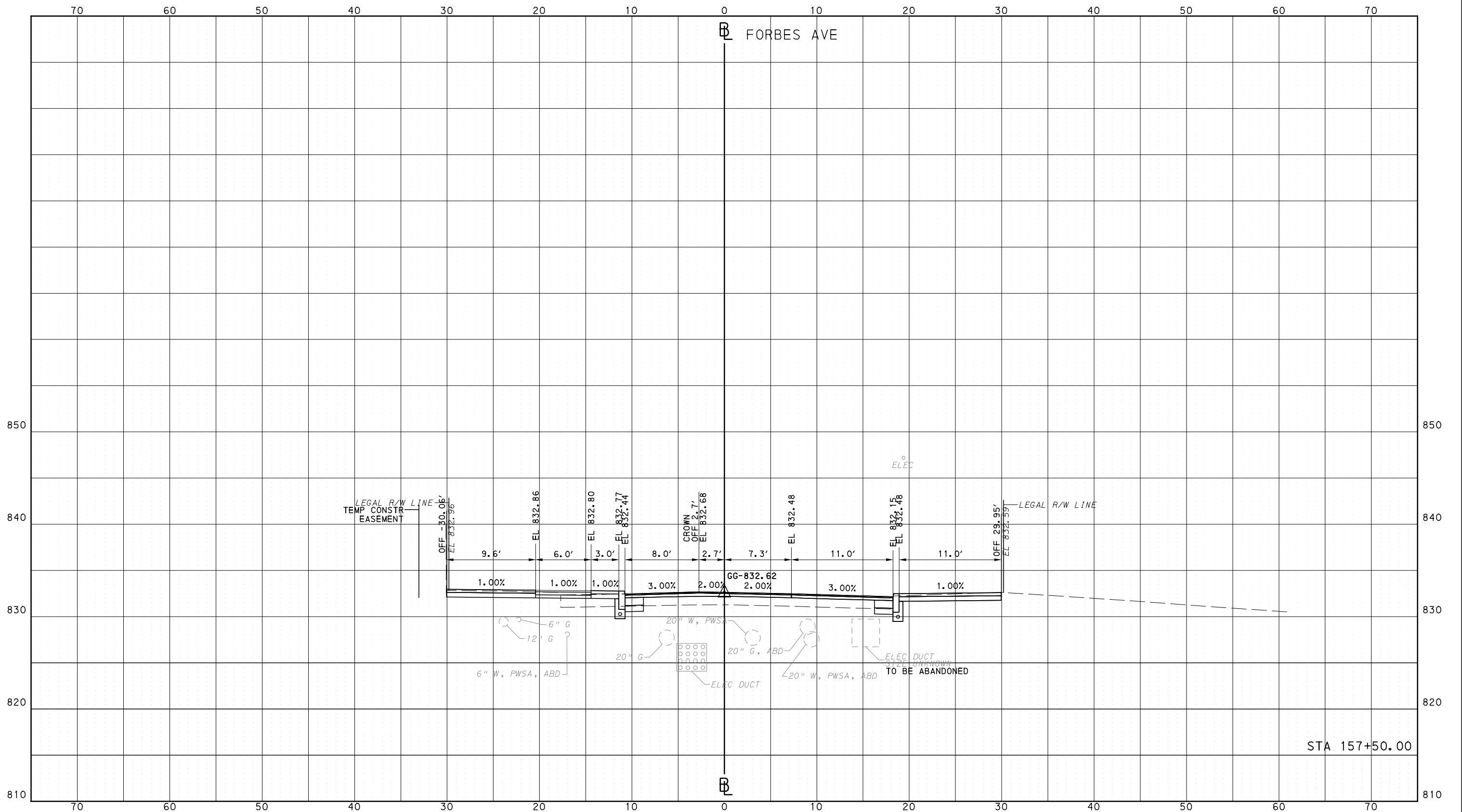
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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS



STA 157+50.00

**AECOM**  
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 Pittsburgh, PA 15219

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 Suite 400  
 730 Holiday Drive  
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DATE	05/01/24
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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
 PITTSBURGH PENNSYLVANIA

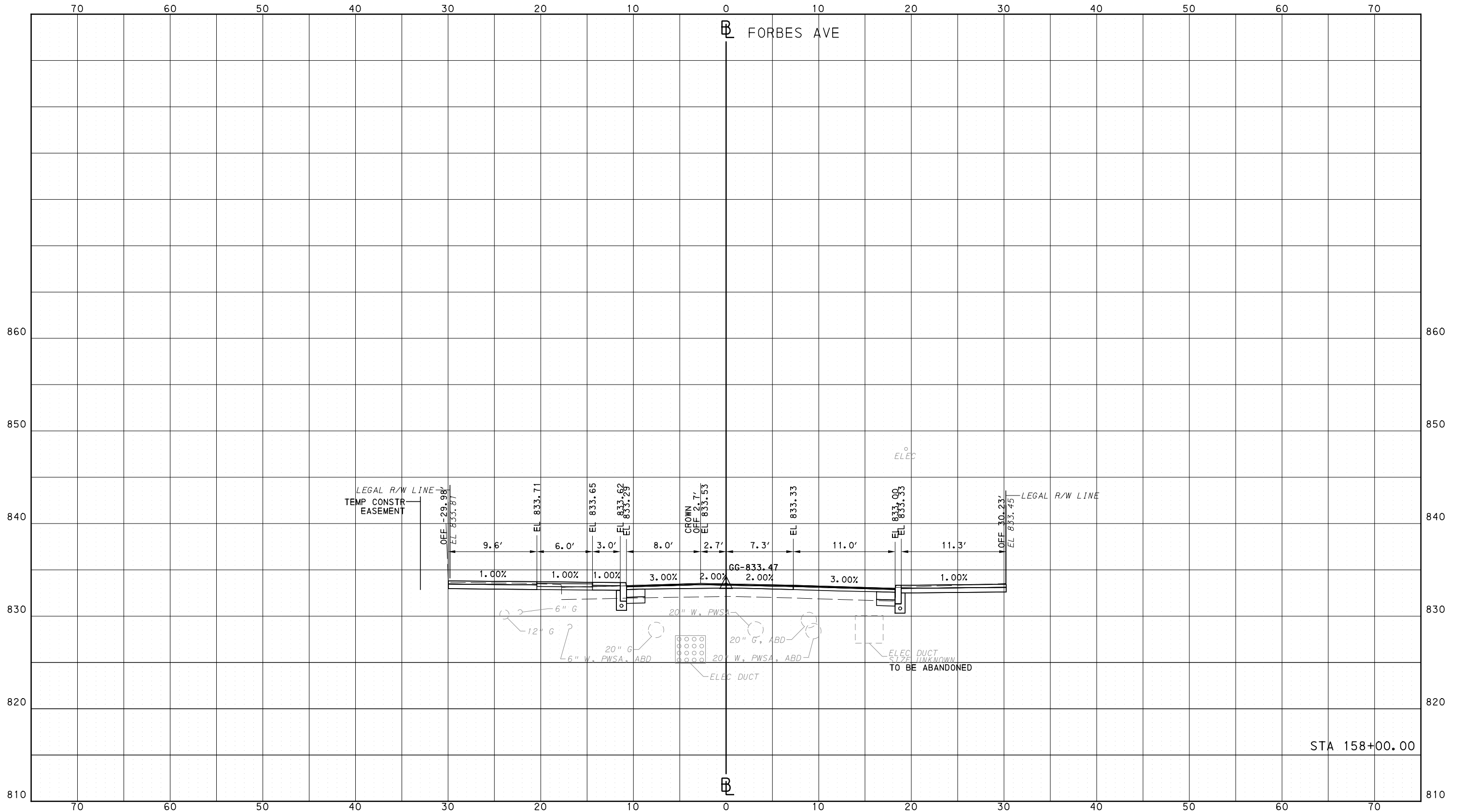
**BUS RAPID TRANSIT  
 CROSS SECTIONS  
 FORBES AVE - STA 157+50.00**

**Port Authority** connecting people to life

CONTRACT NO. BRT-001  
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PORT AUTHORITY OF ALLEGHENY COUNTY  
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DATE	05/01/24
SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
 PITTSBURGH PENNSYLVANIA

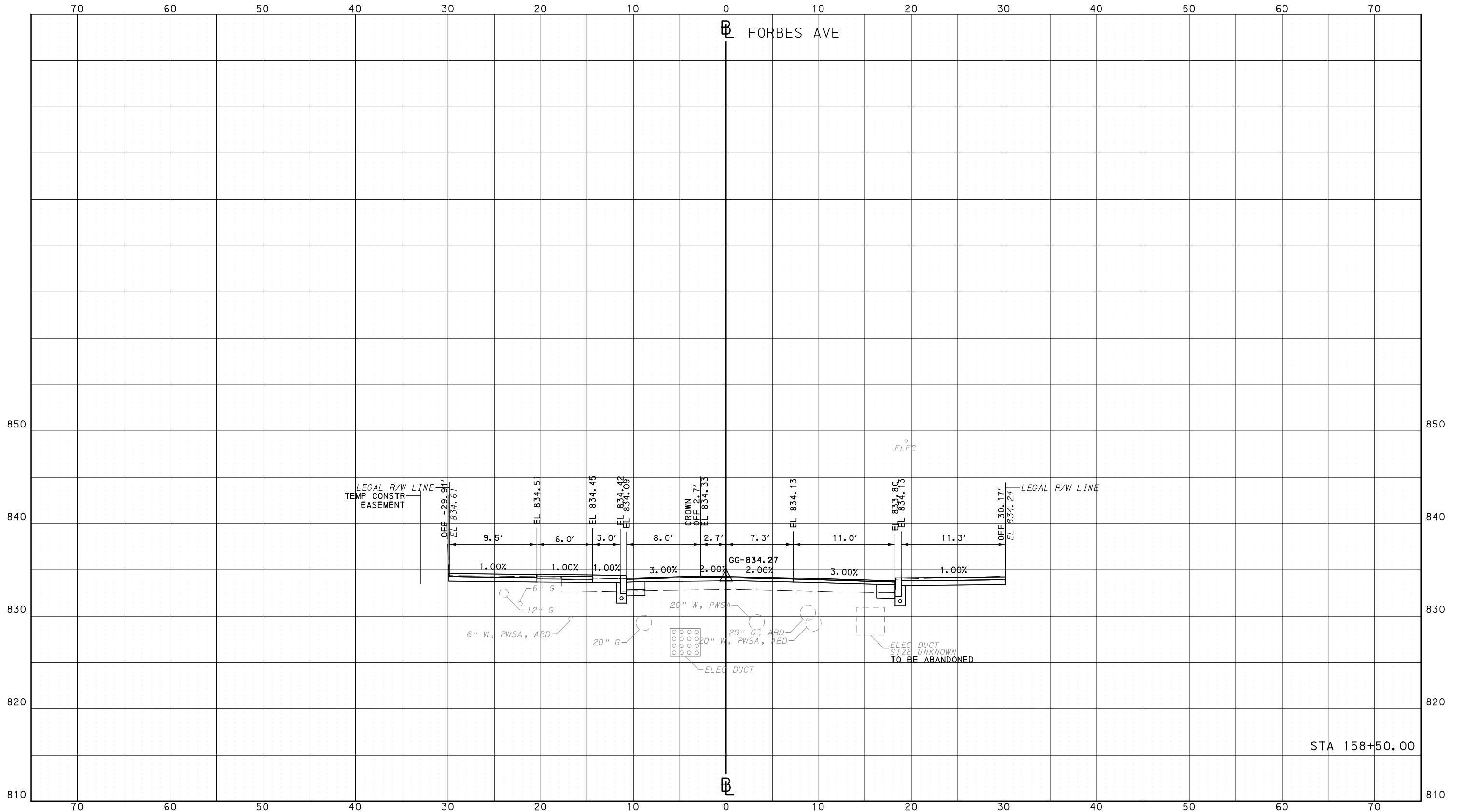
**BUS RAPID TRANSIT**  
 CROSS SECTIONS  
 FORBES AVE - STA 158+00.00

**Port Authority** connecting people to life

CONTRACT NO. BRT-001  
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PORT AUTHORITY OF ALLEGHENY COUNTY  
 CROSS SECTIONS



STA 158+50.00

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 730 Holiday Drive  
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IN CHARGE	GEC
DATE	05/01/24
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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
 PITTSBURGH PENNSYLVANIA

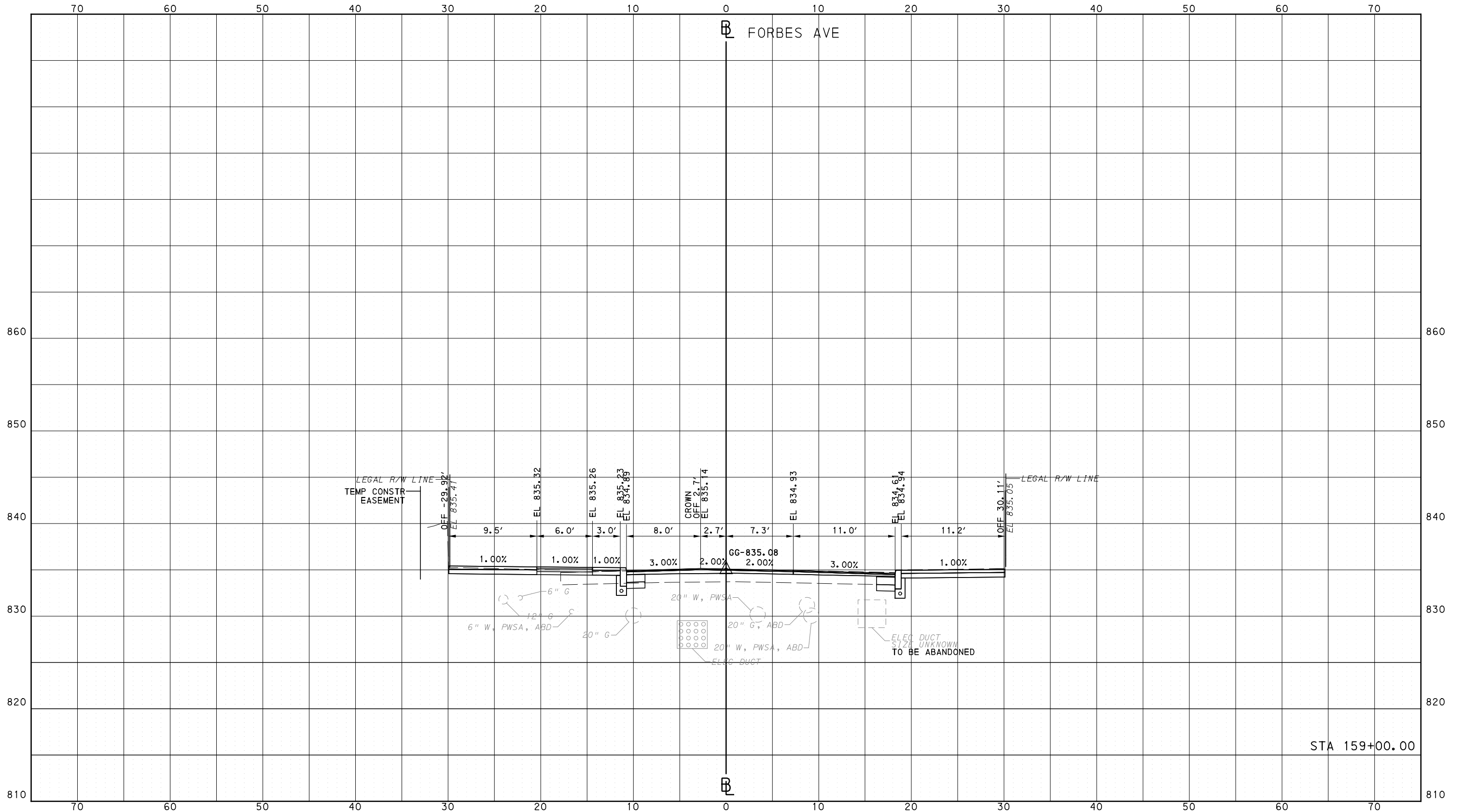
**BUS RAPID TRANSIT  
 CROSS SECTIONS  
 FORBES AVE - STA 158+50.00**

**Port Authority**  
 connecting people to life

CONTRACT NO. BRT-001
DWG. NO. XS227
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PORT AUTHORITY OF ALLEGHENY COUNTY  
 CROSS SECTIONS



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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
 PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT**  
 CROSS SECTIONS  
 FORBES AVE - STA 159+00.00

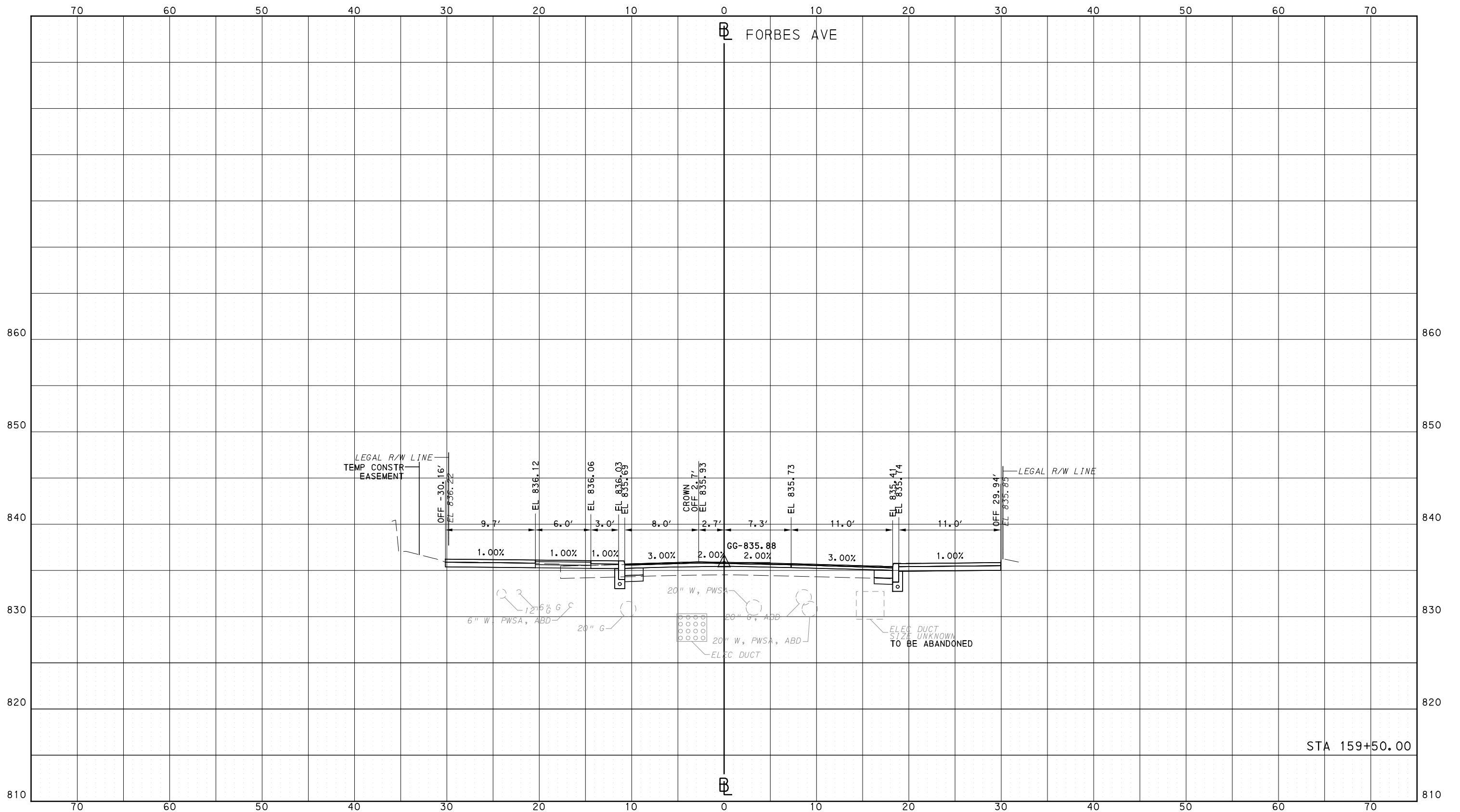
**Port Authority** connecting people to life

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PORT AUTHORITY OF ALLEGHENY COUNTY  
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DATE	05/01/24
SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT  
CROSS SECTIONS  
FORBES AVE - STA 159+50.00**

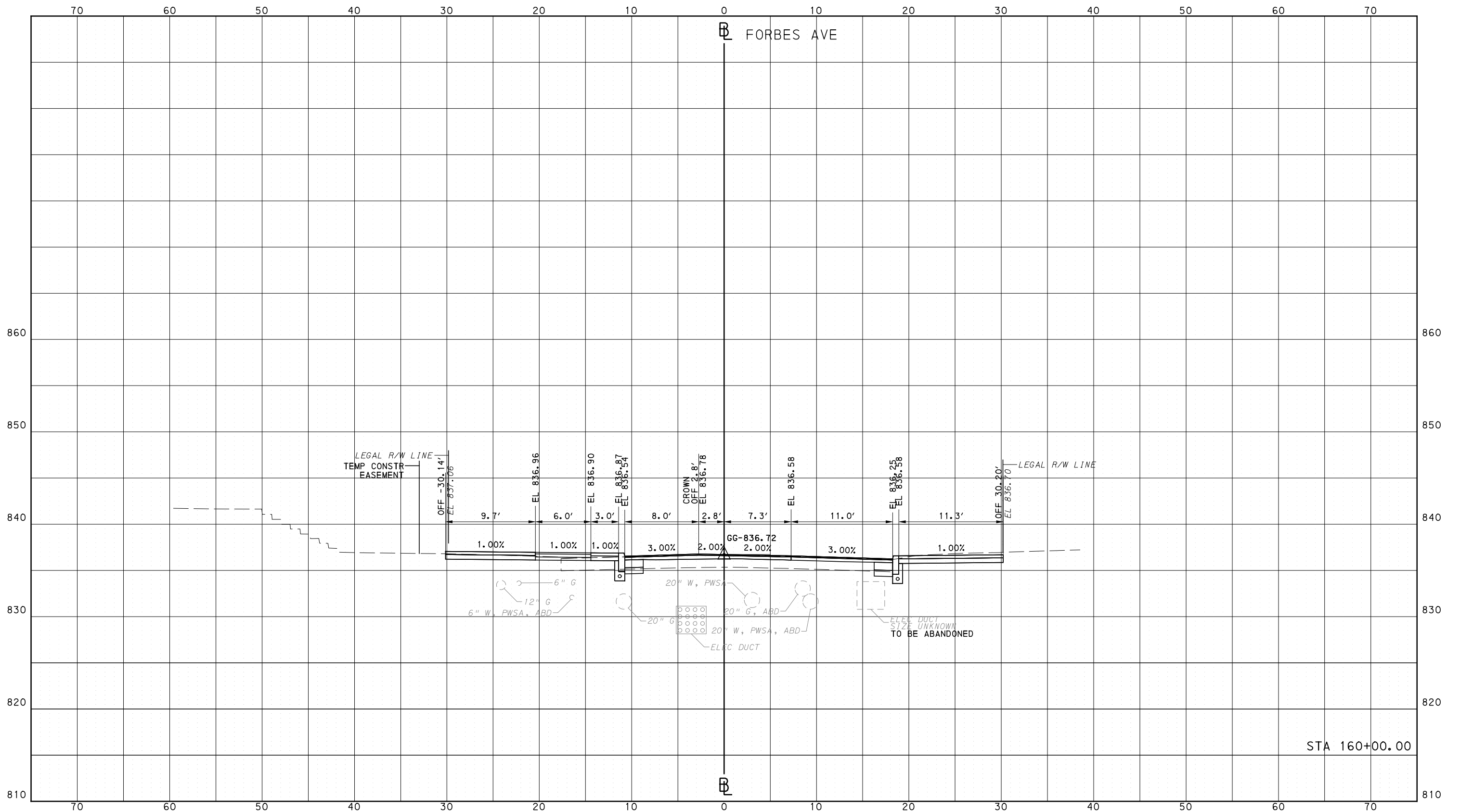
**Port Authority** connecting people to life

CONTRACT NO. BRT-001
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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT  
CROSS SECTIONS  
FORBES AVE - STA 160+00.00**

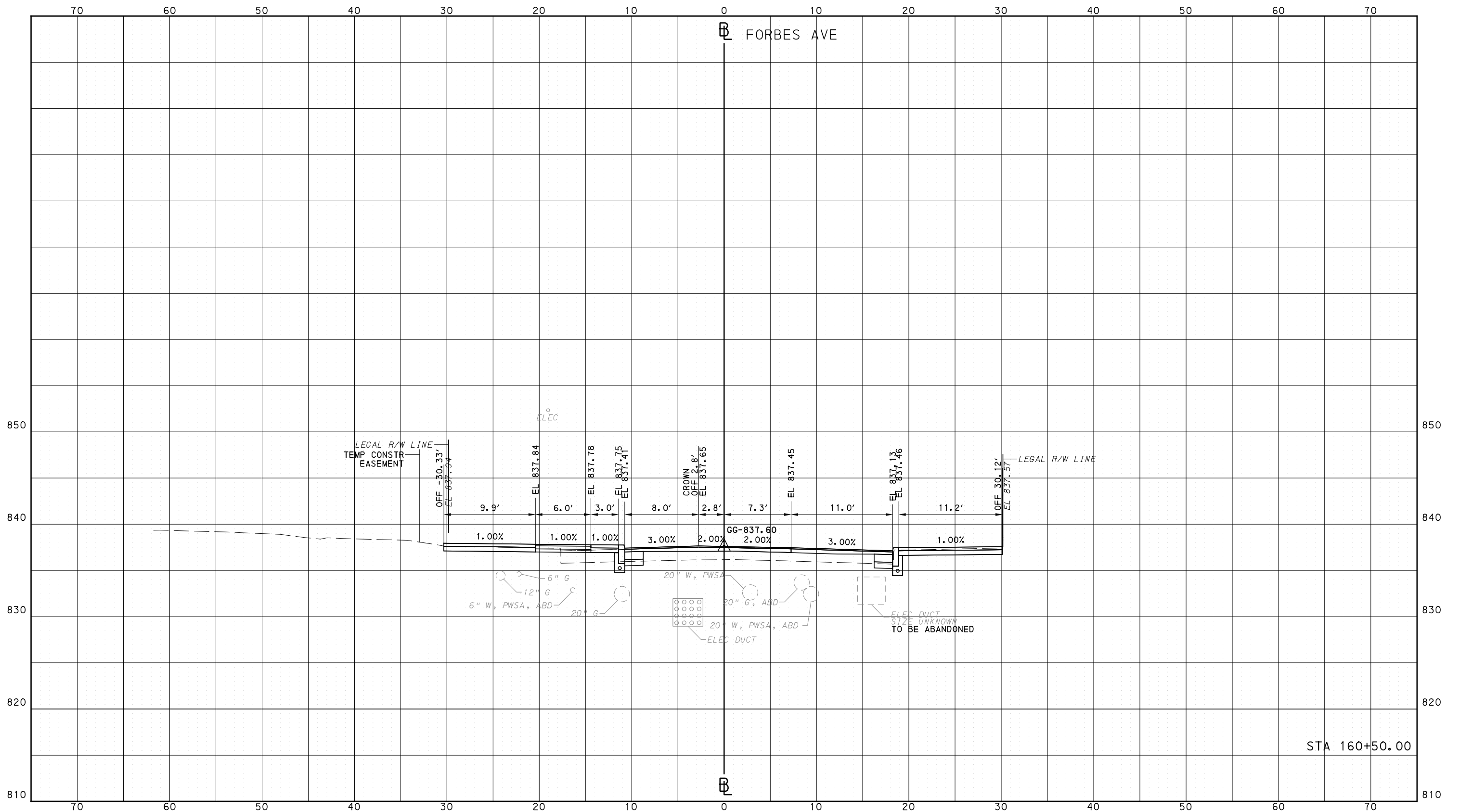
**Port Authority** connecting people to life

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CROSS SECTIONS



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707 Grant Street  
5th Floor  
Pittsburgh, PA 15219

**GANNETT FLEMING**  
GANNETT FLEMING, INC.  
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Suite 400  
730 Holiday Drive  
Pittsburgh, PA. 15220

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PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT**  
CROSS SECTIONS  
FORBES AVE - STA 160+50.00

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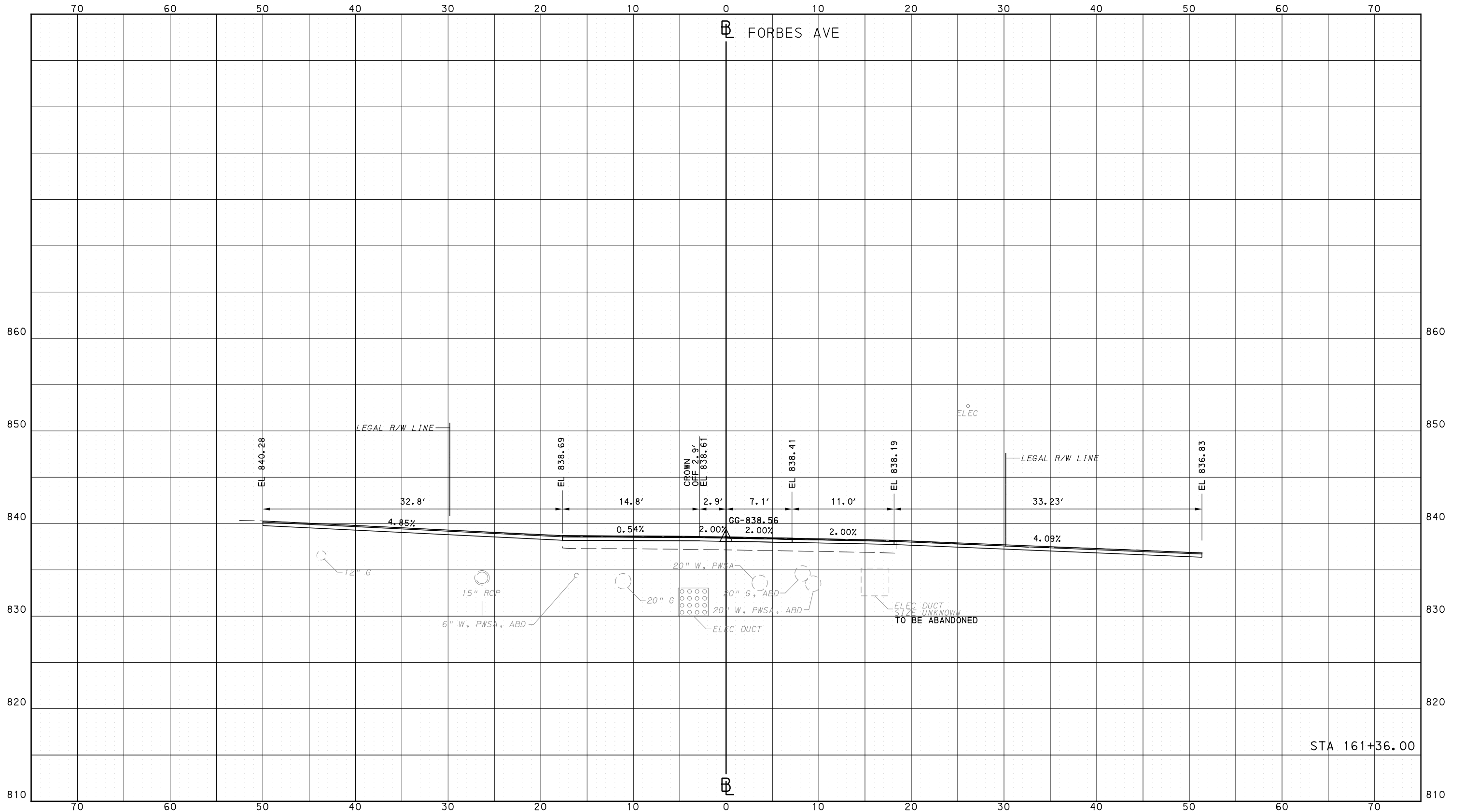
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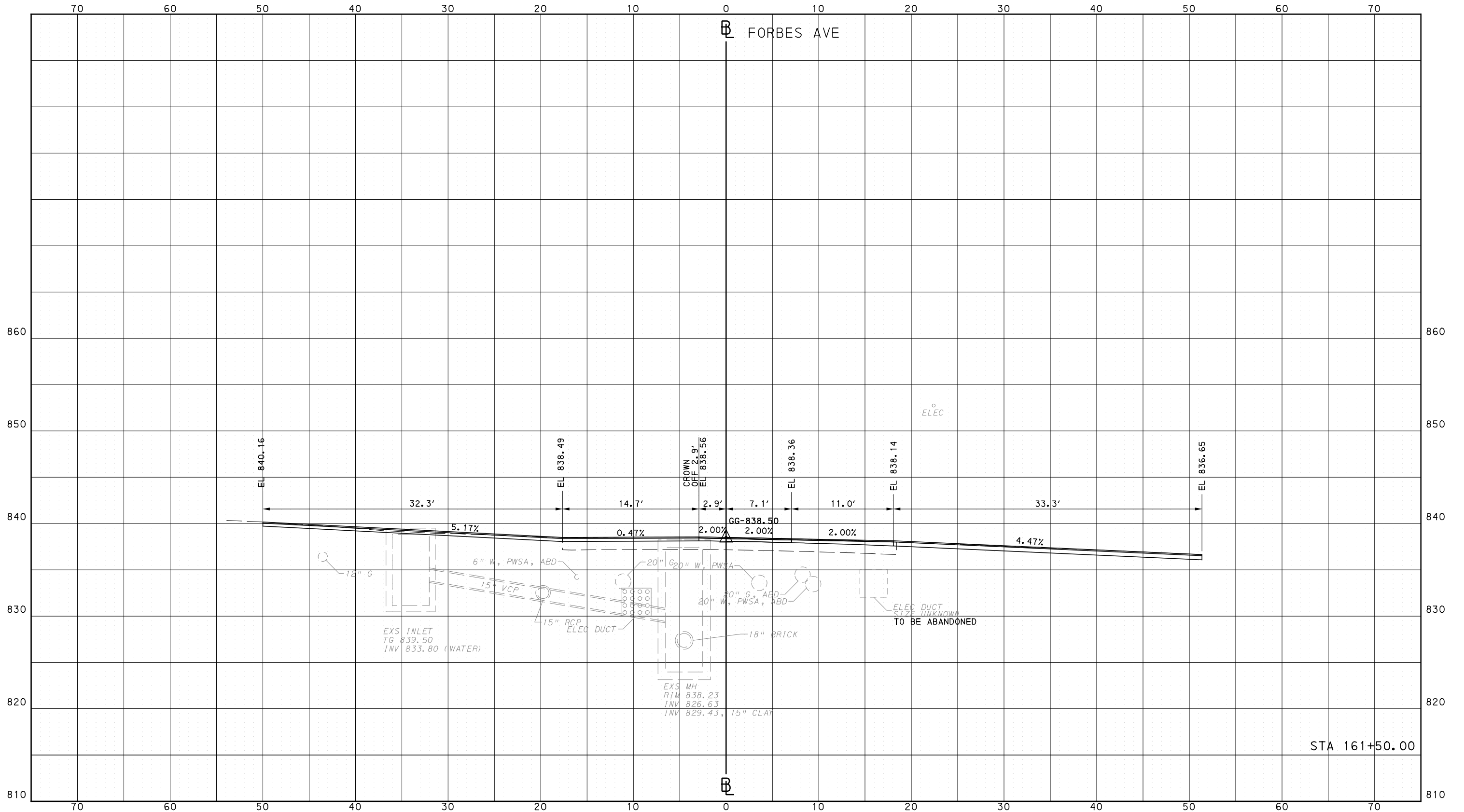
**BUS RAPID TRANSIT  
CROSS SECTIONS  
FORBES AVE - STA 161+36.00**

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CONTRACT NO. BRT-001  
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PORT AUTHORITY OF ALLEGHENY COUNTY  
PITTSBURGH PENNSYLVANIA

BUS RAPID TRANSIT  
CROSS SECTIONS  
FORBES AVE - STA 161+50.00



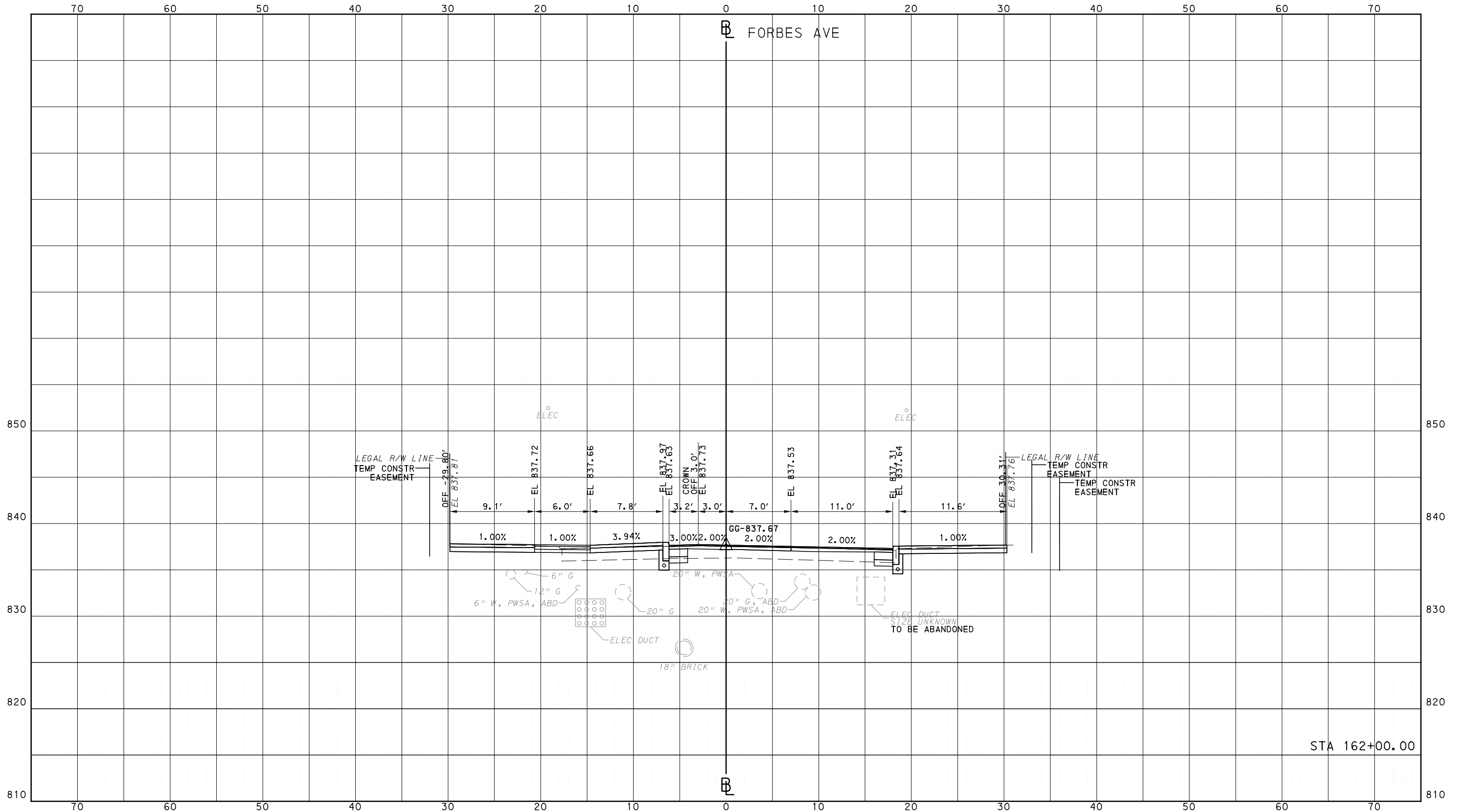
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SHT. 1440

OPERATOR: "joseph.s.j.tch"  
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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS



STA 162+00.00

**AECOM**  
 Gulf Tower  
 707 Grant Street  
 5th Floor  
 Pittsburgh, PA 15219

**GANNETT FLEMING**  
 GANNETT FLEMING, INC.  
 Foster Plaza 8  
 Suite 400  
 730 Holiday Drive  
 Pittsburgh, PA. 15220

NO.	DATE	DESCRIPTION
REVISIONS		

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**(NOT FOR CONSTRUCTION)**

DESIGNED	RRH
DRAWN	DVP
CHECKED	KCF
IN CHARGE	GEC
DATE	05/01/24
SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

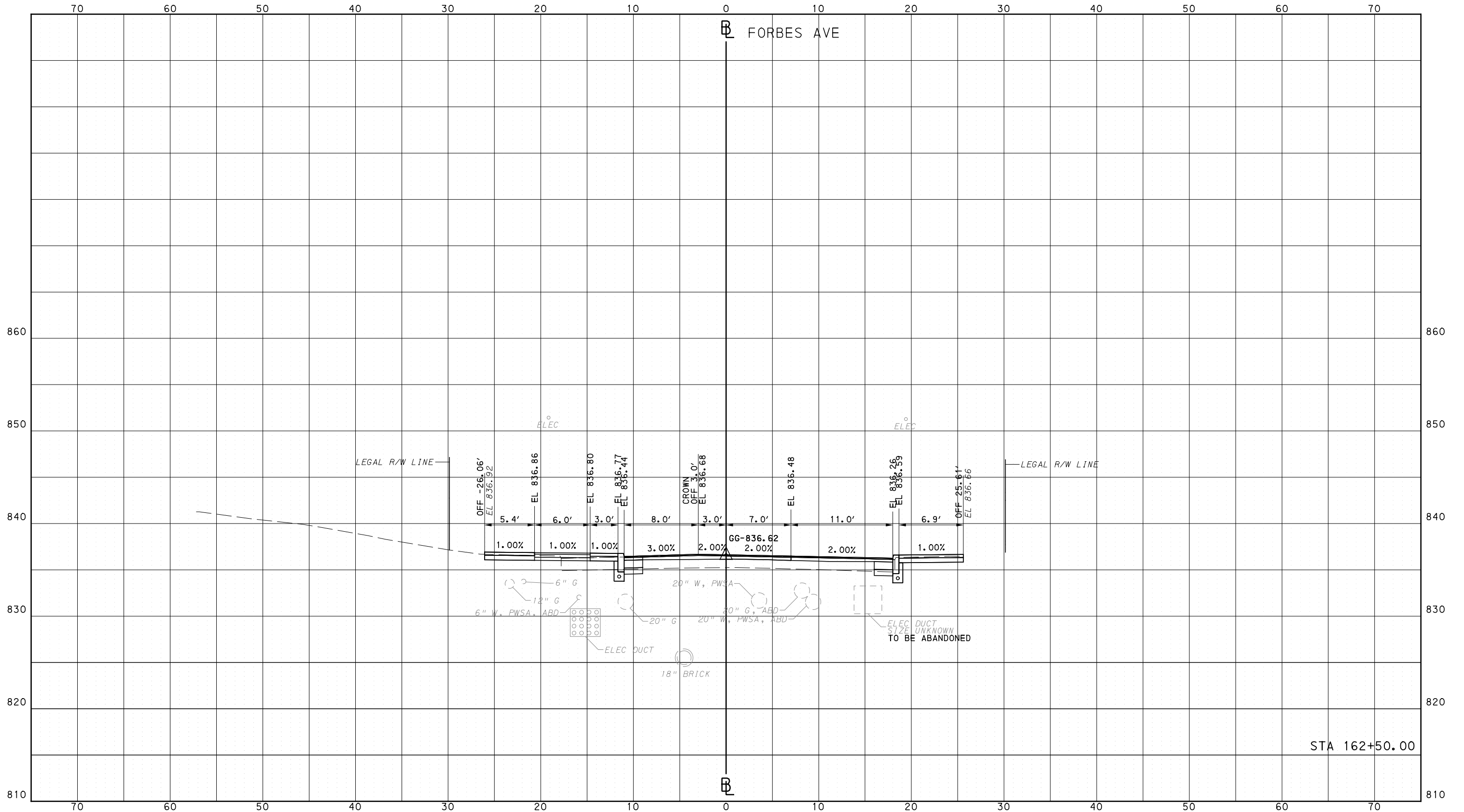
**BUS RAPID TRANSIT  
CROSS SECTIONS  
FORBES AVE - STA 162+00.00**

**Port Authority** connecting people to life

CONTRACT NO. BRT-001
DWG. NO. XS235
SHT. 1441

OPERATOR: "joseph.s.litch"  
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PORT AUTHORITY OF ALLEGHENY COUNTY  
 CROSS SECTIONS



STA 162+50.00

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 Gulf Tower  
 707 Grant Street  
 5th Floor  
 Pittsburgh, PA 15219

**GANNETT FLEMING**  
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 Foster Plaza 8  
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**(NOT FOR CONSTRUCTION)**

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CHECKED	KCF
IN CHARGE	GEC
DATE	05/01/24
SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
 PITTSBURGH PENNSYLVANIA

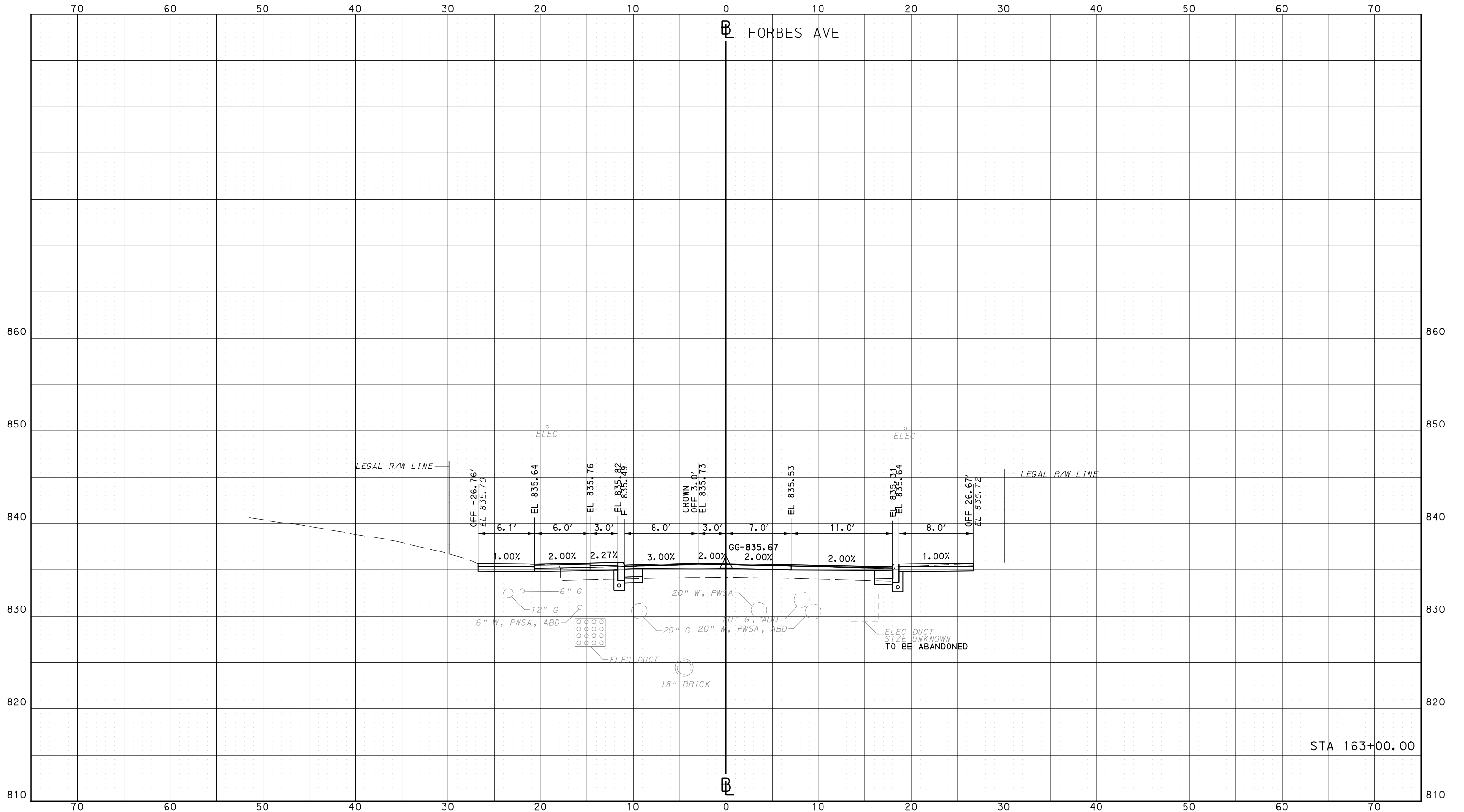
**BUS RAPID TRANSIT  
 CROSS SECTIONS  
 FORBES AVE - STA 162+50.00**

**Port Authority**  
 connecting people to life

CONTRACT NO. BRT-001
DWG. NO. XS236
SHT. 1442

OPERATOR: "joseph.s.l|tch"  
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PORT AUTHORITY OF ALLEGHENY COUNTY  
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STA 163+00.00



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**(NOT FOR CONSTRUCTION)**

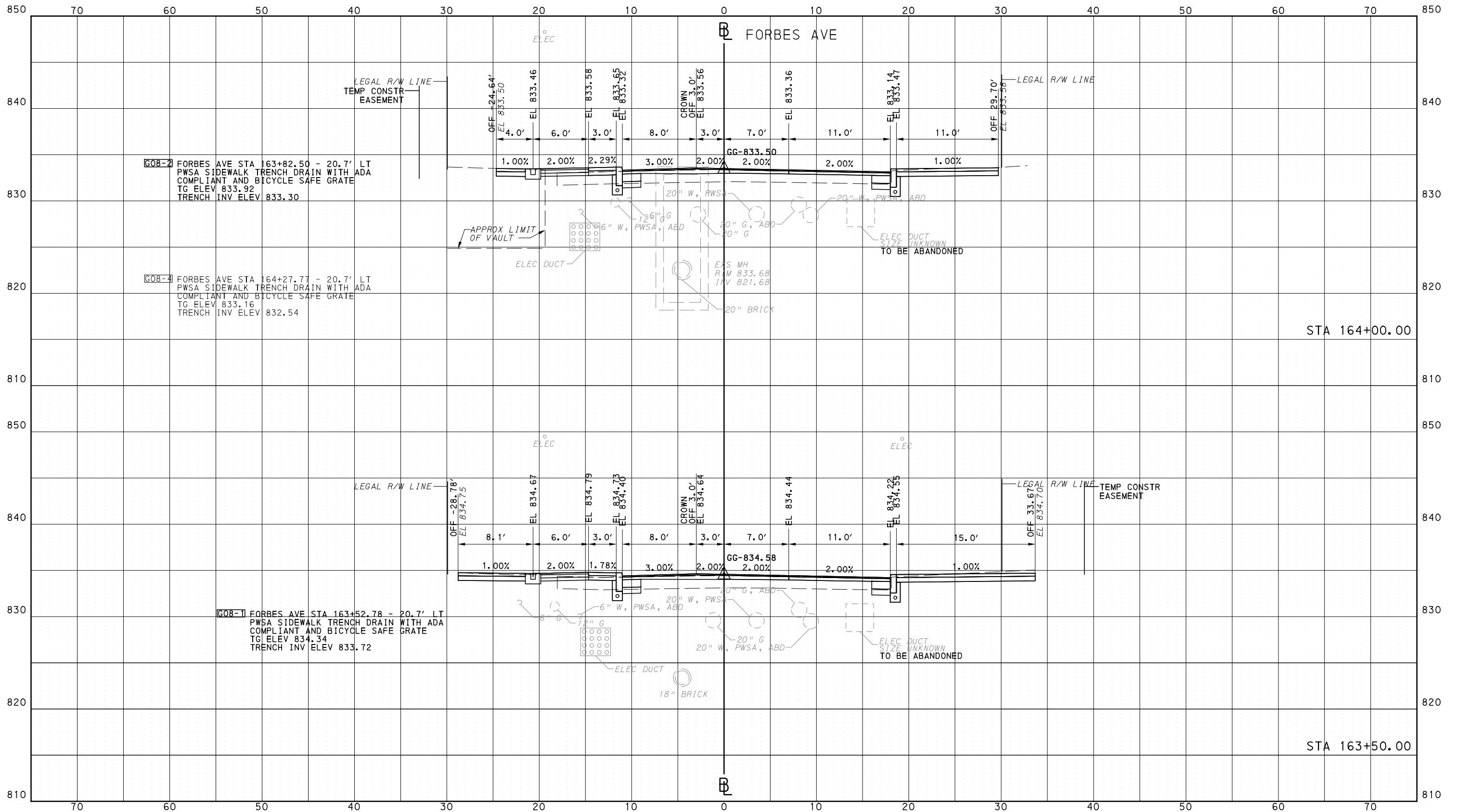
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DRAWN	DVP
CHECKED	KCF
IN CHARGE	GEC
DATE	05/01/24
SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
 PITTSBURGH PENNSYLVANIA  
**BUS RAPID TRANSIT**  
**CROSS SECTIONS**  
**FORBES AVE - STA 163+00.00**  
**Port Authority** connecting people to life  
 CONTRACT NO. BRT-001  
 DWG. NO. XS237 SHT. 1443

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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS



**AECOM**  
 Gulf Tower  
 707 Grant Street  
 5th Floor  
 Pittsburgh, PA 15219

**GANNETT FLEMING**  
 GANNETT FLEMING, INC.  
 Foster Plaza 8  
 Suite 400  
 730 Holiday Drive  
 Pittsburgh, PA. 15220

NO.	DATE	DESCRIPTION
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**(NOT FOR CONSTRUCTION)**

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DRAWN	DVP
CHECKED	KCF
IN CHARGE	GEC
DATE	05/01/24
SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
 PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT  
 CROSS SECTIONS  
 FORBES AVE - STA 163+50.00 TO STA 164+00.00**

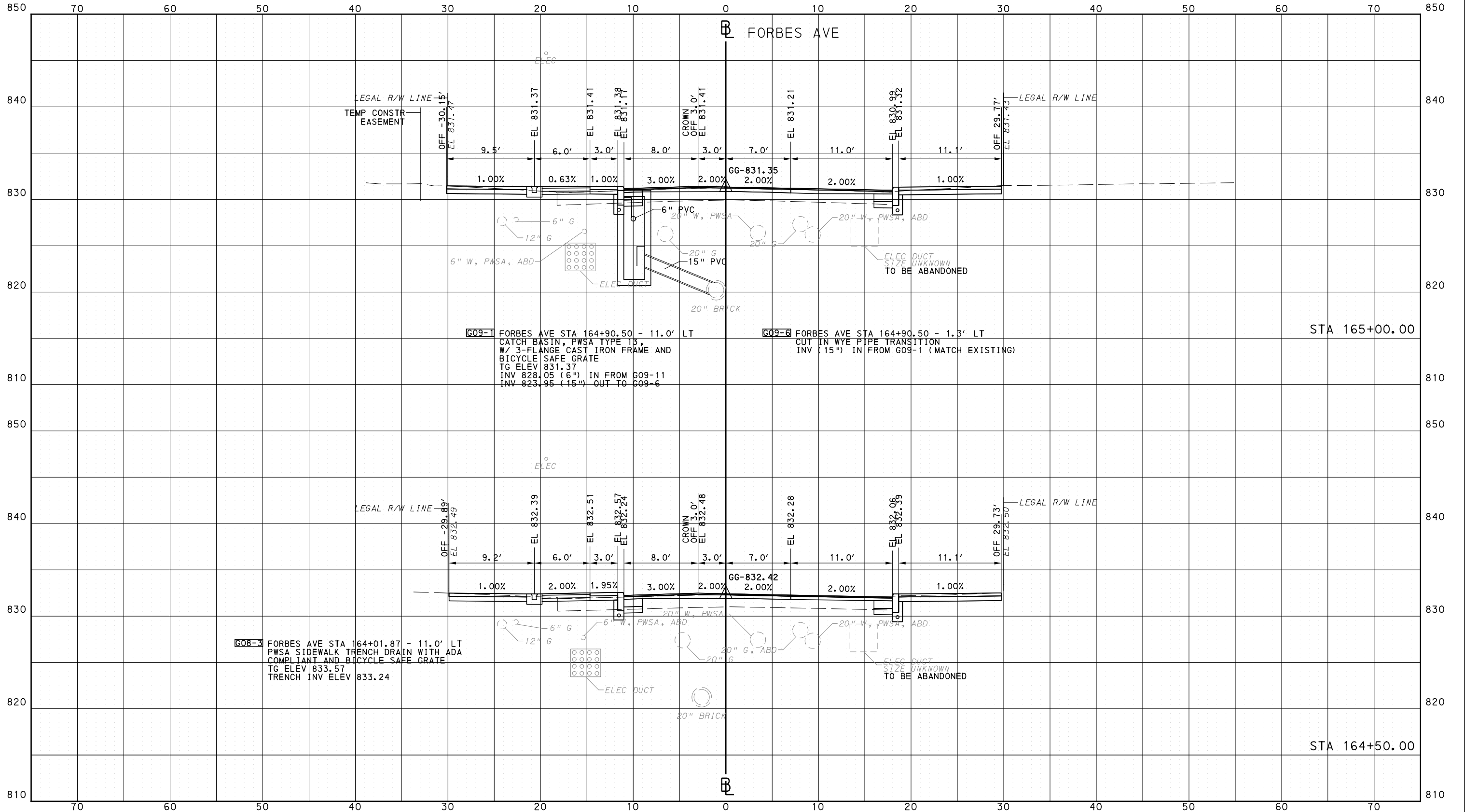
**Port Authority** connecting people to life™

CONTRACT NO. BRT-001  
 DWG. NO. XS238 SHT. 1444



OPERATOR: "joseph.s.litch" FILE PATH: c:\pwworking\aecocom\d0207632\p-brt-07\_xs\_base\_shts50-100.dgn PLOTTED: 3/23/2024 11:26:46 AM

PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS



**AECOM**  
Gulf Tower  
707 Grant Street  
5th Floor  
Pittsburgh, PA 15219

**GANNETT FLEMING**  
GANNETT FLEMING, INC.  
Foster Plaza 8  
Suite 400  
730 Holiday Drive  
Pittsburgh, PA. 15220

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REVISIONS		

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CHECKED	KCF
IN CHARGE	GEC
DATE	05/01/24
SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT**  
CROSS SECTIONS  
FORBES AVE - STA 164+50.00 TO STA 165+00.00

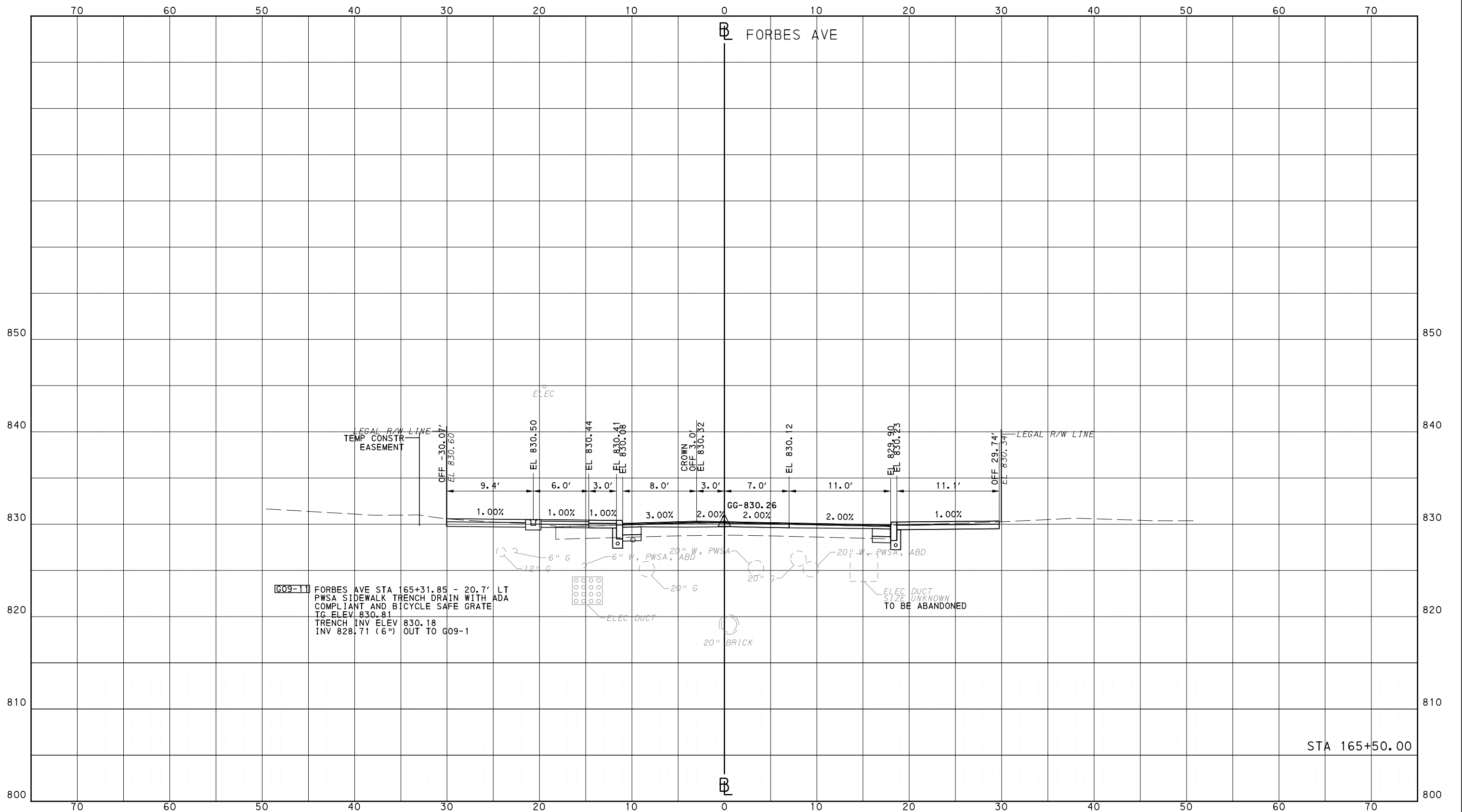
**Port Authority** connecting people to life

CONTRACT NO. BRT-001  
DWG. NO. XS239 SHT. 1445

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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS



G09-11 FORBES AVE STA 165+31.85 - 20.7' LT  
PWSA SIDEWALK TRENCH DRAIN WITH ADA  
COMPLIANT AND BICYCLE SAFE GRATE  
TG ELEV 830.81  
TRENCH INV ELEV 830.18  
INV 828.71 (6") OUT TO G09-1



Gulf Tower  
707 Grant Street  
5th Floor  
Pittsburgh, PA 15219



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Pittsburgh, PA. 15220

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(NOT FOR CONSTRUCTION)

DESIGNED	RRH
DRAWN	DVP
CHECKED	KCF
IN CHARGE	GEC
DATE	05/01/24
SCALE	0 5 10 FEET

PORT AUTHORITY OF ALLEGHENY COUNTY  
PITTSBURGH PENNSYLVANIA

BUS RAPID TRANSIT  
CROSS SECTIONS  
FORBES AVE - STA 165+50.00

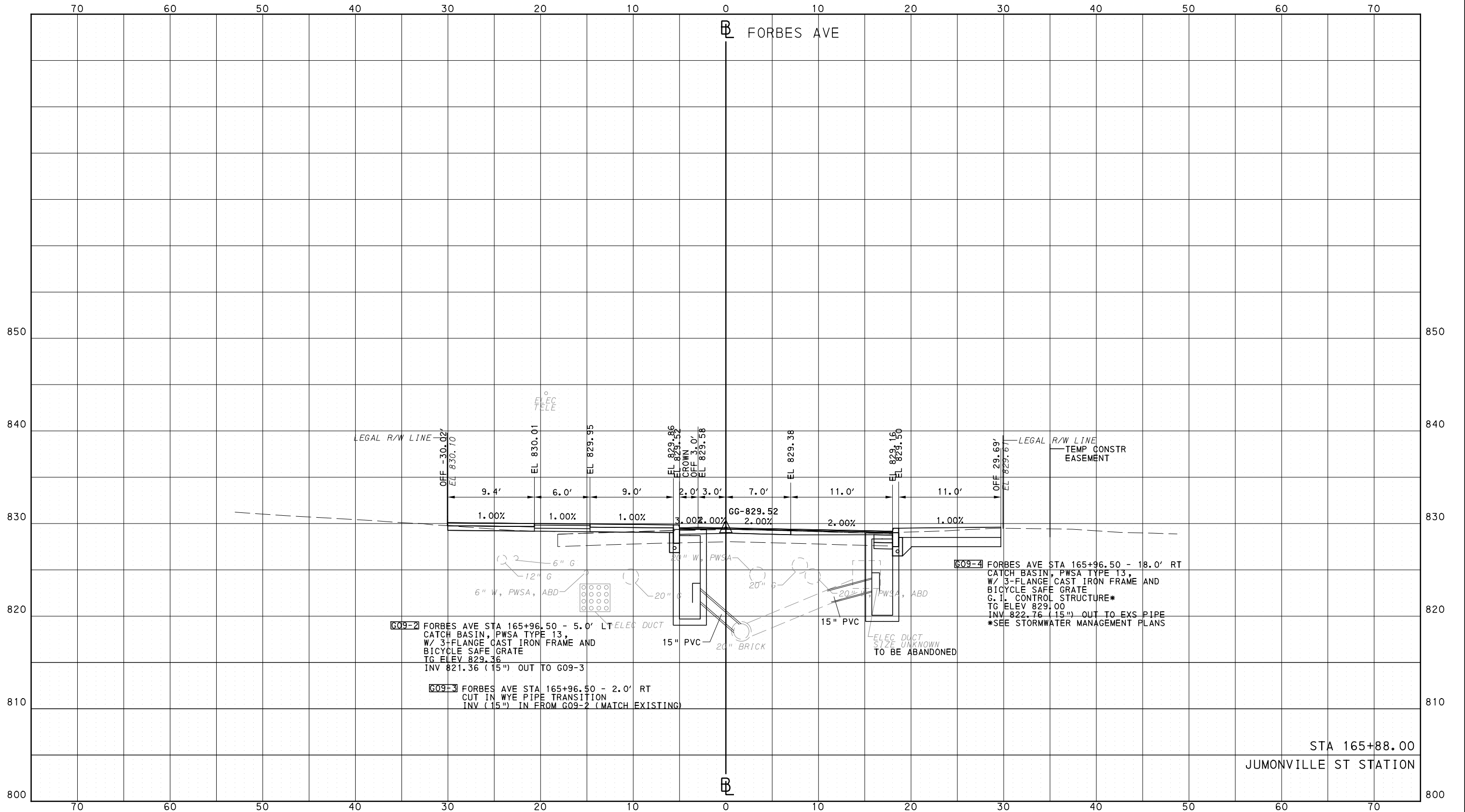


CONTRACT NO. BRT-001

DWG. NO. XS240 SHT. 1446

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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS



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5th Floor  
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Pittsburgh, PA. 15220

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**(NOT FOR CONSTRUCTION)**

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CHECKED	KCF
IN CHARGE	GEC
DATE	05/01/24
SCALE	0 5 10 FEET

PORT AUTHORITY OF ALLEGHENY COUNTY  
PITTSBURGH PENNSYLVANIA

BUS RAPID TRANSIT  
CROSS SECTIONS  
FORBES AVE - STA 165+88.00



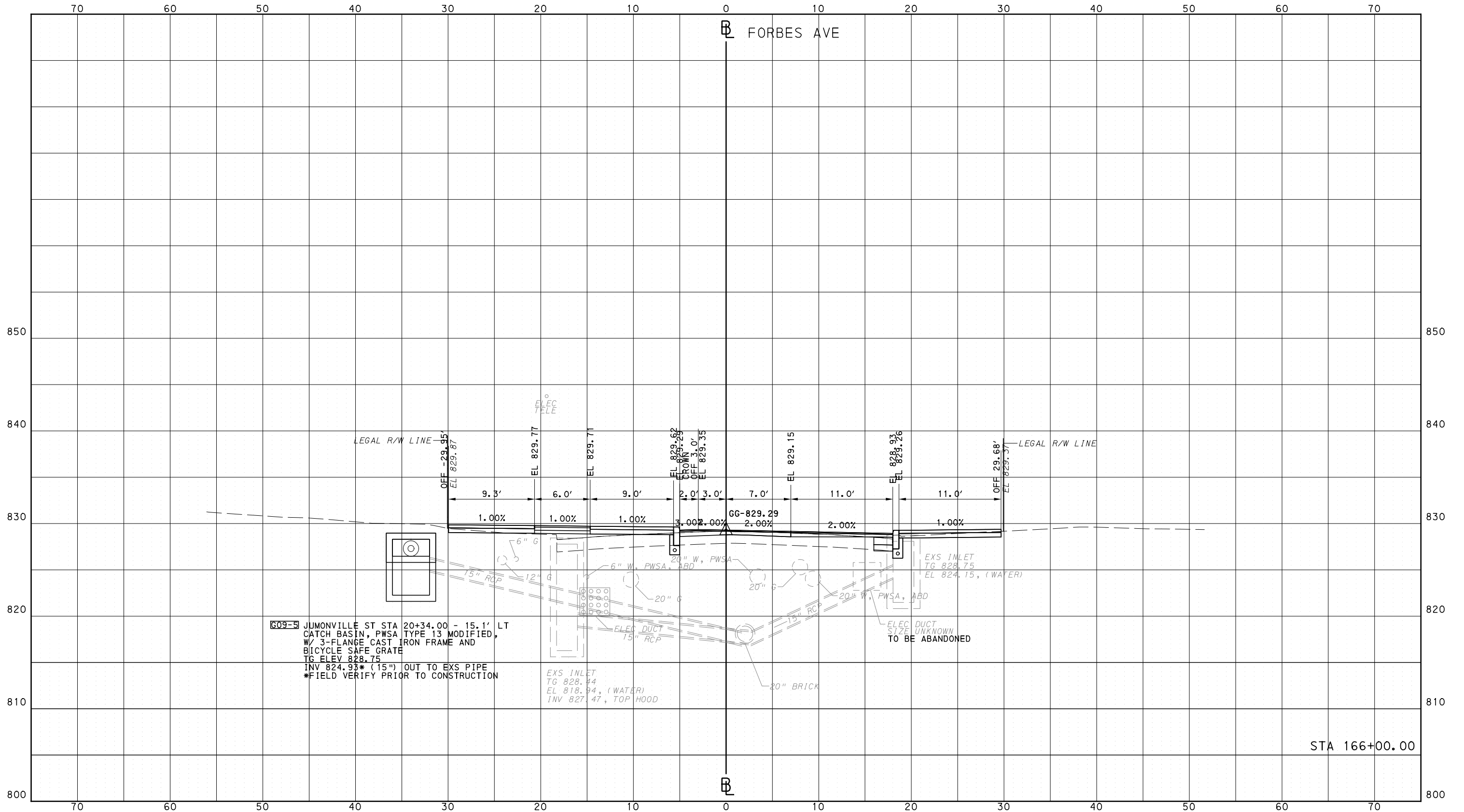
CONTRACT NO. BRT-001

DWG. NO. XS241

SHT. 1447

OPERATOR: "joseph.s.l.fcb"  
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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS



**609-5** JUMONVILLE ST STA 20+34.00 - 15.1' LT  
 CATCH BASIN, PWSA TYPE 13 MODIFIED,  
 W/ 3-FLANGE CAST IRON FRAME AND  
 BICYCLE SAFE GRATE  
 TG ELEV 828.75  
 INV 824.93\* (15") OUT TO EXS PIPE  
 \*FIELD VERIFY PRIOR TO CONSTRUCTION

EXS INLET  
 TG 828.44  
 EL 818.94, (WATER)  
 INV 827.47, TOP HOOD

EXS INLET  
 TG 828.75  
 EL 824.15, (WATER)

ELEC DUCT  
 SIZE UNKNOWN  
 TO BE ABANDONED



NO.	DATE	DESCRIPTION
REVISIONS		

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(NOT FOR CONSTRUCTION)

DESIGNED	RRH
DRAWN	DVP
CHECKED	KCF
IN CHARGE	GEC
DATE	05/01/24
SCALE	0 5 10 FEET

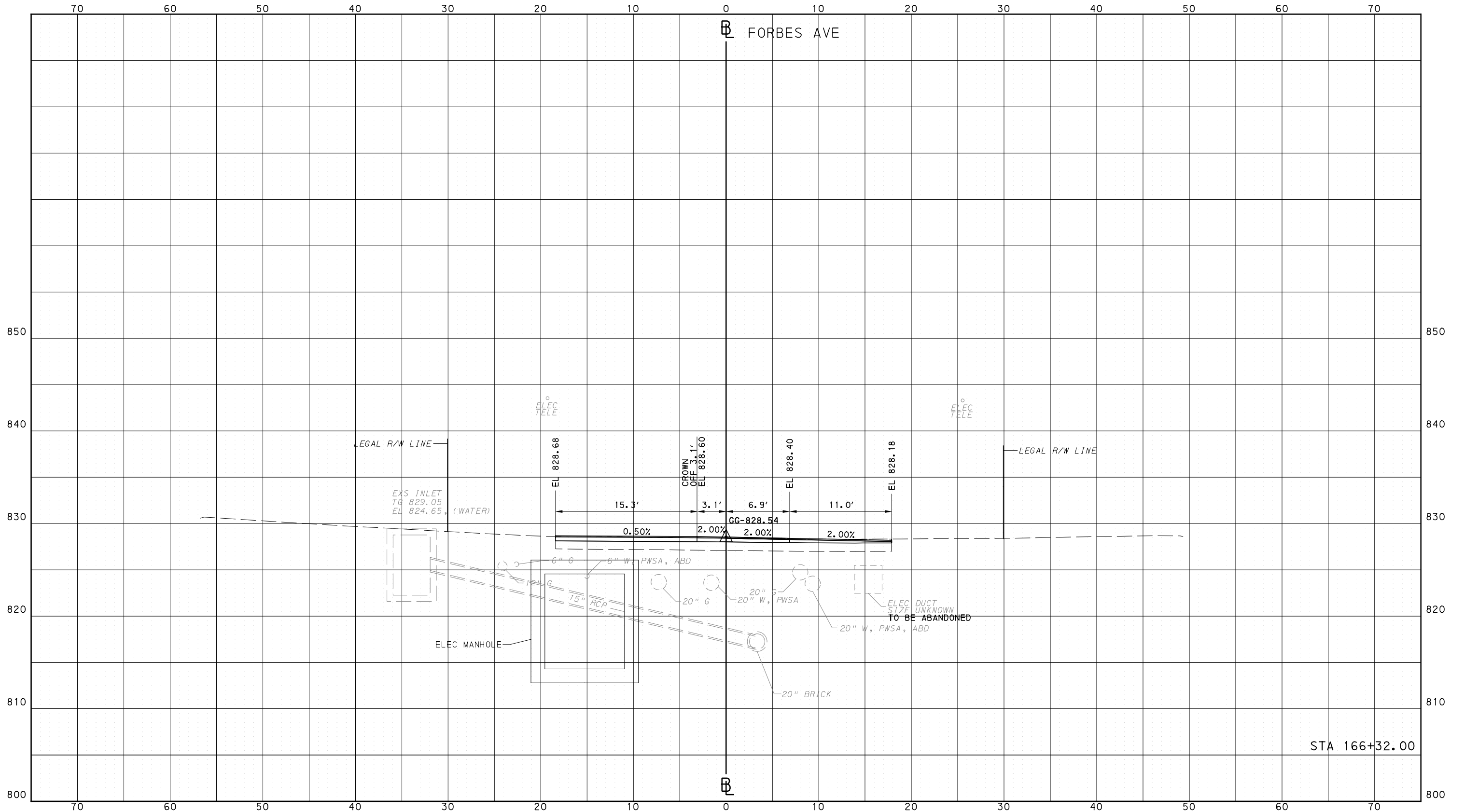
**PORT AUTHORITY OF ALLEGHENY COUNTY**  
 PITTSBURGH PENNSYLVANIA  
**BUS RAPID TRANSIT**  
 CROSS SECTIONS  
 FORBES AVE - STA 166+00.00

**Port Authority**  
connecting people to life

CONTRACT NO. BRT-001	
DWG. NO. XS242	SHT. 1448

OPERATOR: "joseph.s.j.tch"  
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PORT AUTHORITY OF ALLEGHENY COUNTY  
 CROSS SECTIONS



STA 166+32.00

**AECOM**  
 Gulf Tower  
 707 Grant Street  
 5th Floor  
 Pittsburgh, PA 15219

**GANNETT FLEMING**  
 GANNETT FLEMING, INC.  
 Foster Plaza 8  
 Suite 400  
 730 Holiday Drive  
 Pittsburgh, PA. 15220

NO.	DATE	DESCRIPTION
REVISIONS		

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DESIGNED	RRH
DRAWN	DVP
CHECKED	KCF
IN CHARGE	GEC
DATE	05/01/24
SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
 PITTSBURGH PENNSYLVANIA

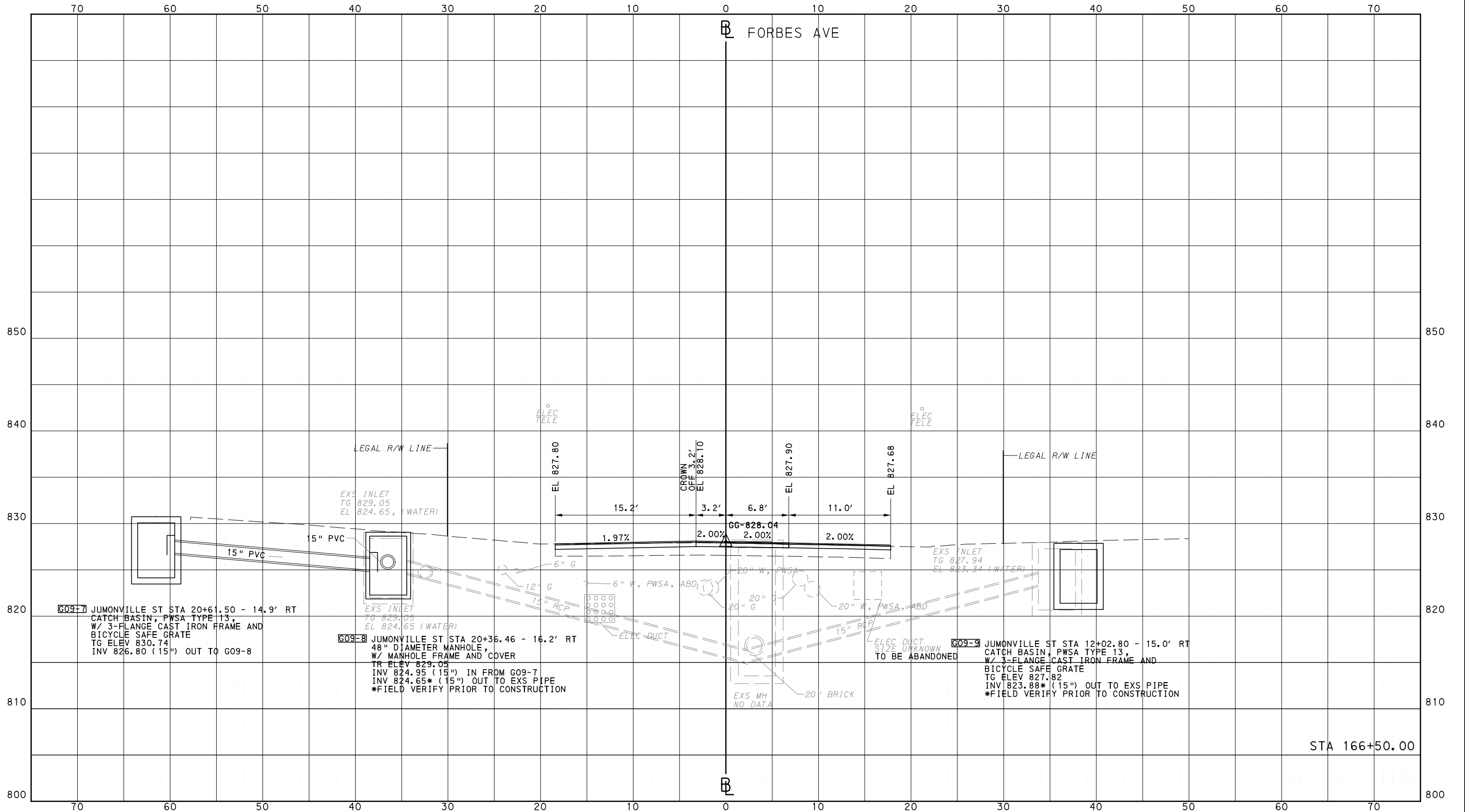
**BUS RAPID TRANSIT**  
 CROSS SECTIONS  
 FORBES AVE - STA 166+32.00

**Port Authority** connecting people to life

CONTRACT NO. BRT-001  
 DWG. NO. XS243 SHT. 1449

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 PLOTTED: 3/23/2024 11:59:43 AM

PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS



Gulf Tower  
707 Grant Street  
5th Floor  
Pittsburgh, PA 15219



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Suite 400  
730 Holiday Drive  
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CHECKED	KCF
IN CHARGE	GEC
DATE	05/01/24
SCALE	0 5 10 FEET

PORT AUTHORITY OF ALLEGHENY COUNTY  
PITTSBURGH PENNSYLVANIA

BUS RAPID TRANSIT  
CROSS SECTIONS  
FORBES AVE - STA 166+50.00



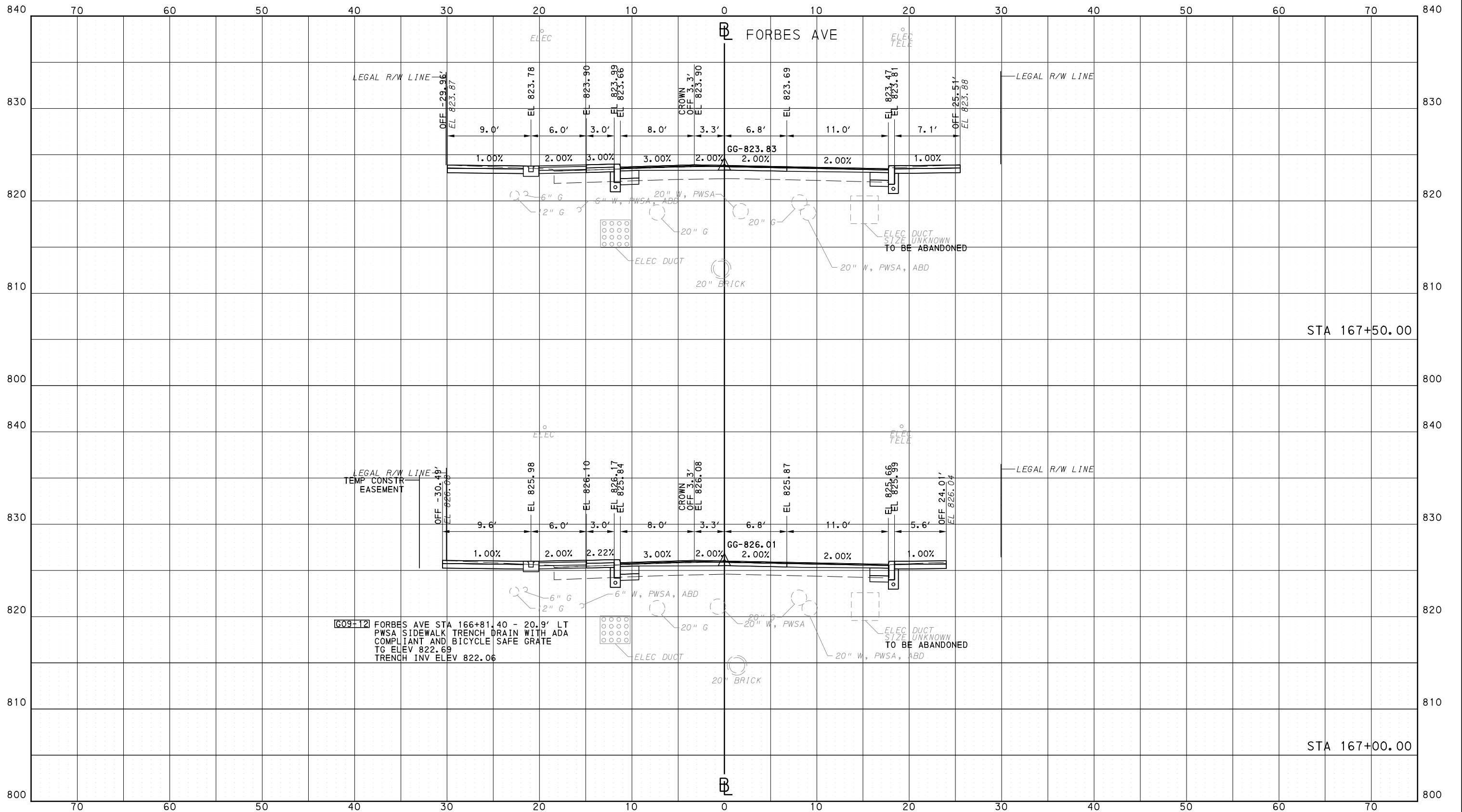
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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT**  
CROSS SECTIONS  
FORBES AVE - STA 167+00.00 TO STA 167+50.00

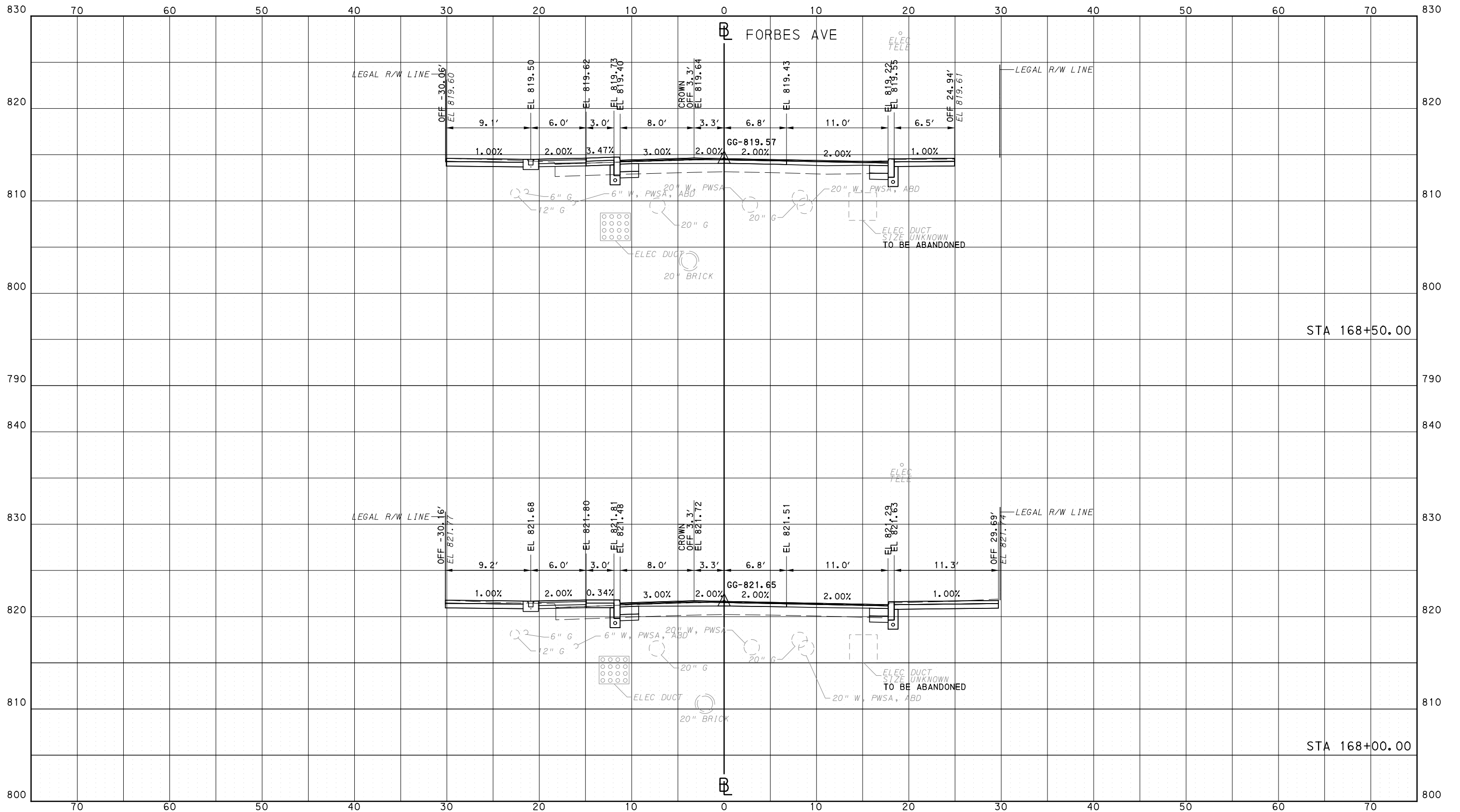
**Port Authority** connecting people to life™

CONTRACT NO. BRT-001  
DWG. NO. XS245 SHT. 1451



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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS



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707 Grant Street  
5th Floor  
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Suite 400  
730 Holiday Drive  
Pittsburgh, PA. 15220

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IN CHARGE	GEC
DATE	05/01/24
SCALE	0 5 10 FEET

PORT AUTHORITY OF ALLEGHENY COUNTY  
PITTSBURGH PENNSYLVANIA

BUS RAPID TRANSIT  
CROSS SECTIONS  
FORBES AVE - STA 168+00.00 TO STA 168+50.00

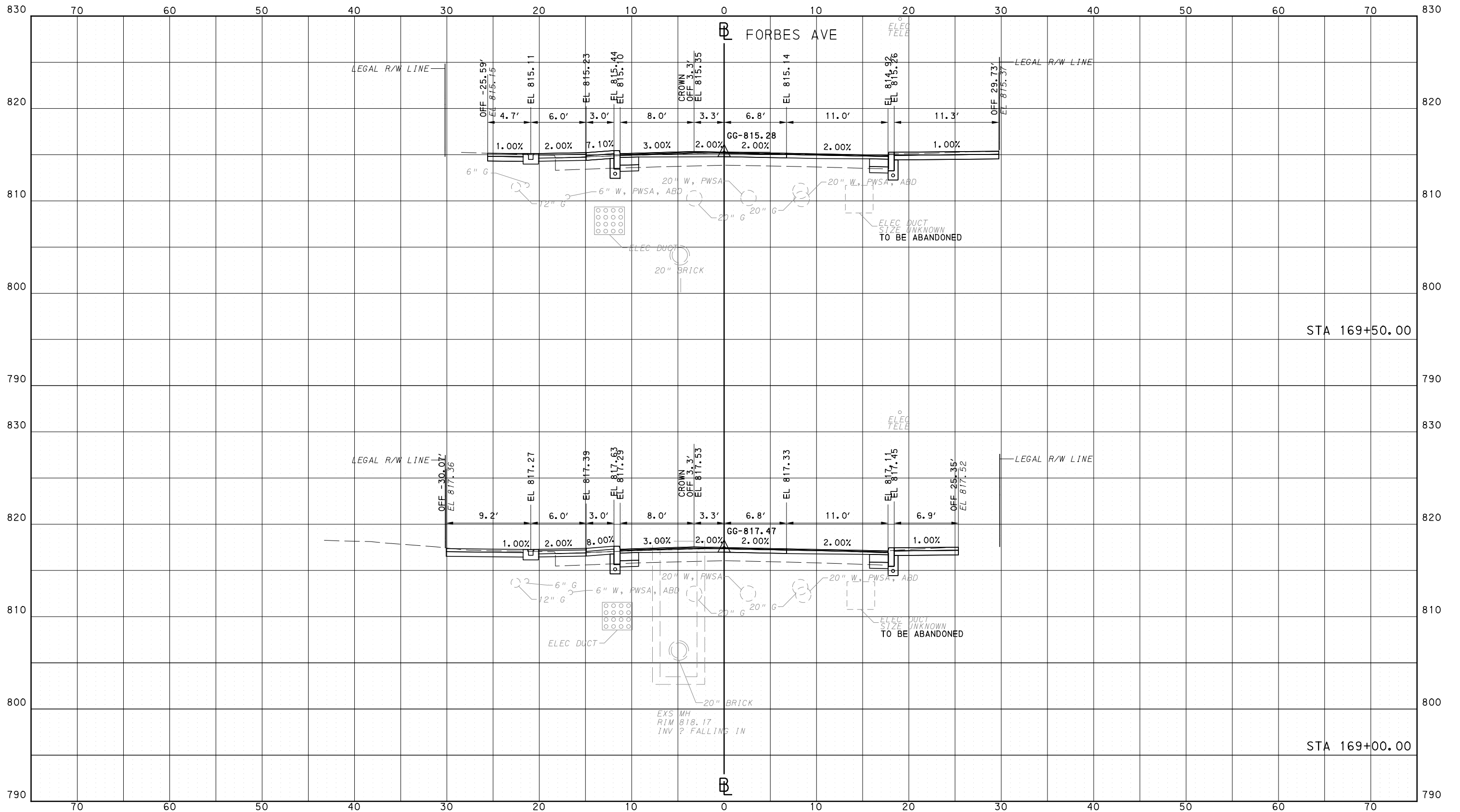


CONTRACT NO. BRT-001

DWG. NO. XS246

SHT. 1452

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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT**  
CROSS SECTIONS  
FORBES AVE - STA 169+00.00 TO STA 169+50.00

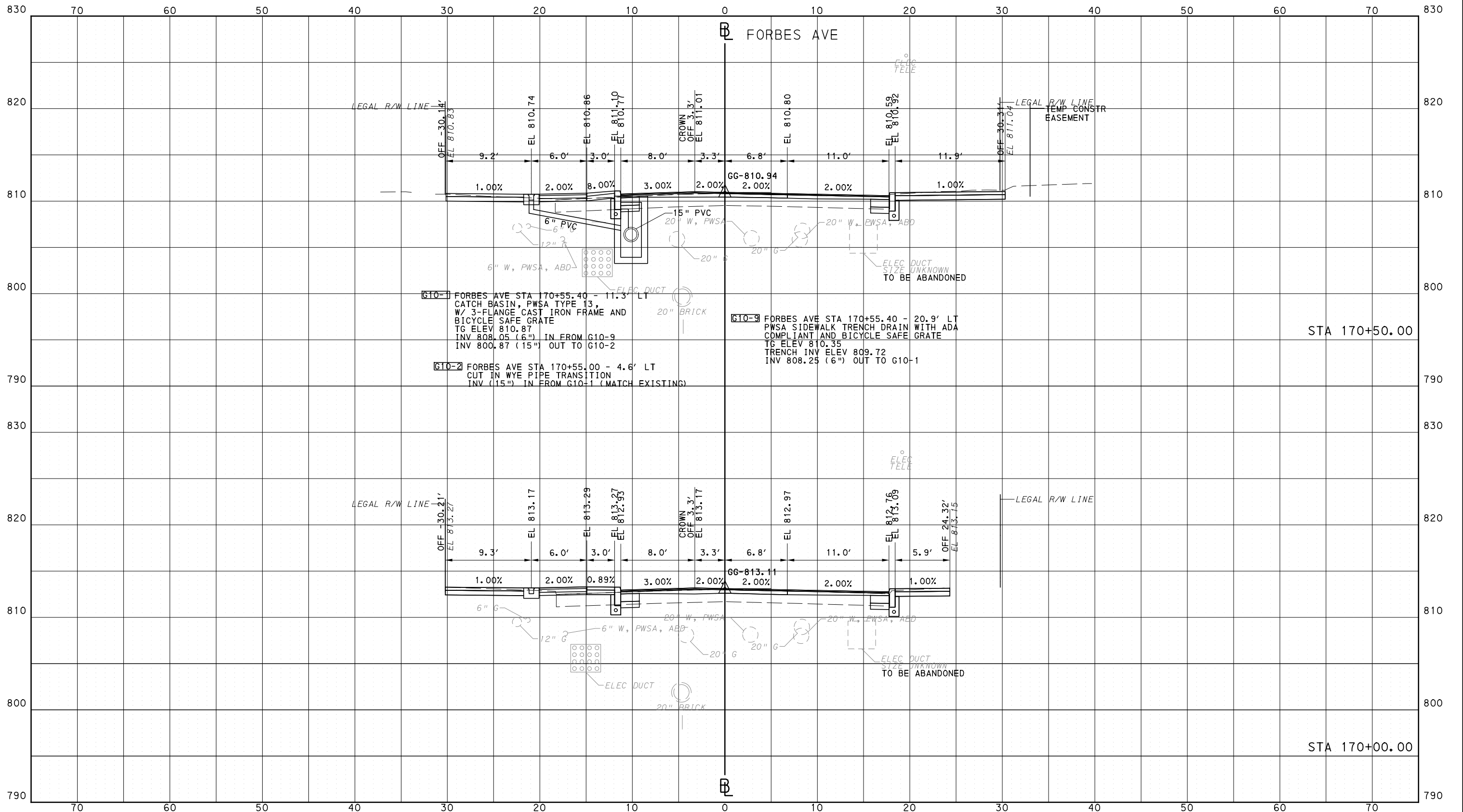
**Port Authority** connecting people to life

CONTRACT NO. BRT-001  
DWG. NO. XS247 SHT. 1453

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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS



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707 Grant Street  
5th Floor  
Pittsburgh, PA 15219



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PORT AUTHORITY OF ALLEGHENY COUNTY  
PITTSBURGH PENNSYLVANIA

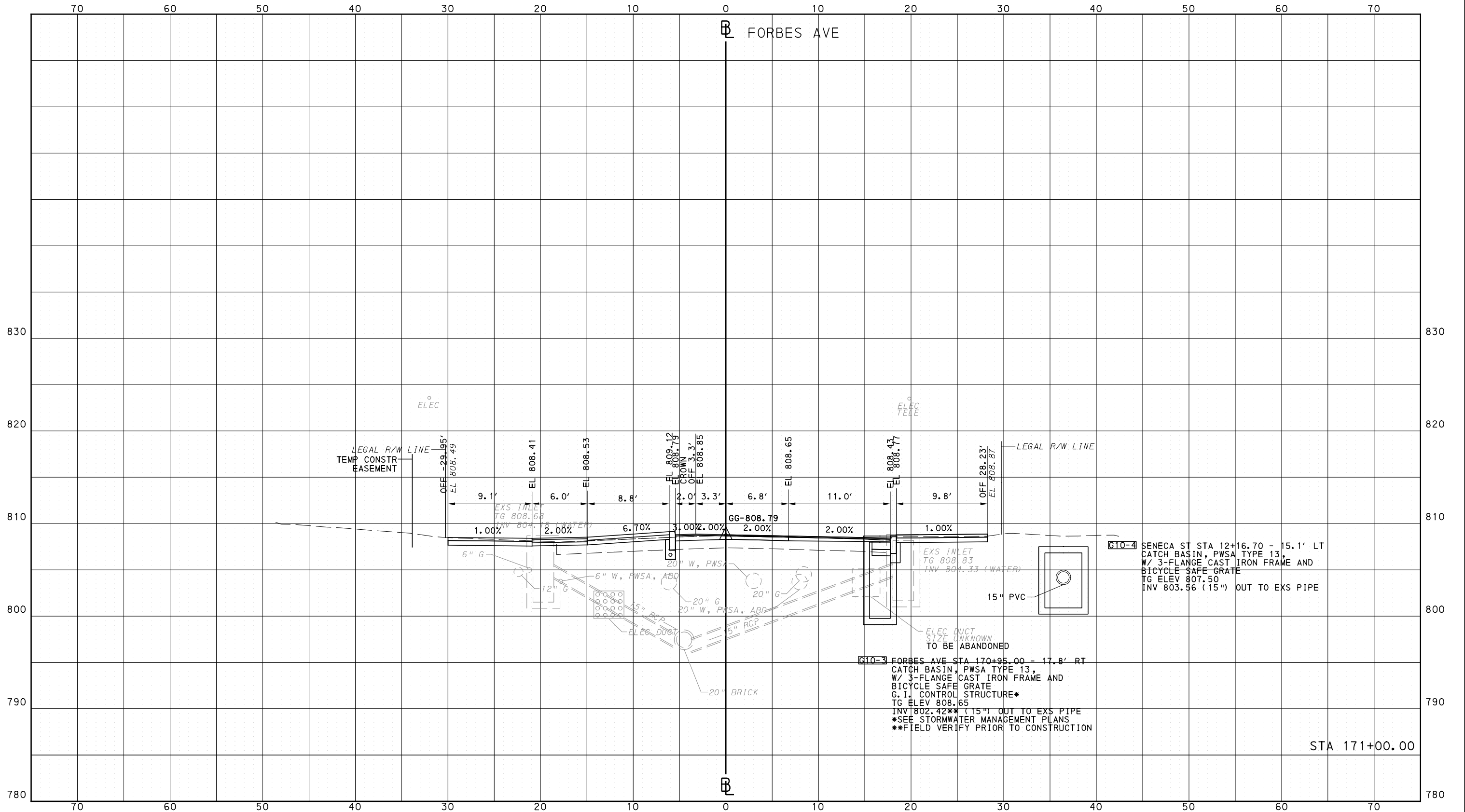
BUS RAPID TRANSIT  
CROSS SECTIONS  
FORBES AVE - STA 170+00.00 TO STA 170+50.00



CONTRACT NO. BRT-001  
DWG. NO. XS248 SHT. 1454

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SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT  
CROSS SECTIONS  
FORBES AVE - STA 171+00.00**

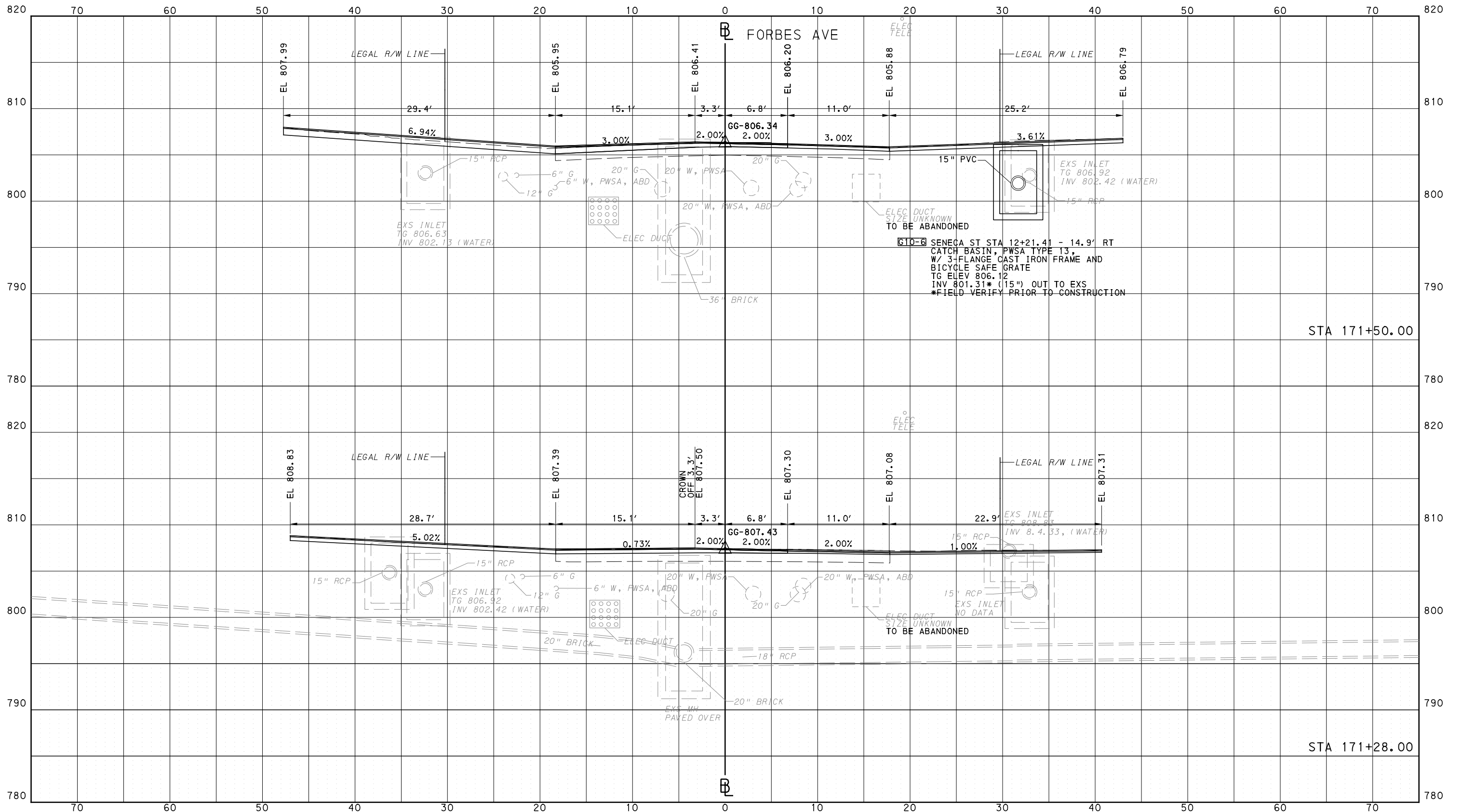
**Port Authority** connecting people to life

CONTRACT NO. BRT-001  
DWG. NO. XS249 SHT. 1455

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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS



Gulf Tower  
707 Grant Street  
5th Floor  
Pittsburgh, PA 15219



GANNETT FLEMING, INC.  
Foster Plaza 8  
Suite 400  
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Pittsburgh, PA. 15220

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**(NOT FOR CONSTRUCTION)**

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CHECKED	KCF
IN CHARGE	GEC
DATE	05/01/24
SCALE	0 5 10 FEET

PORT AUTHORITY OF ALLEGHENY COUNTY  
PITTSBURGH PENNSYLVANIA

BUS RAPID TRANSIT  
CROSS SECTIONS  
FORBES AVE - STA 171+28.00 TOSTA 171+50.00



CONTRACT NO. BRT-001

DWG. NO. XS250 SHT. 1456

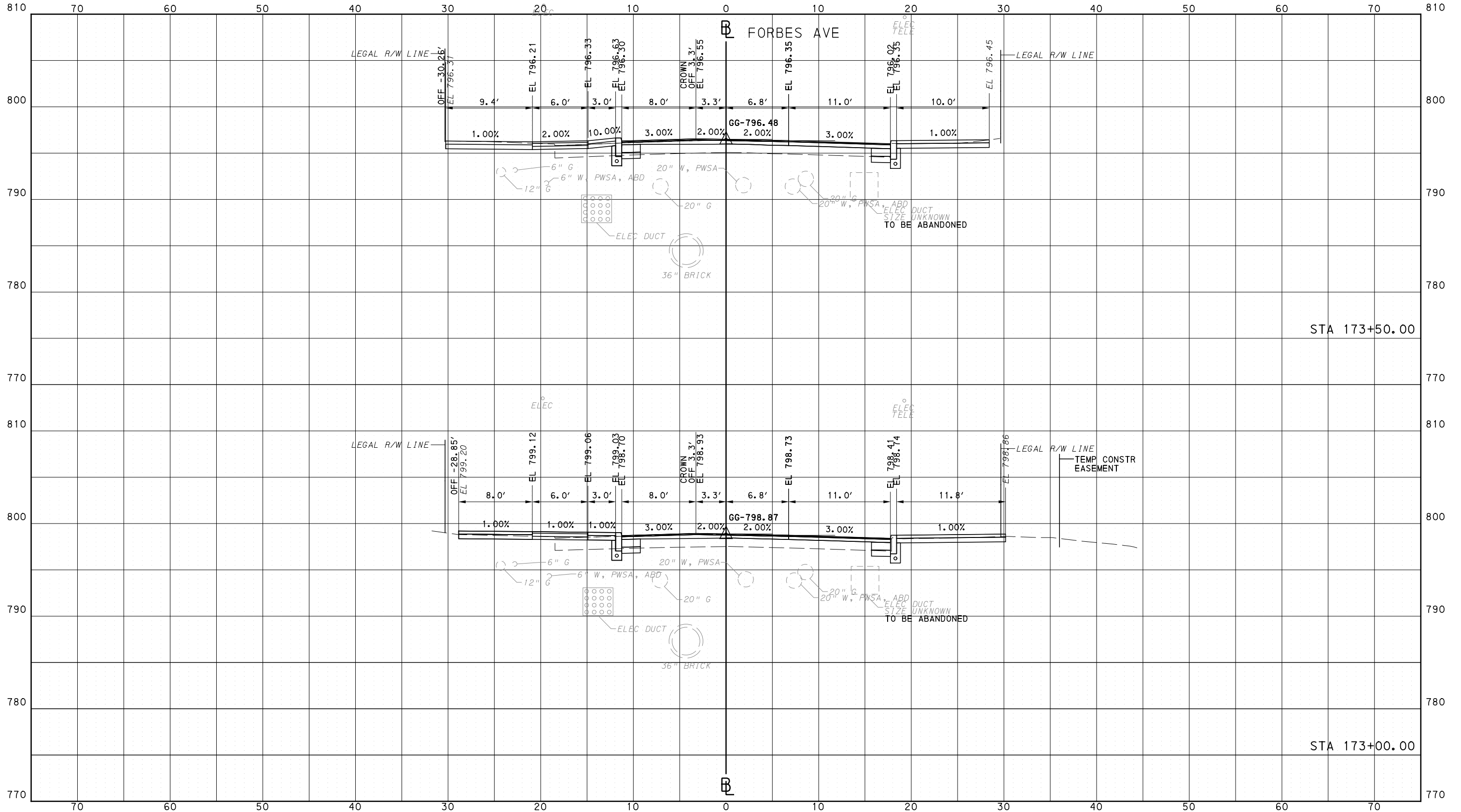




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PORT AUTHORITY OF ALLEGHENY COUNTY CROSS SECTIONS



Gulf Tower  
707 Grant Street  
5th Floor  
Pittsburgh, PA 15219



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Suite 400  
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PITTSBURGH PENNSYLVANIA

BUS RAPID TRANSIT  
CROSS SECTIONS  
FORBES AVE - STA 173+00.00 TO STA 173+50.00



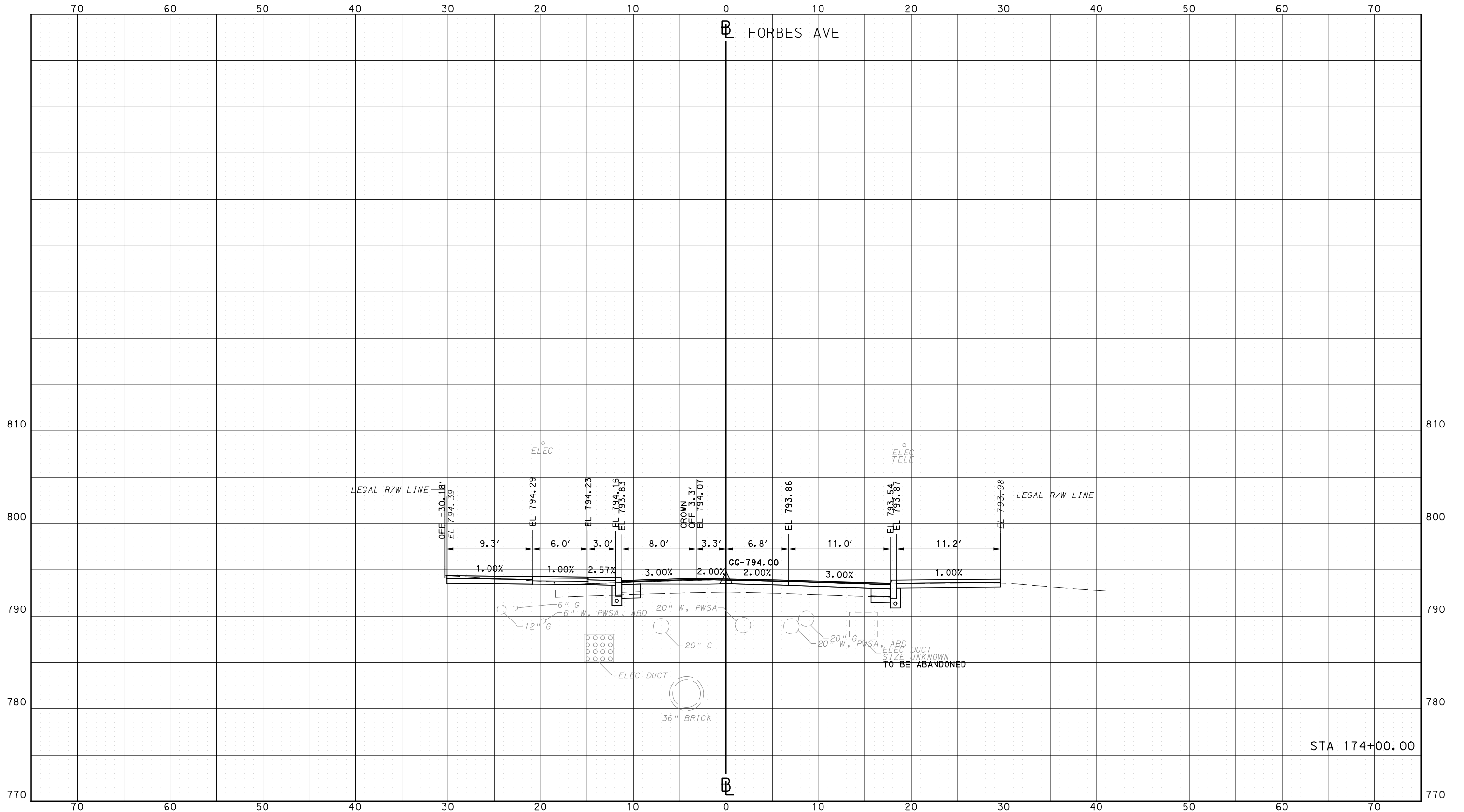
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DATE	05/01/24
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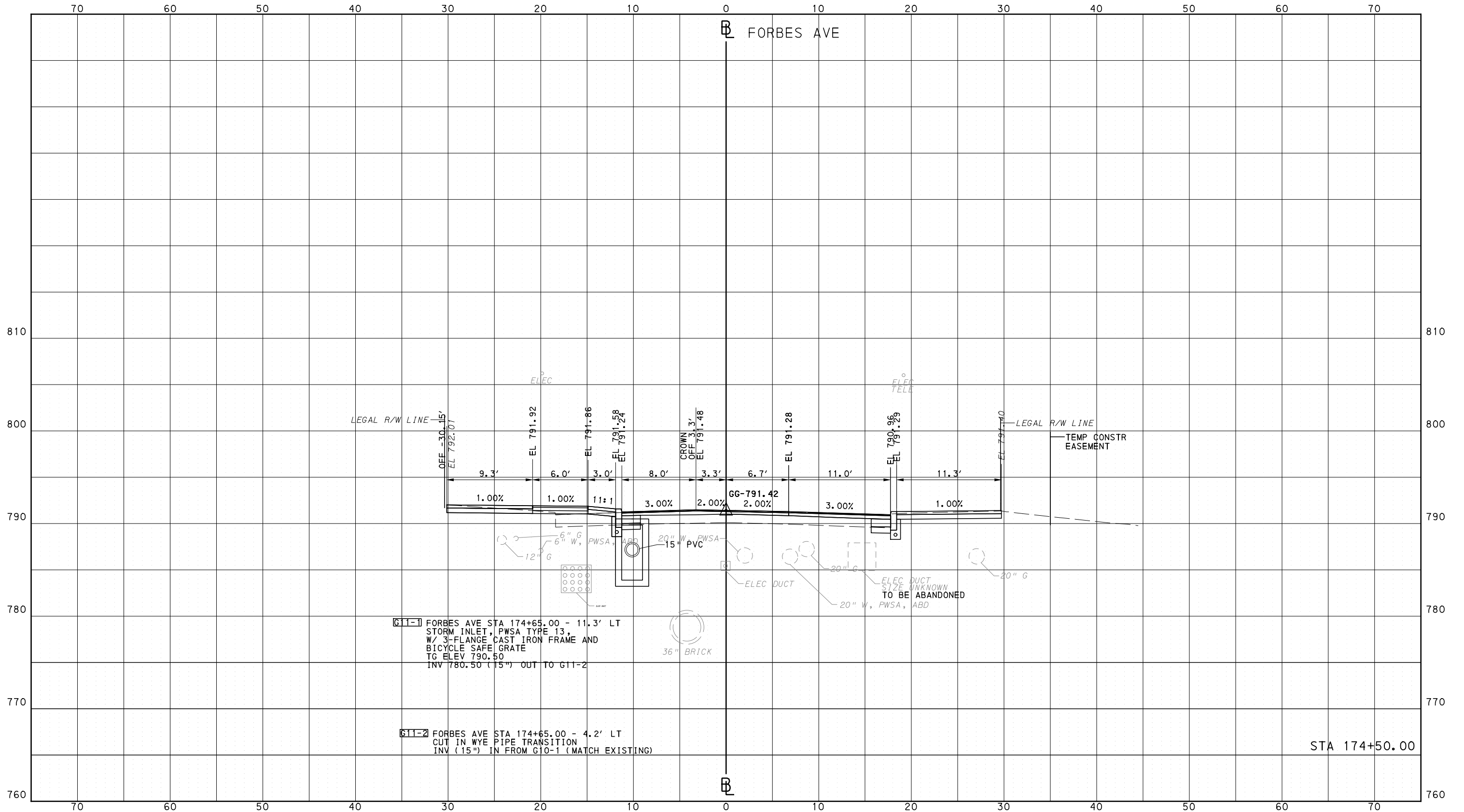
**BUS RAPID TRANSIT CROSS SECTIONS**  
 FORBES AVE - STA 174+00.00

**Port Authority** connecting people to life

CONTRACT NO. BRT-001  
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DATE	05/01/24
SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
 PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT  
 CROSS SECTIONS  
 FORBES AVE - STA 174+50.00**

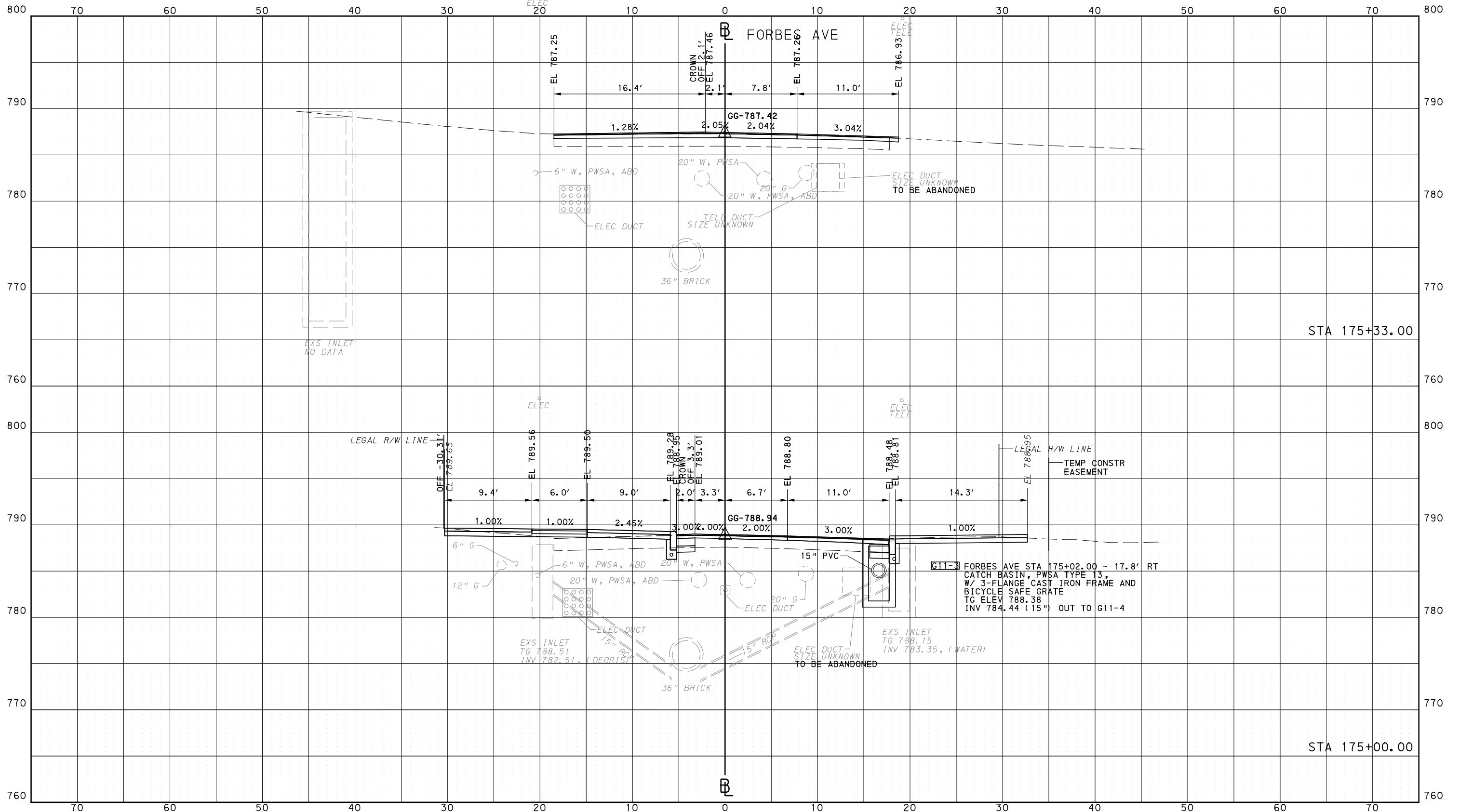
**Port Authority**  
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CONTRACT NO. BRT-001  
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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS



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707 Grant Street  
5th Floor  
Pittsburgh, PA 15219



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Suite 400  
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PITTSBURGH PENNSYLVANIA

BUS RAPID TRANSIT  
CROSS SECTIONS  
FORBES AVE - STA 175+00.00 TO STA 175+33.00



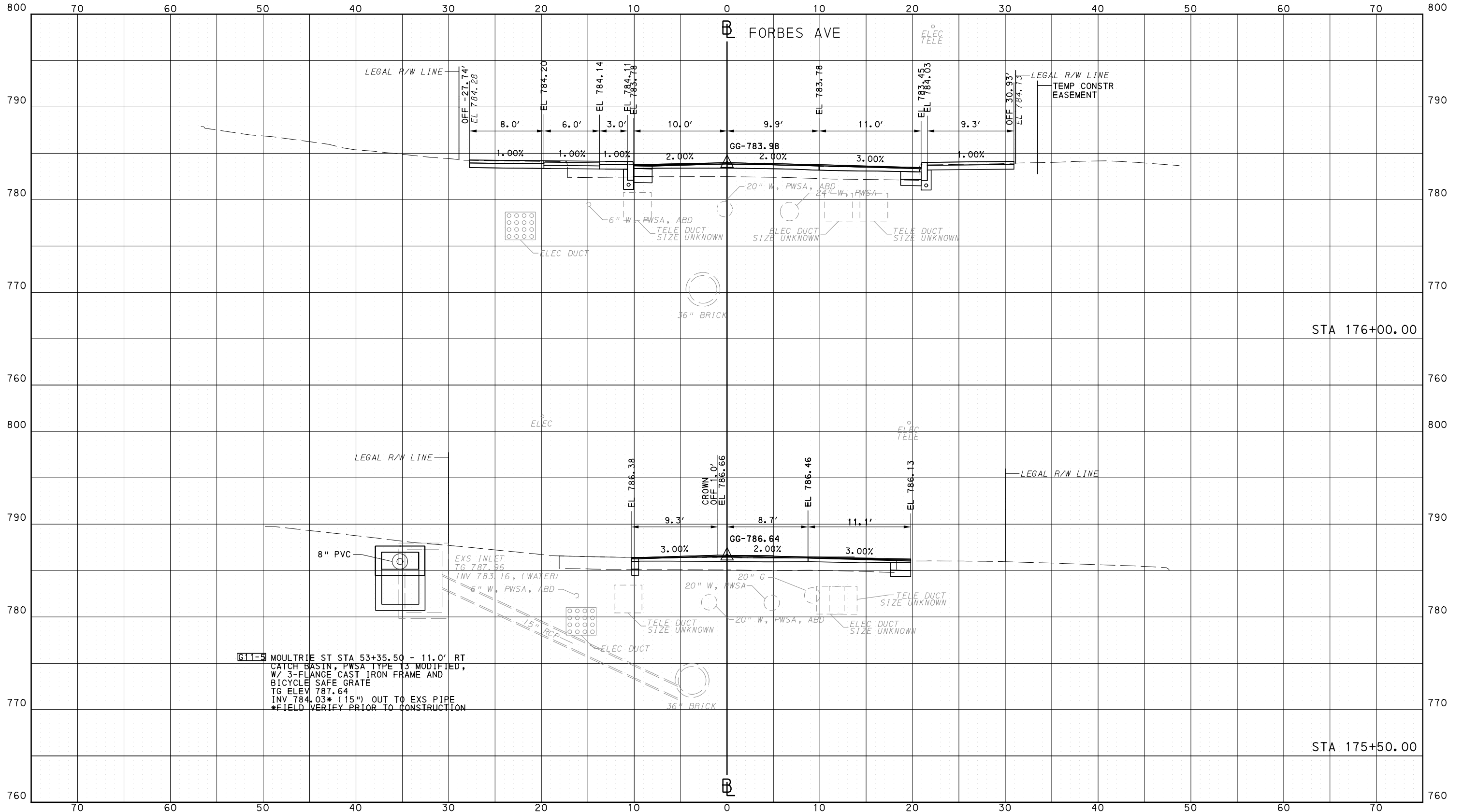
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DWG. NO. XS255

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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS



**G11-5** MOULTRIE ST STA 53+35.50 - 11.0' RT  
 CATCH BASIN, PWSA TYPE T3 MODIFIED,  
 W/ 3-FLANGE CAST IRON FRAME AND  
 BICYCLE SAFE GRATE  
 TG ELEV 787.64  
 INV 784.03\* (15") OUT TO EXS PIPE  
 \*FIELD VERIFY PRIOR TO CONSTRUCTION



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DATE	05/01/24
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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
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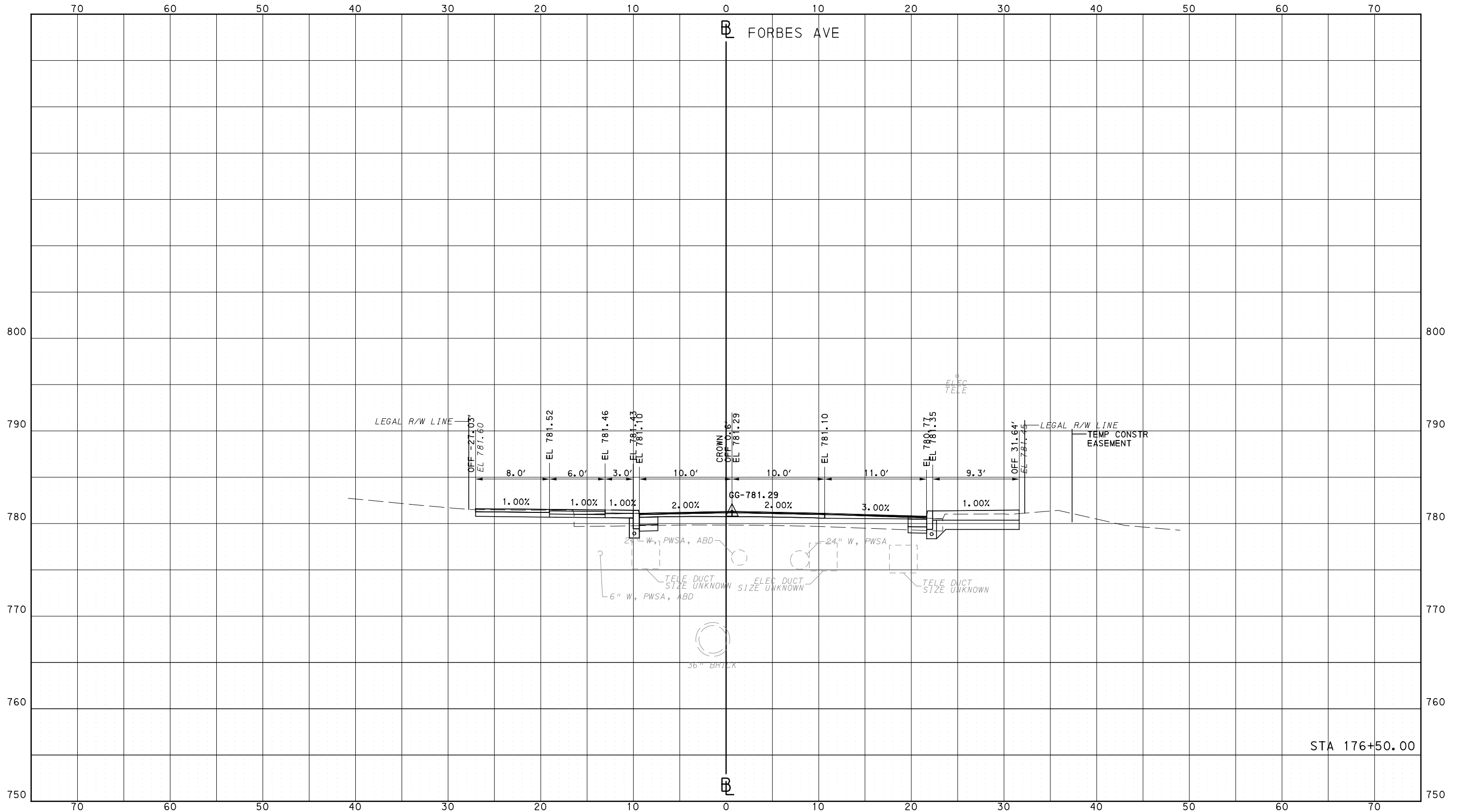
**BUS RAPID TRANSIT**  
 CROSS SECTIONS  
 FORBES AVE - STA 175+50.00 TO STA 176+00.00



CONTRACT NO. BRT-001  
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PORT AUTHORITY OF ALLEGHENY COUNTY  
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STA 176+50.00

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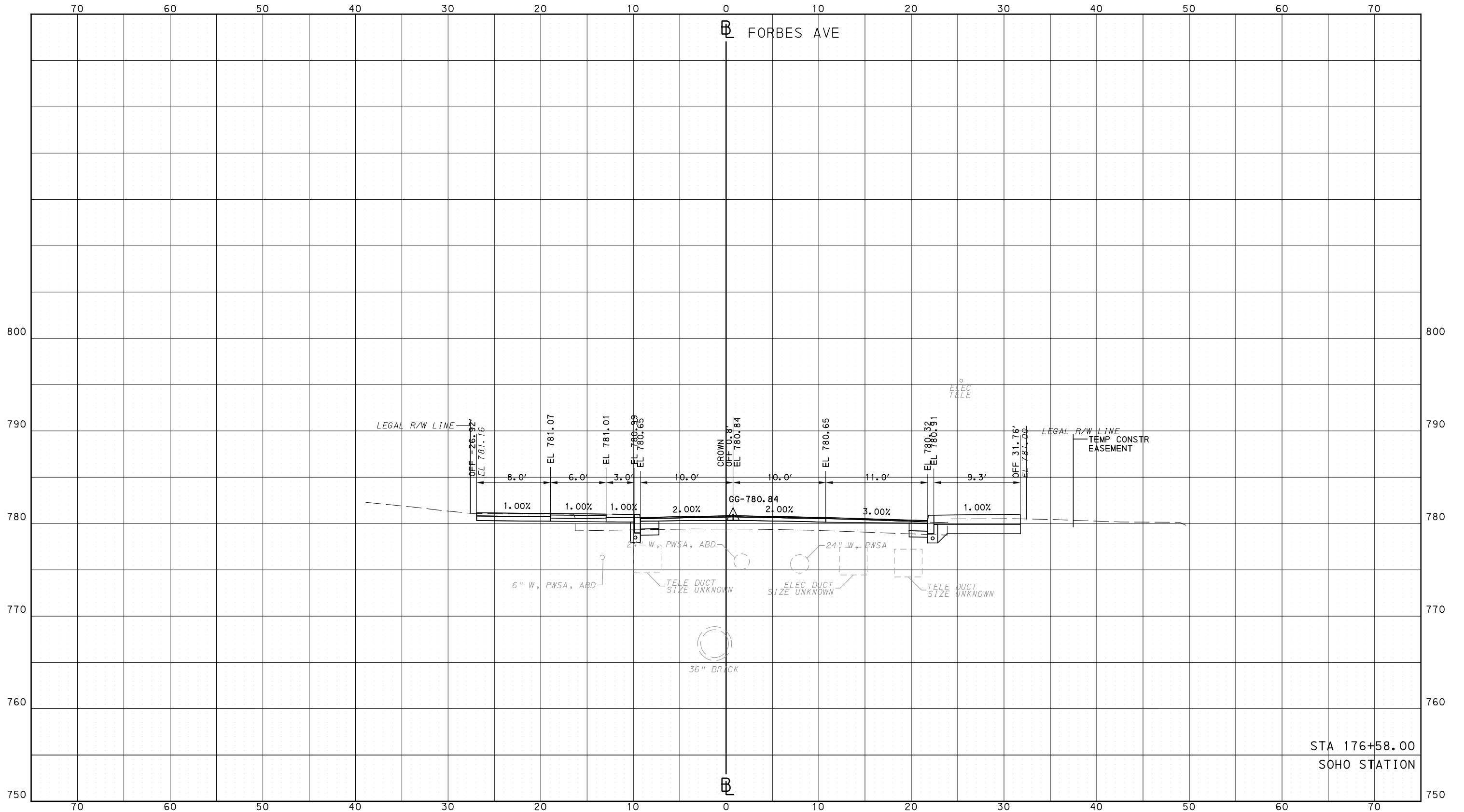
**BUS RAPID TRANSIT  
CROSS SECTIONS  
FORBES AVE - STA 176+50.00**

**Port Authority** connecting people to life

CONTRACT NO. BRT-001	
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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS



STA 176+58.00  
SOHO STATION



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PORT AUTHORITY OF ALLEGHENY COUNTY  
PITTSBURGH PENNSYLVANIA

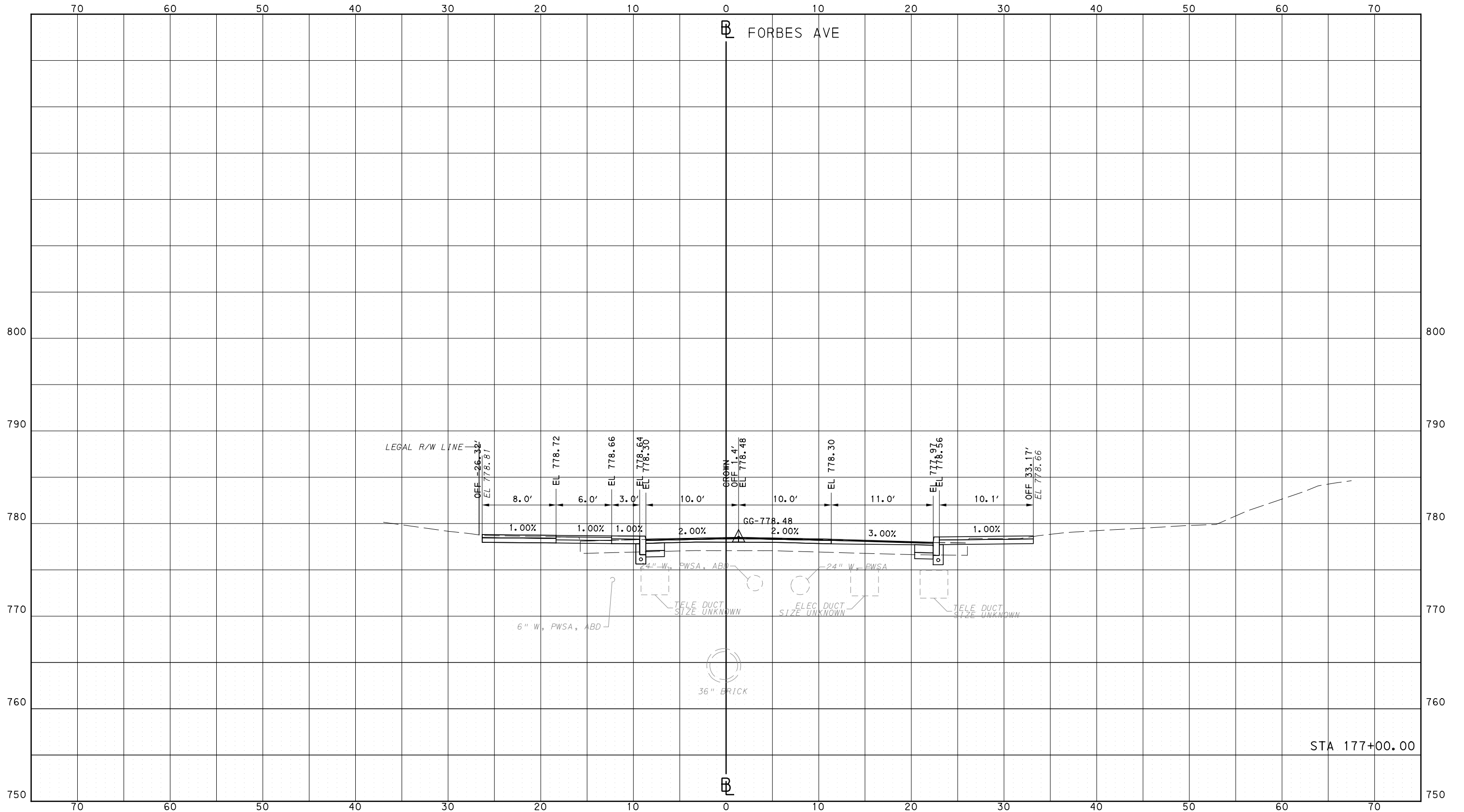
BUS RAPID TRANSIT  
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FORBES AVE - STA 176+58.00



CONTRACT NO. BRT-001  
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PORT AUTHORITY OF ALLEGHENY COUNTY  
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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT  
CROSS SECTIONS  
FORBES AVE - STA 177+00.00**

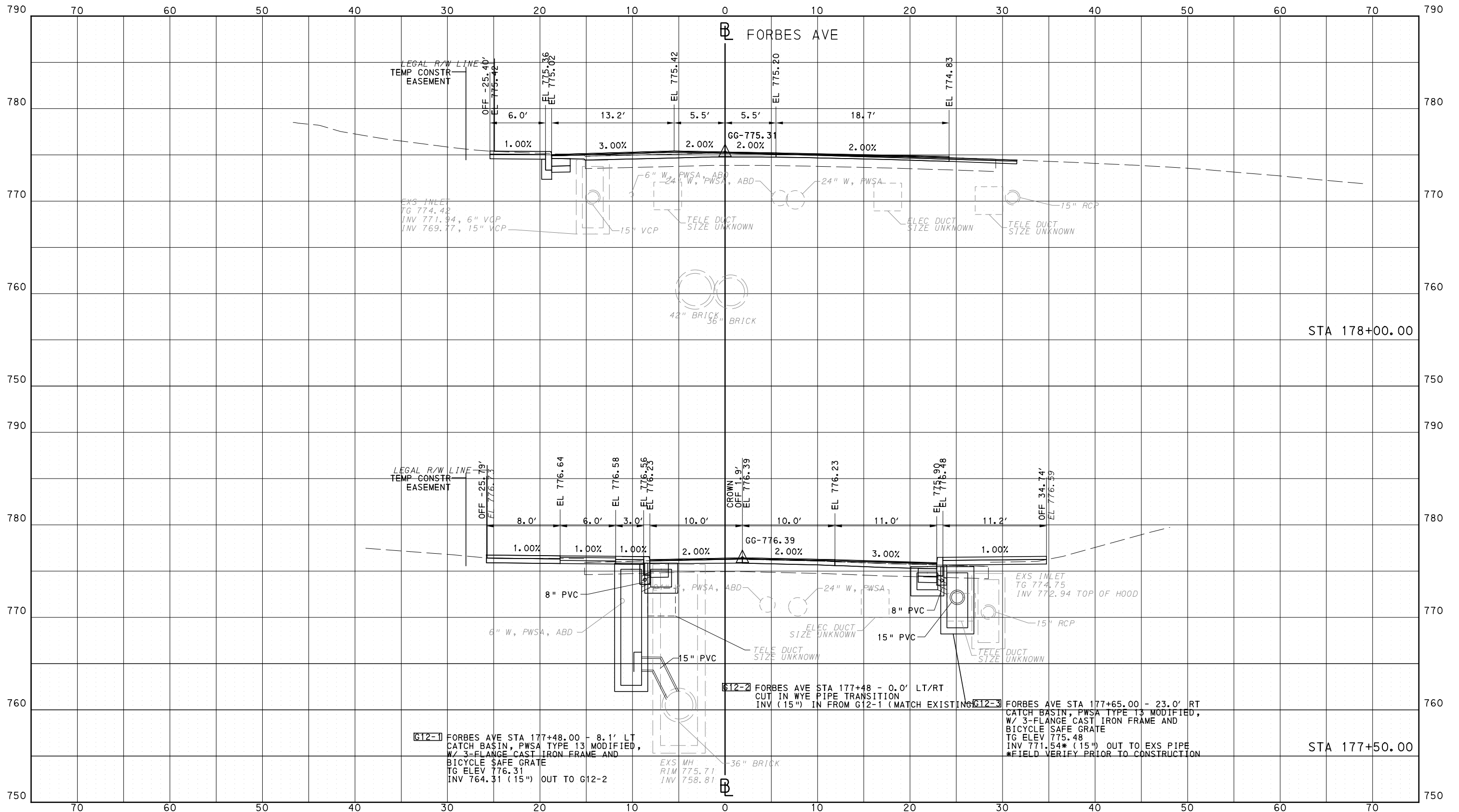
**Port Authority** connecting people to life

CONTRACT NO. BRT-001	
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IN CHARGE	GEC
DATE	05/01/24
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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

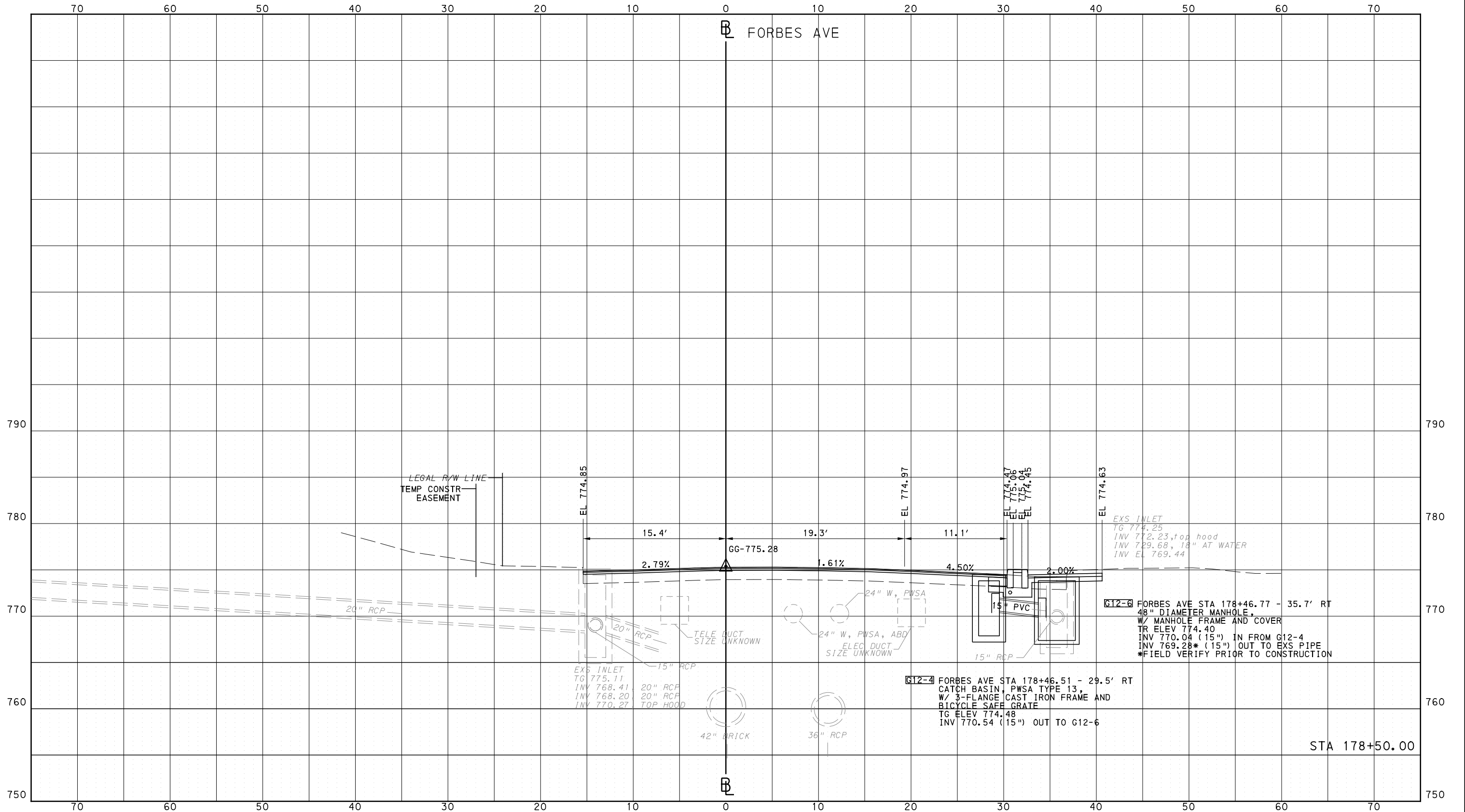
**BUS RAPID TRANSIT**  
CROSS SECTIONS  
FORBES AVE - STA 177+50.00 TO STA 178+00.00

**Port Authority** connecting people to life

CONTRACT NO. BRT-001
DWG. NO. XS260
SHT. 1466

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 707 Grant Street  
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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
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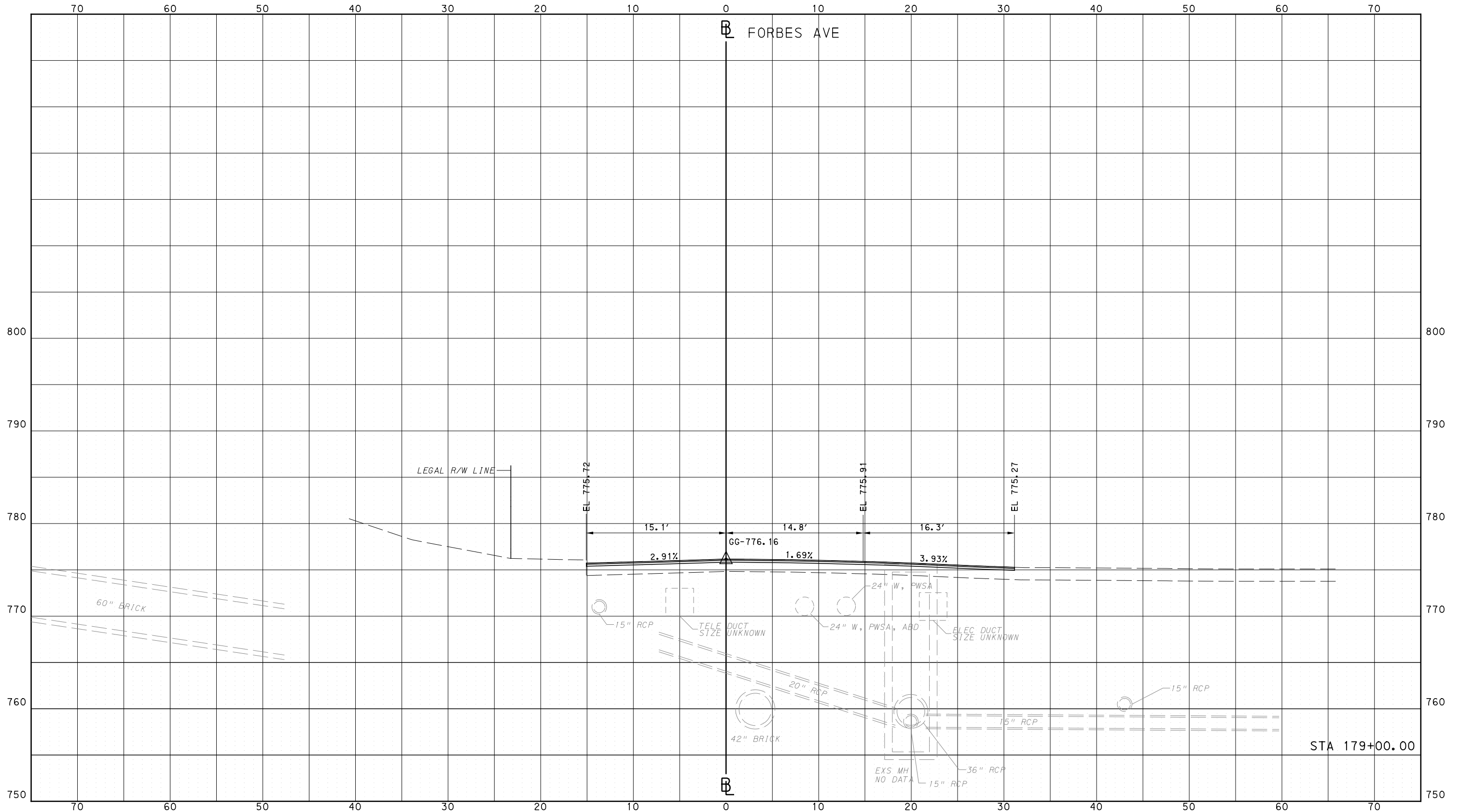
**BUS RAPID TRANSIT**  
CROSS SECTIONS  
FORBES AVE - STA 178+50.00

**Port Authority**  
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CONTRACT NO. BRT-001  
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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT**  
CROSS SECTIONS  
FORBES AVE - STA 179+00.00

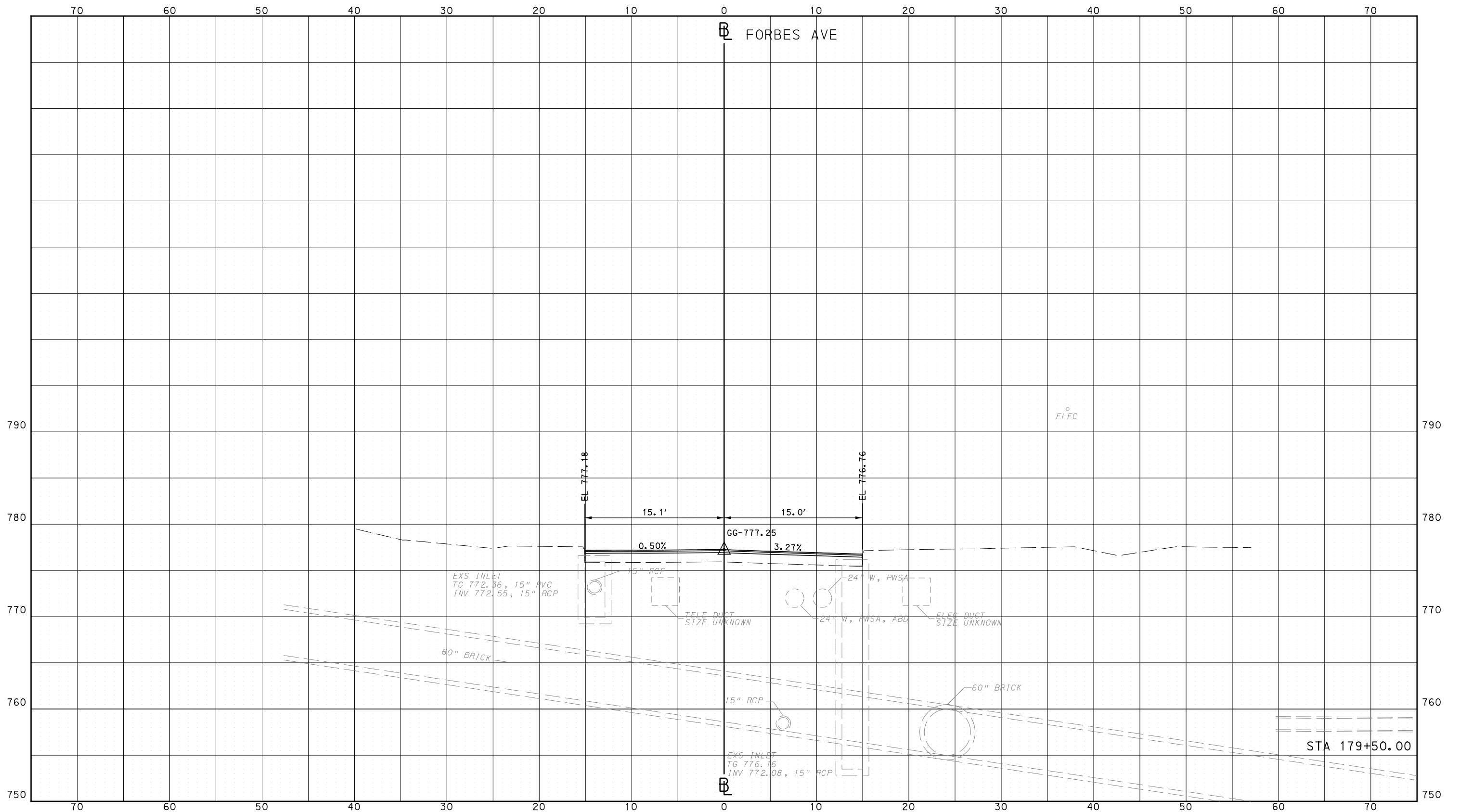
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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS



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IN CHARGE GEC  
DATE 05/01/24

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PORT AUTHORITY OF ALLEGHENY COUNTY  
PITTSBURGH PENNSYLVANIA

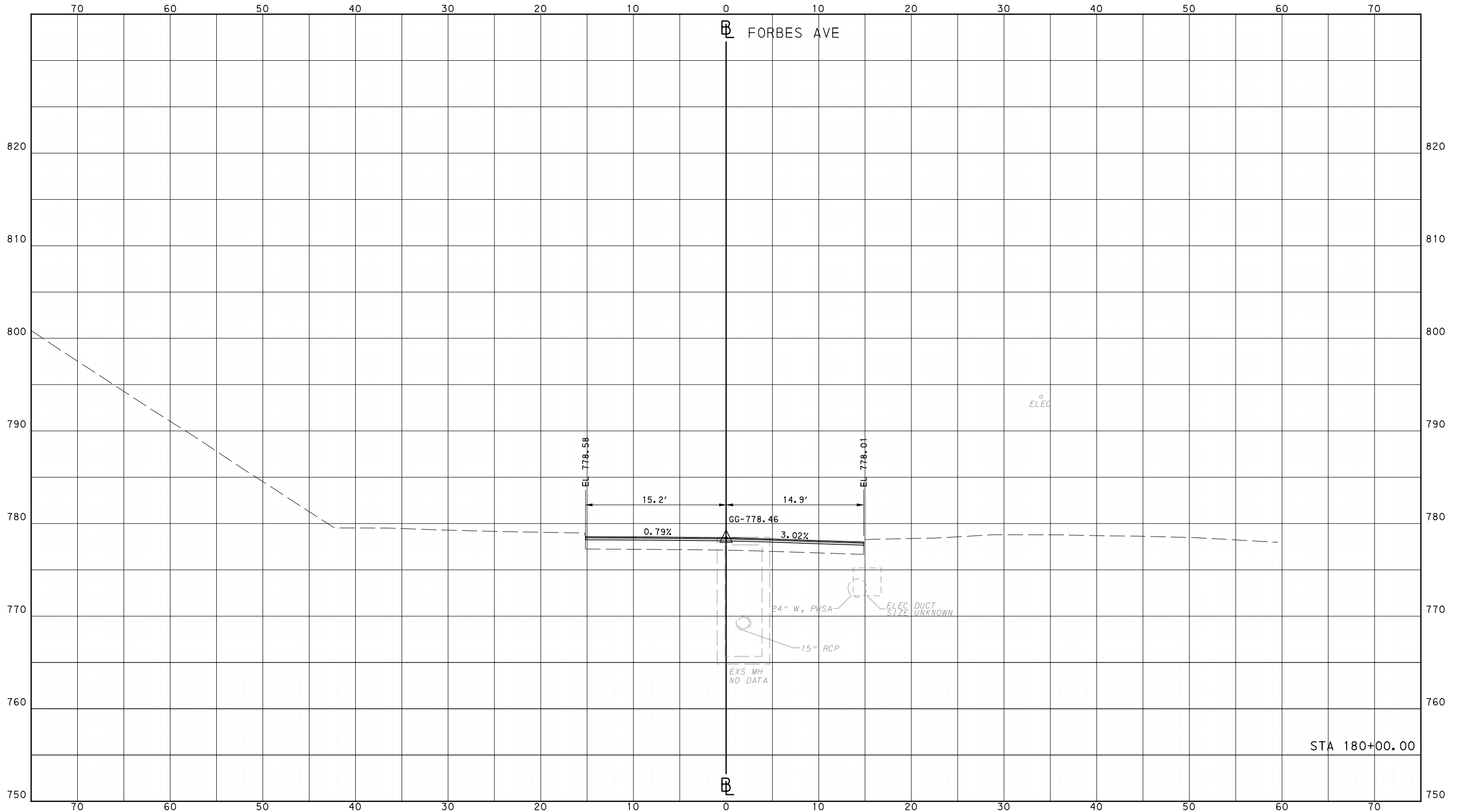
BUS RAPID TRANSIT  
CROSS SECTIONS  
FORBES AVE - STA 179+50.00

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CONTRACT NO. BRT-001  
DWG. NO. XS263 SHT. 1469

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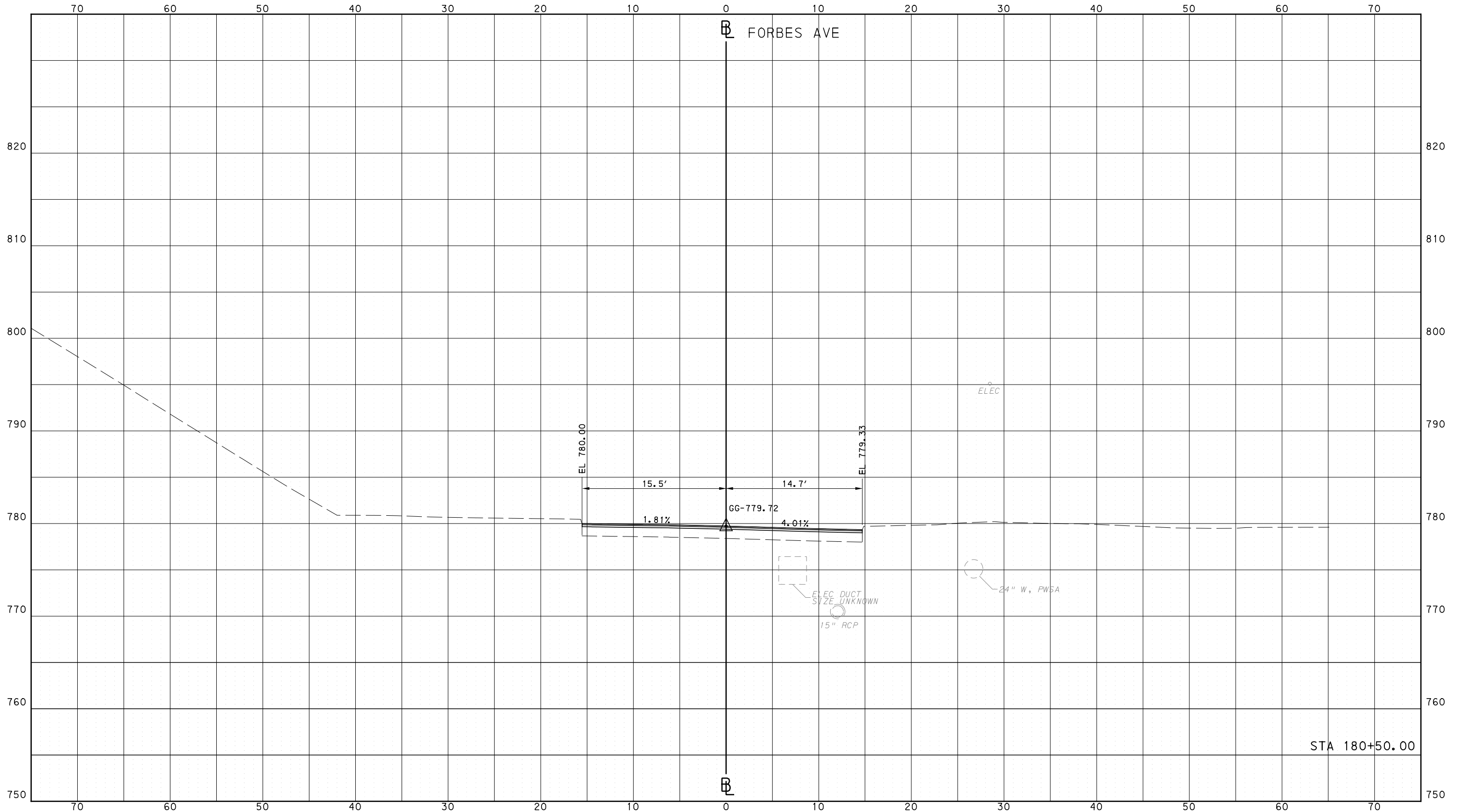
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CROSS SECTIONS  
FORBES AVE - STA 180+00.00



CONTRACT NO. BRT-001  
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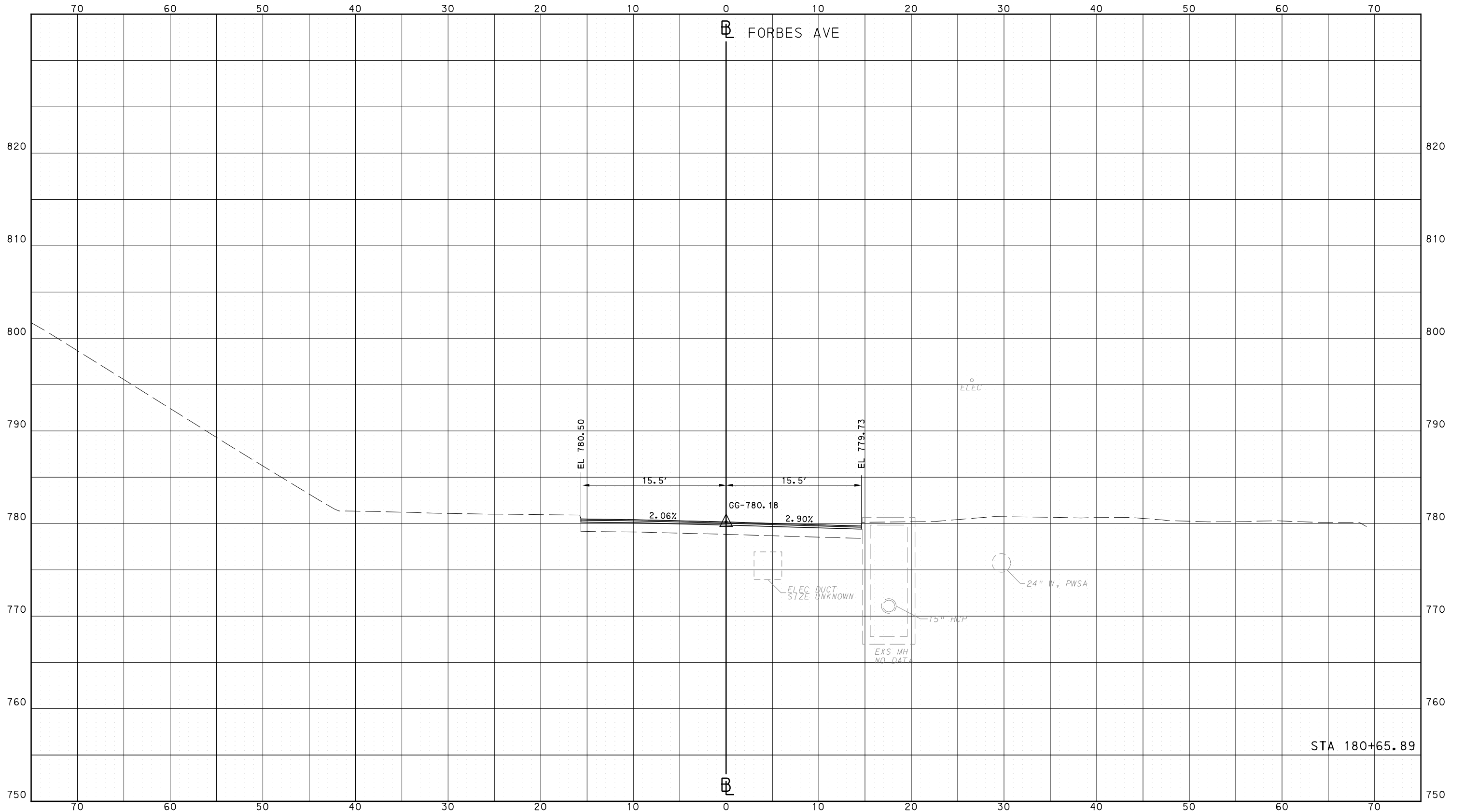
**BUS RAPID TRANSIT  
 CROSS SECTIONS  
 FORBES AVE - STA 180+50.00**

**Port Authority**  
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SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
 PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT**  
 CROSS SECTIONS  
 FORBES AVE - STA 180+65.89



CONTRACT NO. BRT-001

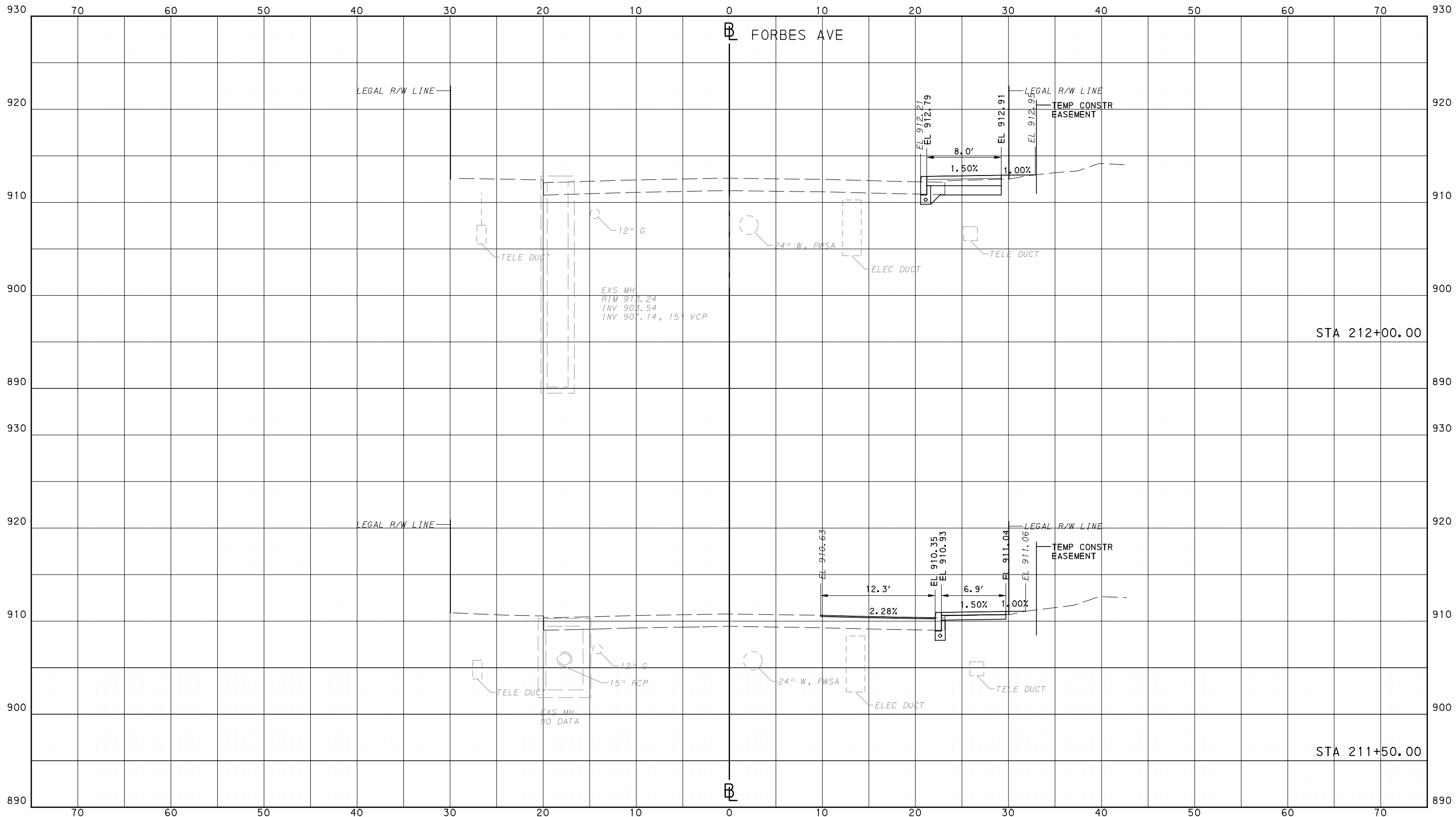
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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS



Gulf Tower  
707 Grant Street  
5th Floor  
Pittsburgh, PA 15219



GANNETT FLEMING, INC.  
Foster Plaza 8  
Suite 400  
730 Holiday Drive  
Pittsburgh, PA. 15220

NO.	DATE	DESCRIPTION
REVISIONS		

THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE FEDERAL TRANSIT ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED, FOR THE PORT AUTHORITY OF ALLEGHENY COUNTY, PENNSYLVANIA.

(NOT FOR CONSTRUCTION)

DESIGNED	RRH
DRAWN	DVP
CHECKED	KCF
IN CHARGE	GEC
DATE	05/01/24
SCALE	0 5 10 FEET

PORT AUTHORITY OF ALLEGHENY COUNTY  
PITTSBURGH PENNSYLVANIA

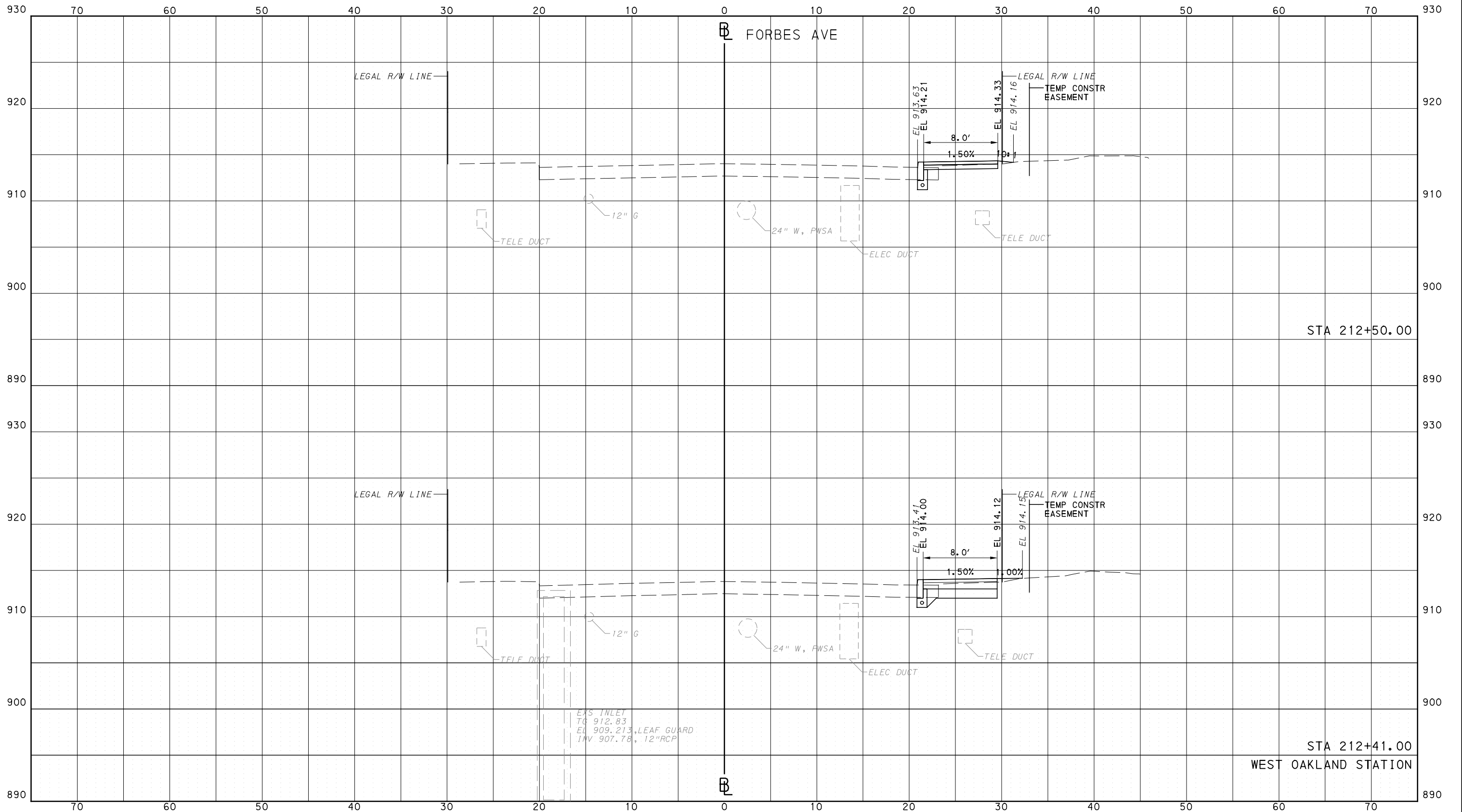
BUS RAPID TRANSIT  
CROSS SECTIONS  
FORBES AVE - STA 211+50.00 TO STA 212+00.00



CONTRACT NO. BRT-001  
DWG. NO. XS267 SHT. 1473

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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS



**AECOM**  
 Gulf Tower  
 707 Grant Street  
 5th Floor  
 Pittsburgh, PA 15219

**GANNETT FLEMING**  
 GANNETT FLEMING, INC.  
 Foster Plaza 8  
 Suite 400  
 730 Holiday Drive  
 Pittsburgh, PA. 15220

NO.	DATE	DESCRIPTION
REVISIONS		

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(NOT FOR CONSTRUCTION)

DESIGNED	RRH
DRAWN	DVP
CHECKED	KCF
IN CHARGE	GEC
DATE	05/01/24
SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT CROSS SECTIONS**  
FORBES AVE - STA 212+41.00 TO STA 212+50.00

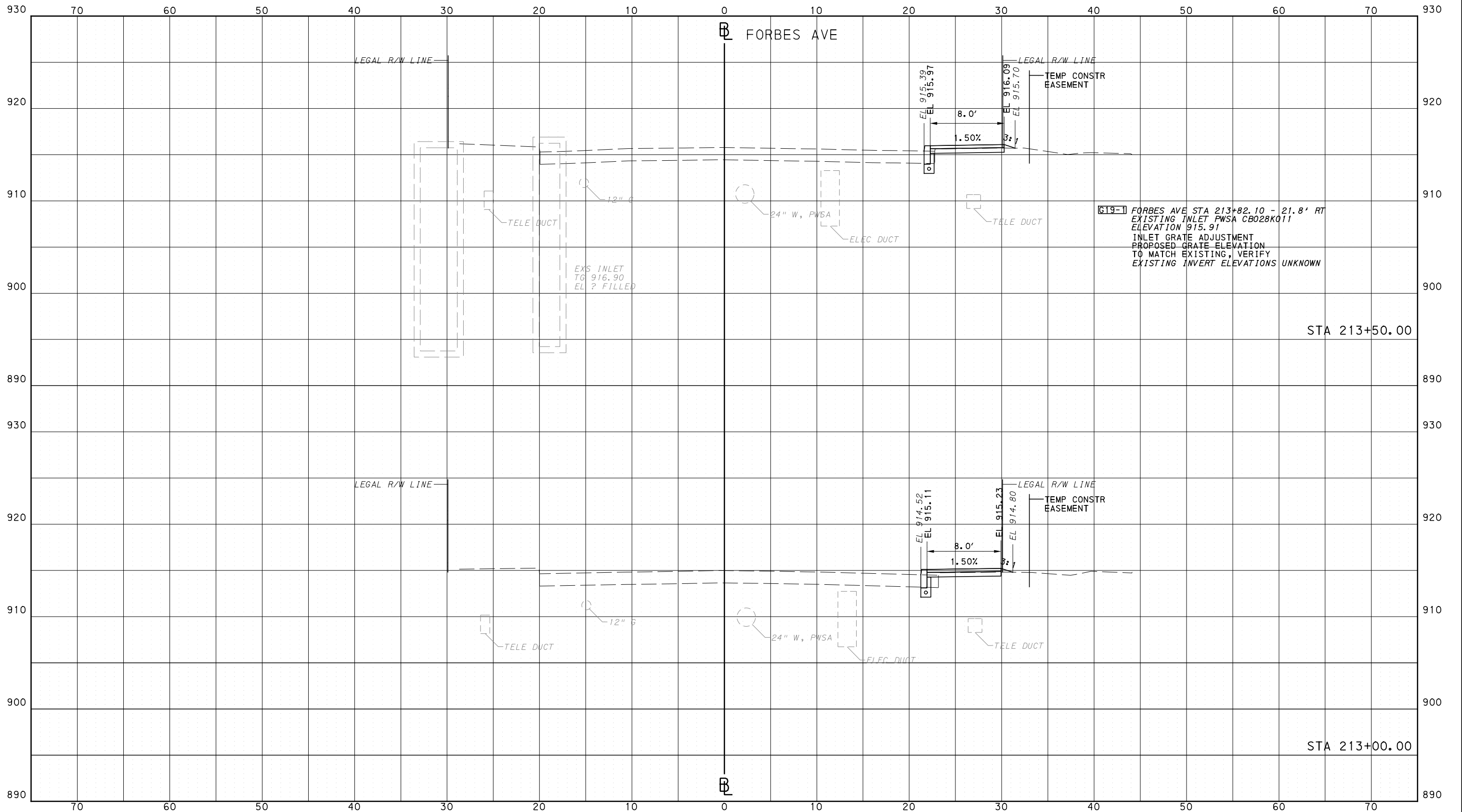
**Port Authority** connecting people to life™

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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS



**G19-1** FORBES AVE STA 213+82.10 - 21.8' RT  
 EXISTING INLET PWSA C6028K011  
 ELEVATION 915.91  
 INLET GRATE ADJUSTMENT  
 PROPOSED GRATE ELEVATION  
 TO MATCH EXISTING, VERIFY  
 EXISTING INVERT ELEVATIONS UNKNOWN



NO.	DATE	DESCRIPTION
REVISIONS		

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IN CHARGE	GEC
DATE	05/01/24
SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

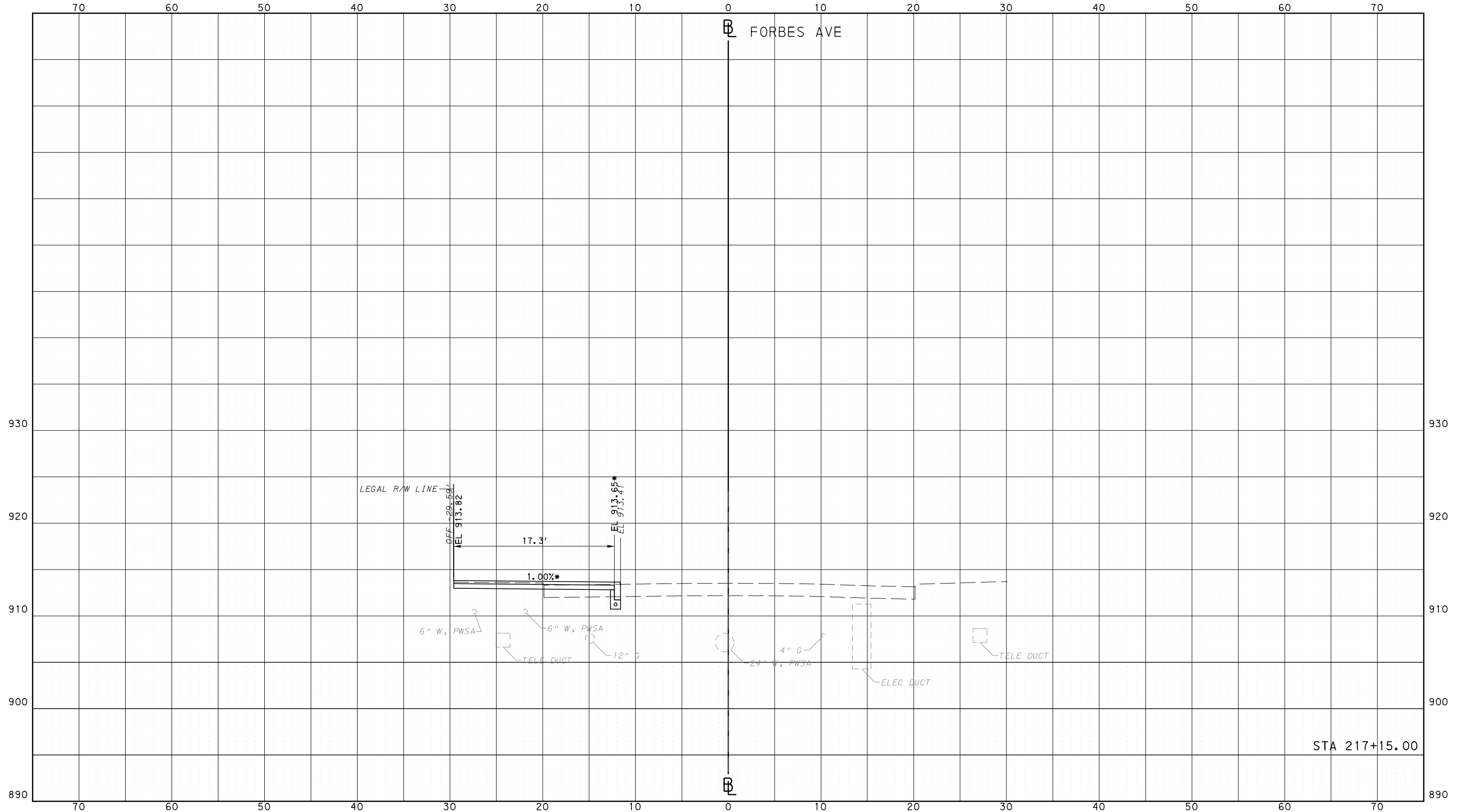
**BUS RAPID TRANSIT**  
CROSS SECTIONS  
FORBES AVE - STA 213+00.00 TO STA 213+50.00

**Port Authority** connecting people to life

CONTRACT NO. BRT-001  
DWG. NO. XS269 SHT. 1475

PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS

\*TOP OF CURB ELEVATION AND SIDEWALK SLOPES TO BE DETERMINED PER ITEM 01900.001 - DESIGN OF CURB RAMPS



STA 217+15.00

**AECOM**  
Gulf Tower  
707 Grant Street  
5th Floor  
Pittsburgh, PA 15219

**GANNETT FLEMING**  
GANNETT FLEMING, INC.  
Foster Plaza 8  
Suite 400  
730 Holiday Drive  
Pittsburgh, PA. 15220

NO.	DATE	DESCRIPTION
REVISIONS		

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DATE	05/01/24
SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT**  
CROSS SECTIONS  
FORBES AVE - STA 217+15.00

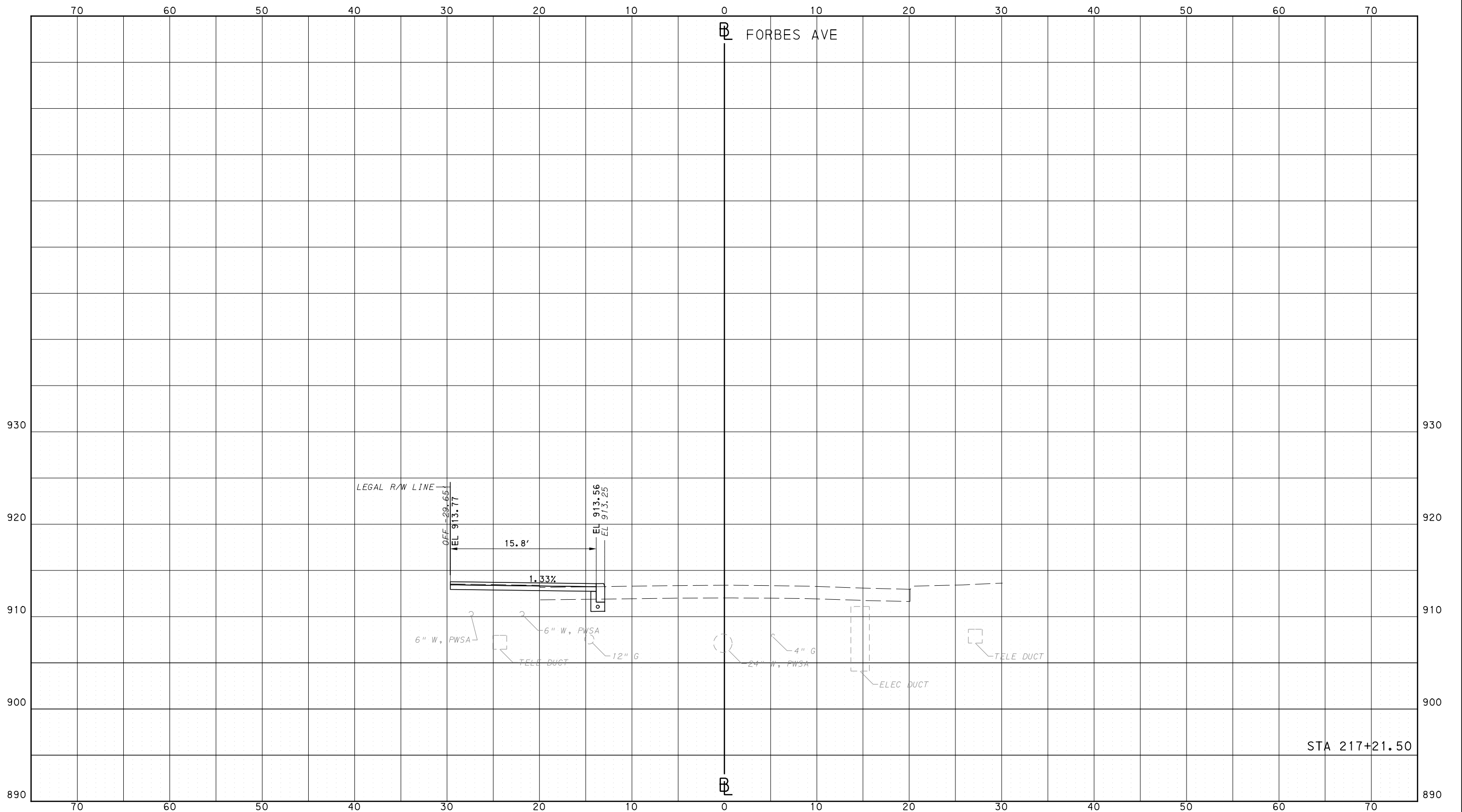
**Port Authority** connecting people to life

CONTRACT NO. BRT-001  
DWG. NO. XS270 SHT. 1476

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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS



NO.	DATE	DESCRIPTION
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(NOT FOR CONSTRUCTION)

DESIGNED	RRH
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CHECKED	KCF
IN CHARGE	GEC
DATE	05/01/24
SCALE	0 5 10 FEET

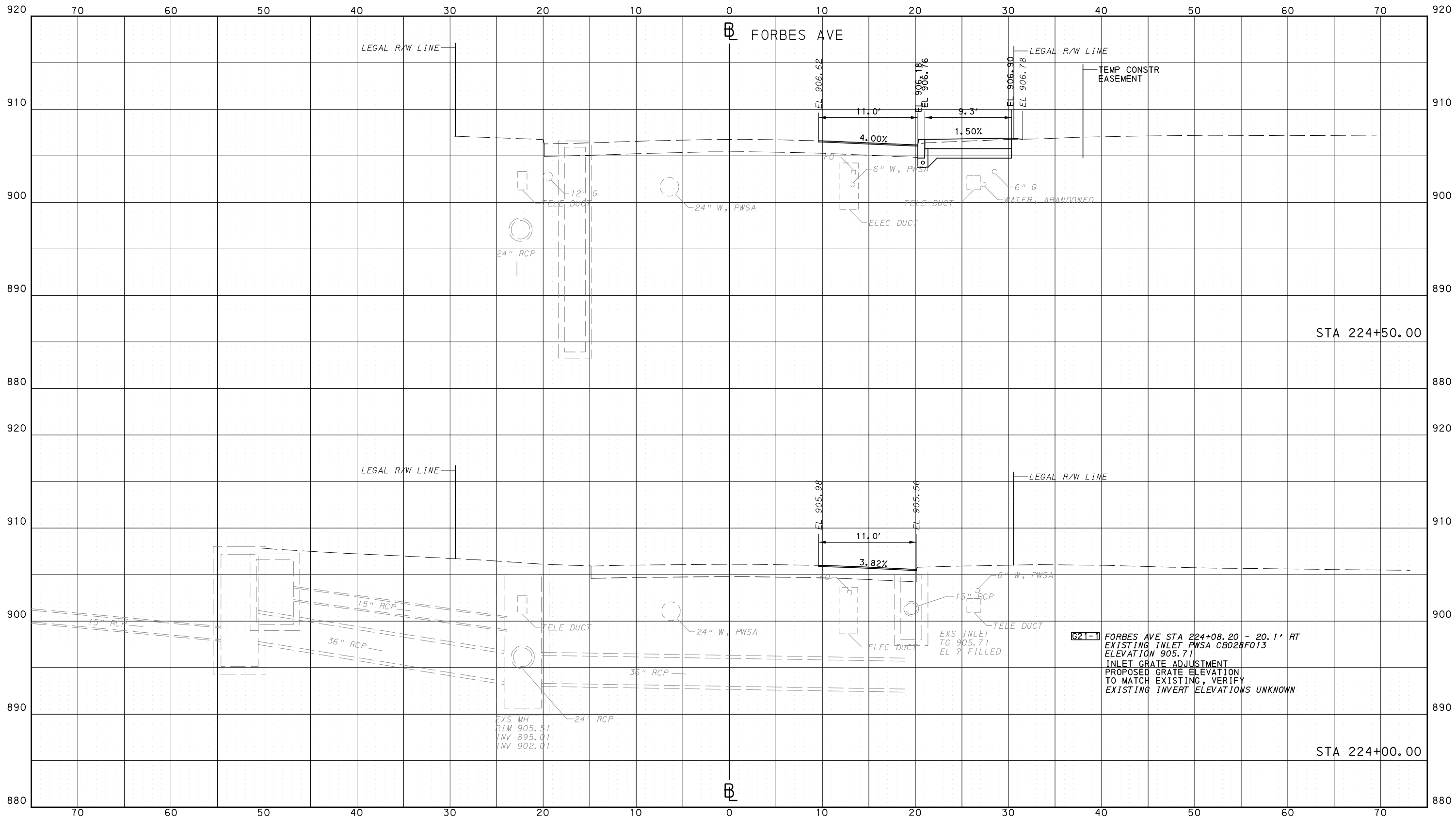
**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT  
CROSS SECTIONS  
FORBES AVE - STA 217+21.50**

**Port Authority** connecting people to life

CONTRACT NO. BRT-001
DWG. NO. XS271
SHT. 1477

PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS



**[G21-1]** FORBES AVE STA 224+08.20 - 20.1' RT  
EXISTING INLET PWSA CB028F013  
ELEVATION 905.71  
INLET GRATE ADJUSTMENT  
PROPOSED GRATE ELEVATION  
TO MATCH EXISTING, VERIFY  
EXISTING INVERT ELEVATIONS UNKNOWN



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**(NOT FOR CONSTRUCTION)**

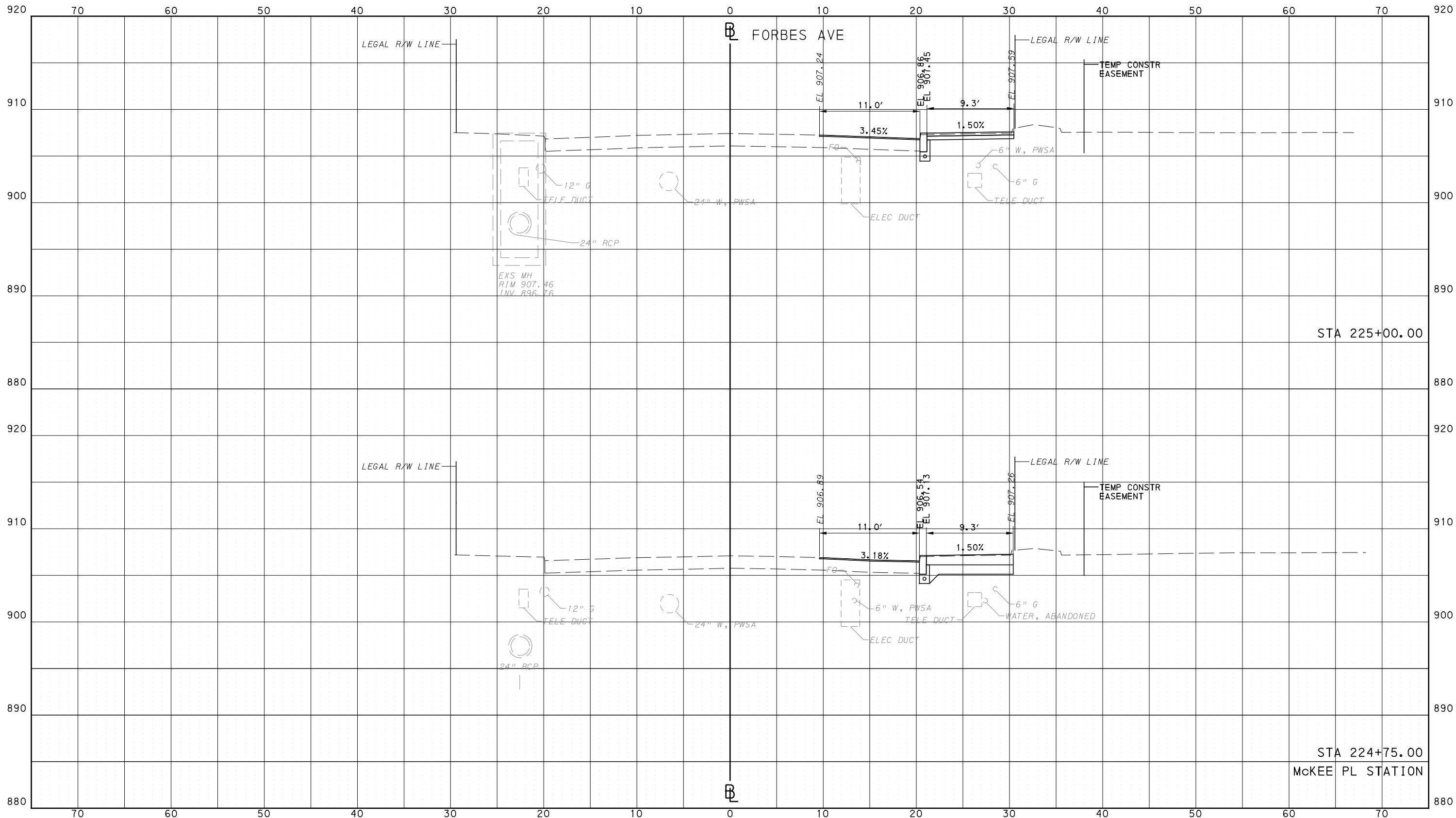
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DRAWN	DVP
CHECKED	KCF
IN CHARGE	GEC
DATE	05/01/24
SCALE	0 5 10 FEET

<b>PORT AUTHORITY OF ALLEGHENY COUNTY</b> PITTSBURGH PENNSYLVANIA	
BUS RAPID TRANSIT CROSS SECTIONS FORBES AVE - STA 224+00.00 TO STA 224+50.00	
<b>Port Authority</b> <small>connecting people to life™</small>	CONTRACT NO. BRT-001
DWG. NO. XS272	SHT. 1478

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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS



**AECOM**  
 Gulf Tower  
 707 Grant Street  
 5th Floor  
 Pittsburgh, PA 15219

**GANNETT FLEMING**  
 GANNETT FLEMING, INC.  
 Foster Plaza 8  
 Suite 400  
 730 Holiday Drive  
 Pittsburgh, PA. 15220

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REVISIONS		

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**(NOT FOR CONSTRUCTION)**

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DRAWN	DVP
CHECKED	KCF
IN CHARGE	GEC
DATE	05/01/24
SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
 PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT**  
 CROSS SECTIONS  
 FORBES AVE - STA 224+75.00 TO STA 225+00.00

**Port Authority** connecting people to life

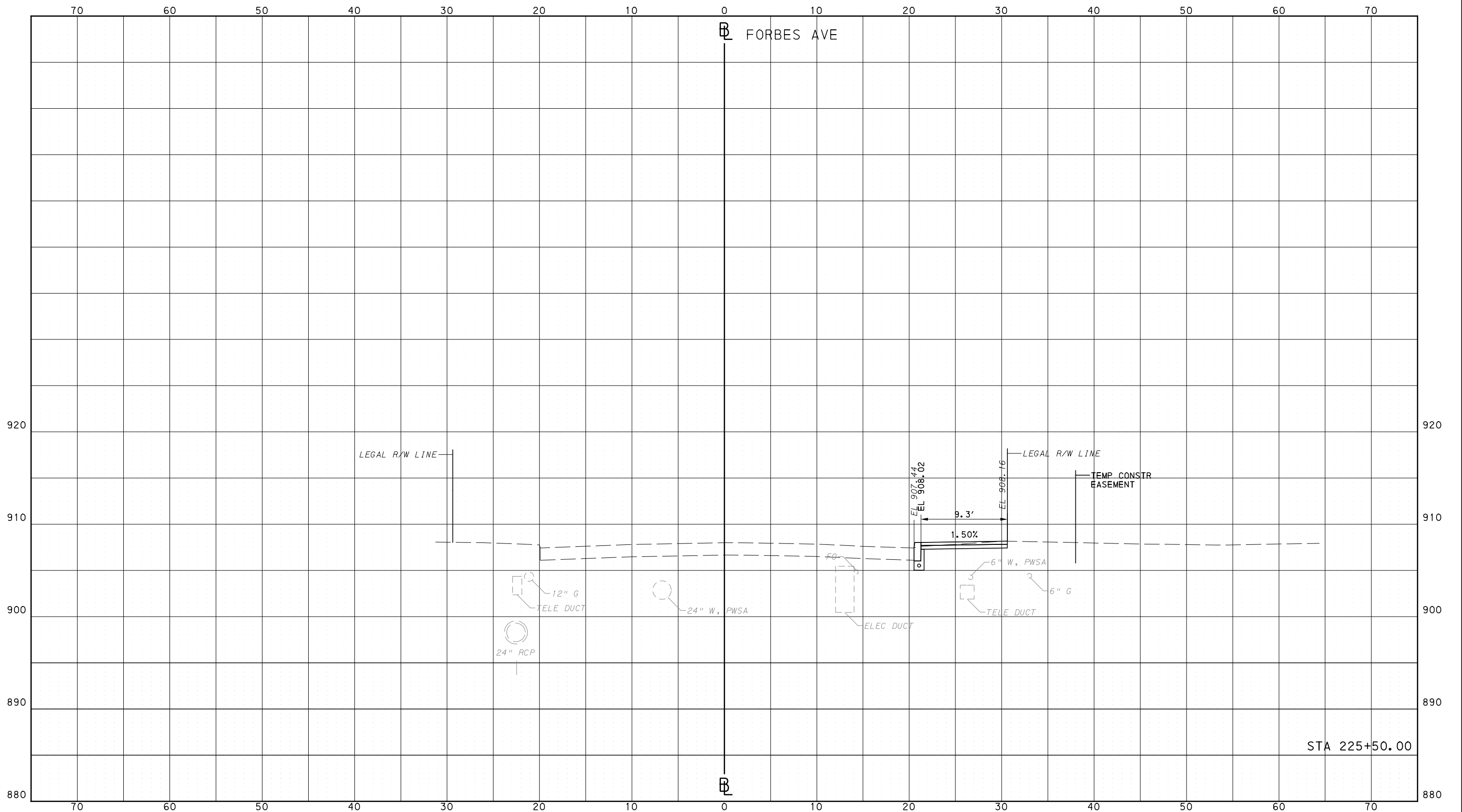
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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS



Gulf Tower  
707 Grant Street  
5th Floor  
Pittsburgh, PA 15219



GANNETT FLEMING, INC.  
Foster Plaza 8  
Suite 400  
730 Holiday Drive  
Pittsburgh, PA. 15220

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IN CHARGE	GEC
DATE	05/01/24
SCALE	0 5 10 FEET

PORT AUTHORITY OF ALLEGHENY COUNTY  
PITTSBURGH PENNSYLVANIA

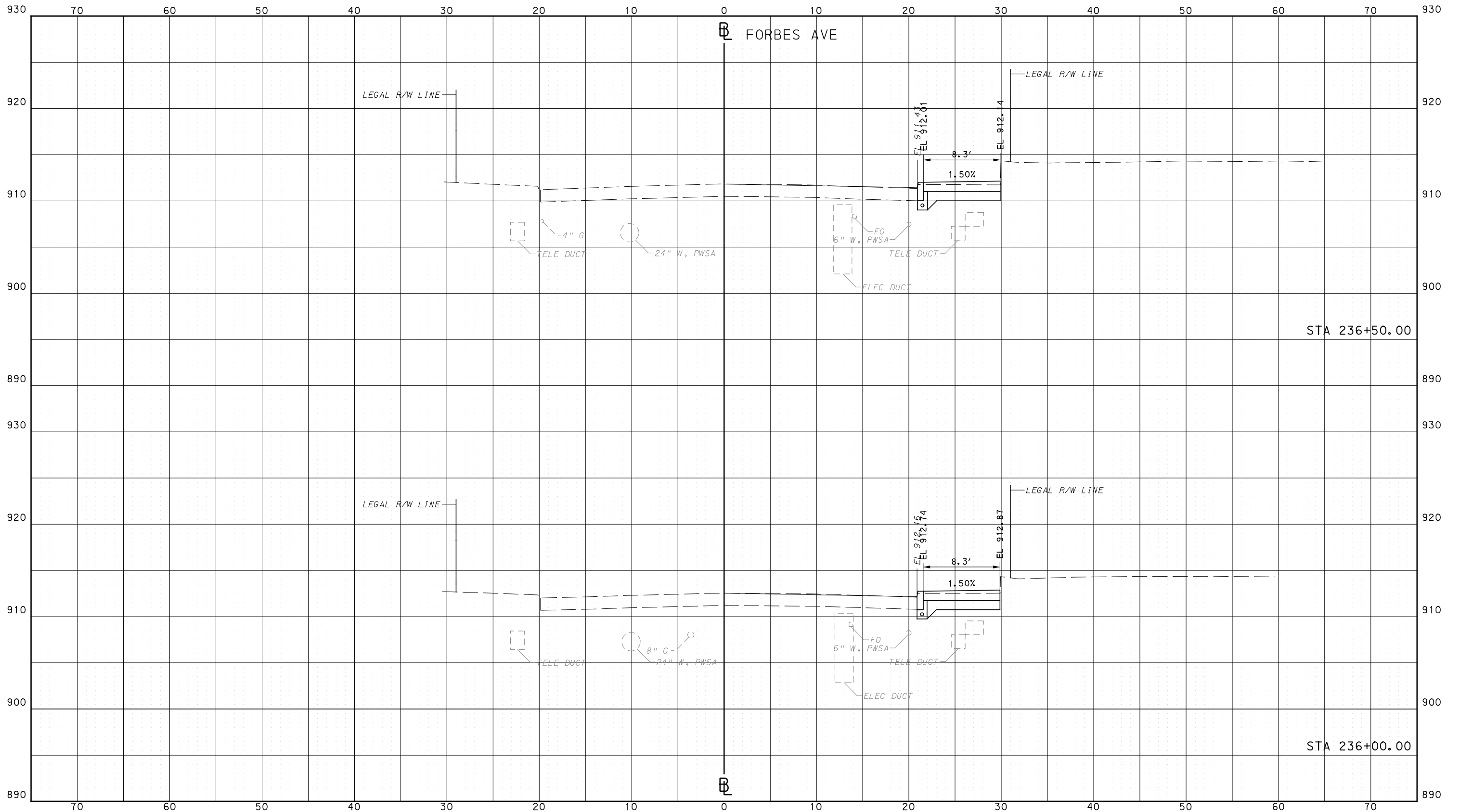
BUS RAPID TRANSIT  
CROSS SECTIONS  
FORBES AVE - STA 225+50.00



CONTRACT NO. BRT-001  
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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS



Gulf Tower  
707 Grant Street  
5th Floor  
Pittsburgh, PA 15219



GANNETT FLEMING, INC.  
Foster Plaza 8  
Suite 400  
730 Holiday Drive  
Pittsburgh, PA. 15220

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DRAWN	DVP
CHECKED	KCF
IN CHARGE	GEC
DATE	05/01/24
SCALE	0 5 10 FEET

PORT AUTHORITY OF ALLEGHENY COUNTY  
PITTSBURGH PENNSYLVANIA

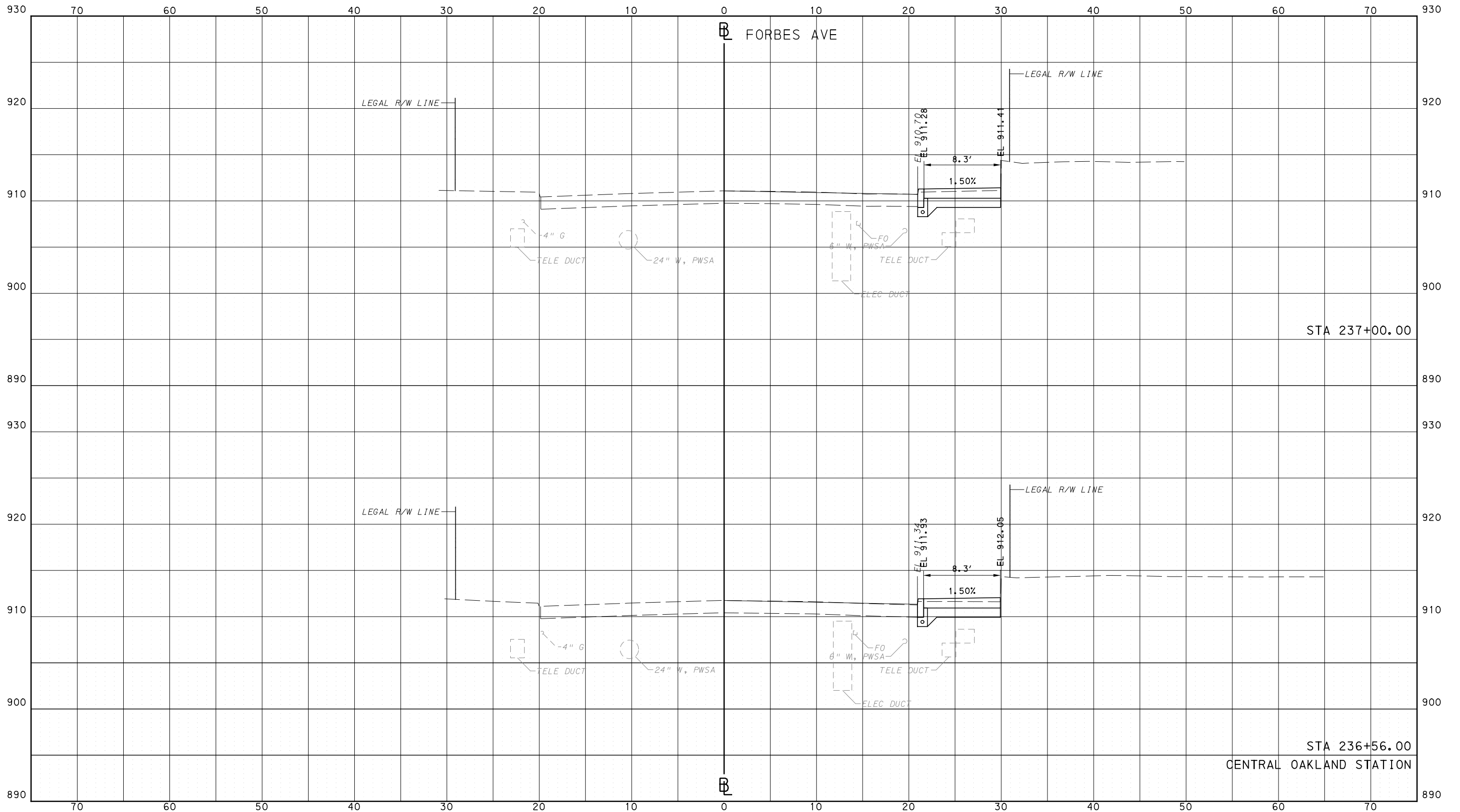
BUS RAPID TRANSIT  
CROSS SECTIONS  
FORBES AVE - STA 236+00.00 TO STA 236+50.00



CONTRACT NO. BRT-001  
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PORT AUTHORITY OF ALLEGHENY COUNTY  
 CROSS SECTIONS



Gulf Tower  
 707 Grant Street  
 5th Floor  
 Pittsburgh, PA 15219



GANNETT FLEMING, INC.  
 Foster Plaza 8  
 Suite 400  
 730 Holiday Drive  
 Pittsburgh, PA. 15220

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REVISIONS		

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DRAWN	DVP
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IN CHARGE	GEC
DATE	05/01/24
SCALE	0 5 10 FEET

PORT AUTHORITY OF ALLEGHENY COUNTY  
 PITTSBURGH PENNSYLVANIA

BUS RAPID TRANSIT  
 CROSS SECTIONS  
 FORBES AVE - STA 236+56.00 TO STA 237+00.00

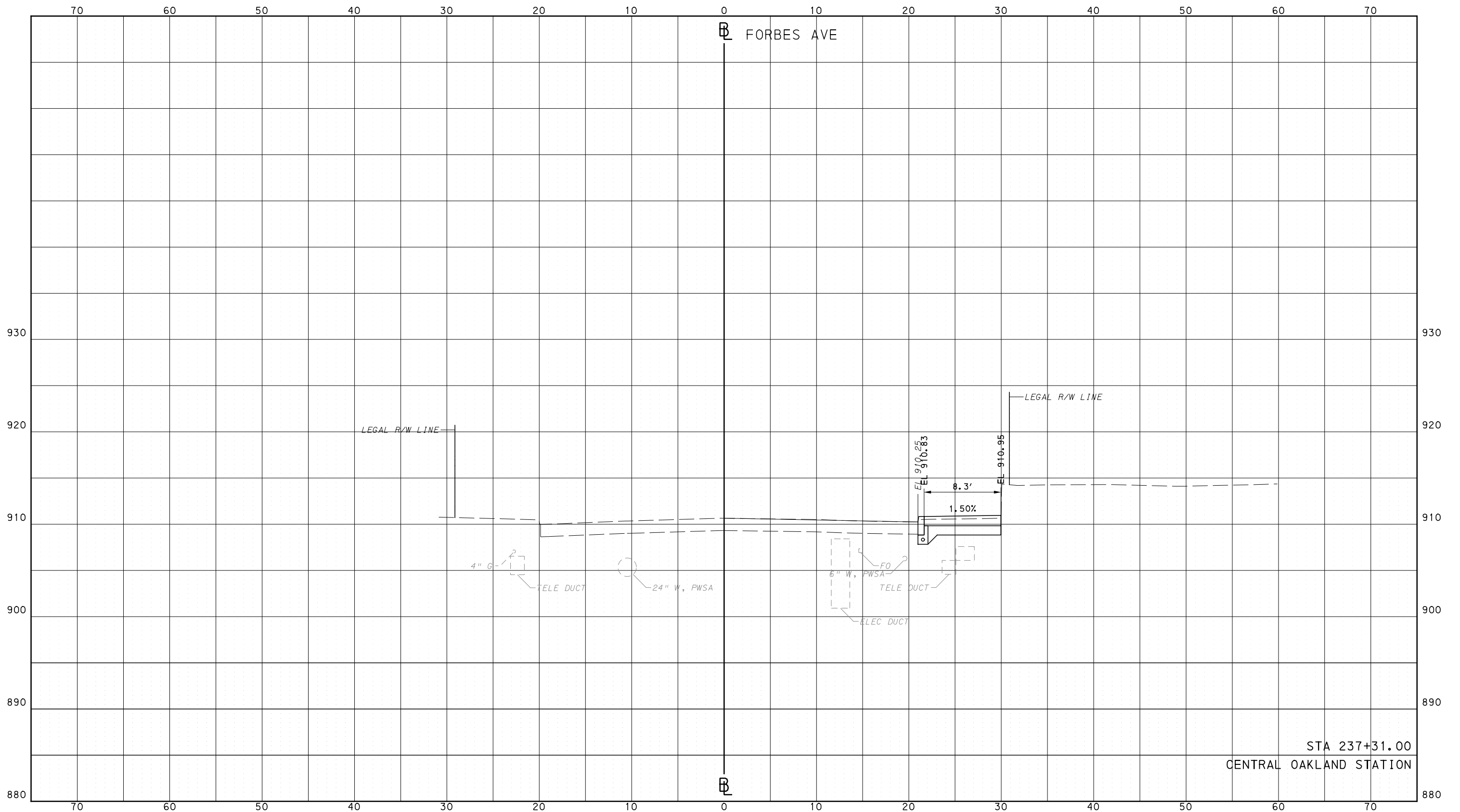


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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS



STA 237+31.00  
CENTRAL OAKLAND STATION

**AECOM**  
Gulf Tower  
707 Grant Street  
5th Floor  
Pittsburgh, PA 15219

**GANNETT FLEMING**  
GANNETT FLEMING, INC.  
Foster Plaza 8  
Suite 400  
730 Holiday Drive  
Pittsburgh, PA. 15220

NO.	DATE	DESCRIPTION
REVISIONS		

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DRAWN	DVP
CHECKED	KCF
IN CHARGE	GEC
DATE	05/01/24
SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

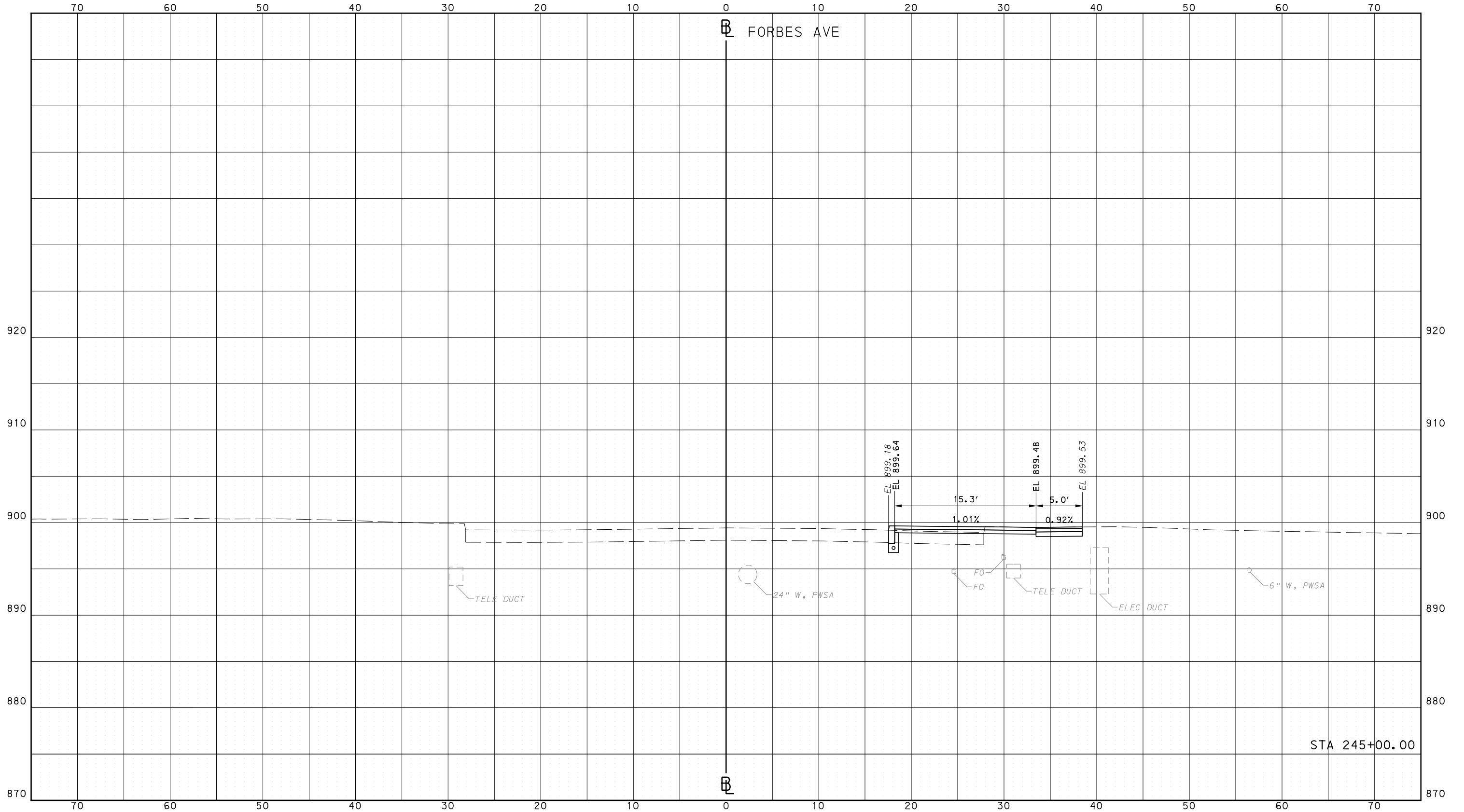
**BUS RAPID TRANSIT**  
CROSS SECTIONS  
FORBES AVE - STA 237+31.00

**Port Authority** connecting people to life

CONTRACT NO. BRT-001  
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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS



**AECOM**  
Gulf Tower  
707 Grant Street  
5th Floor  
Pittsburgh, PA 15219

**GANNETT FLEMING**  
GANNETT FLEMING, INC.  
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Suite 400  
730 Holiday Drive  
Pittsburgh, PA. 15220

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DESIGNED	RRH
DRAWN	DVP
CHECKED	KCF
IN CHARGE	GEC
DATE	05/01/24
SCALE	0 5 10 FEET

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

BUS RAPID TRANSIT  
CROSS SECTIONS  
FORBES AVE - STA 245+00.00

**Port Authority**  
connecting people to life

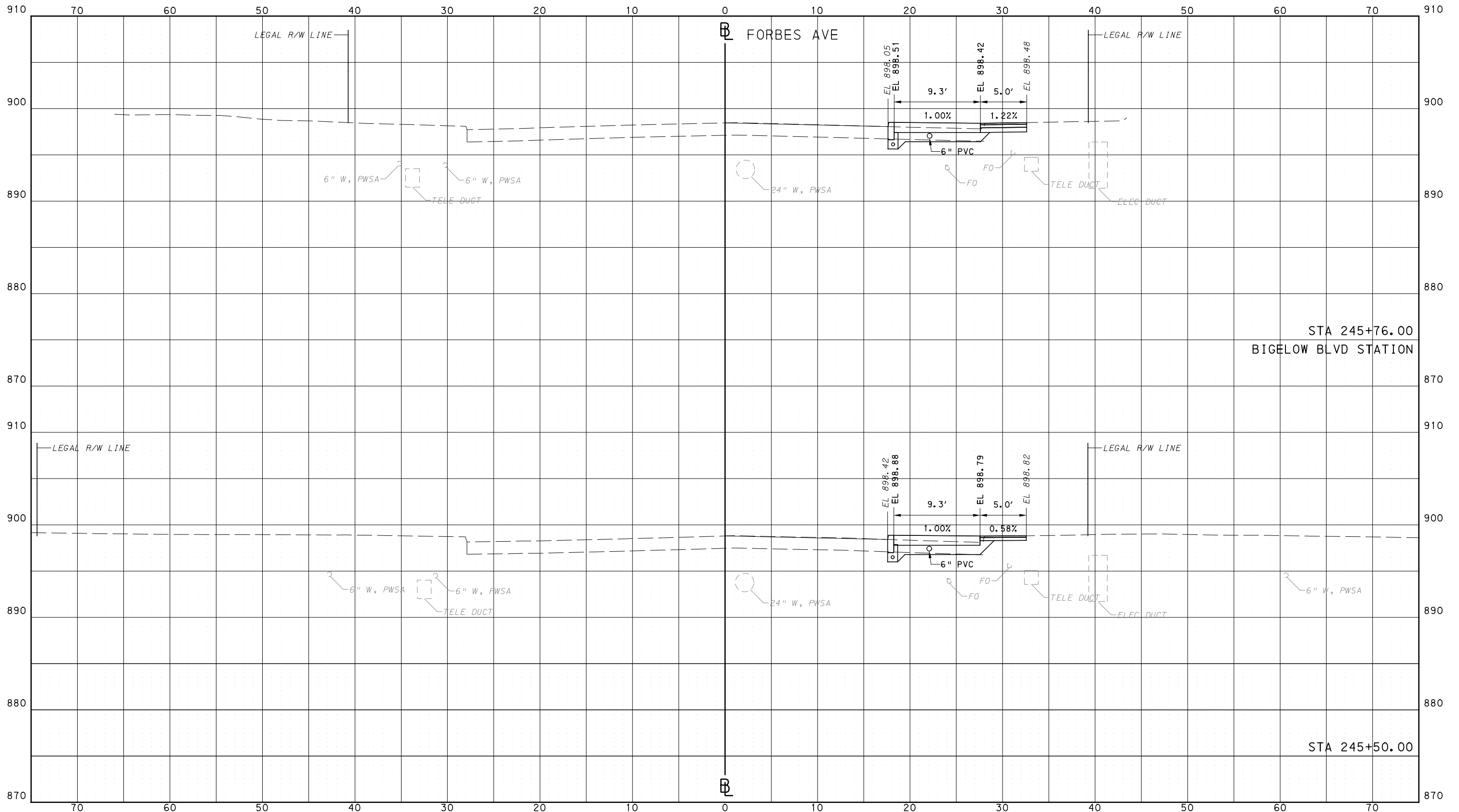
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PORT AUTHORITY OF ALLEGHENY COUNTY CROSS SECTIONS



**AECOM**  
 Gulf Tower  
 707 Grant Street  
 5th Floor  
 Pittsburgh, PA 15219

**GANNETT FLEMING**  
 GANNETT FLEMING, INC.  
 Foster Plaza 8  
 Suite 400  
 730 Holiday Drive  
 Pittsburgh, PA. 15220

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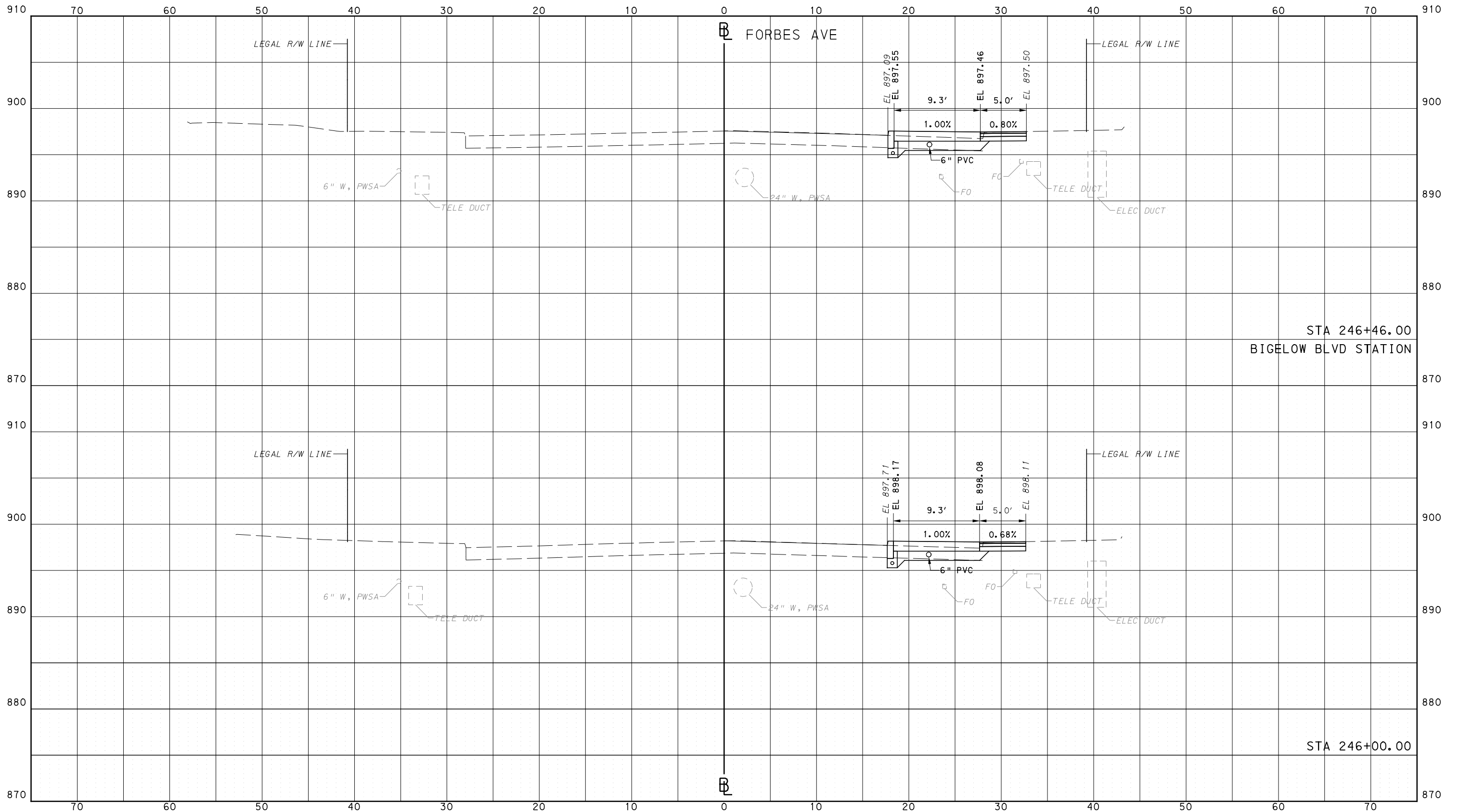
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 IN CHARGE GEC  
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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
 PITTSBURGH PENNSYLVANIA  
 BUS RAPID TRANSIT  
 CROSS SECTIONS  
 FORBES AVE - STA 245+50.00 TO STA 245+76.00  
**Port Authority** connecting people to life  
 CONTRACT NO. BRT-001  
 DWG. NO. XS279 SHT. 1485

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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS



Gulf Tower  
707 Grant Street  
5th Floor  
Pittsburgh, PA 15219



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DRAWN	DVP
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SCALE	0 5 10 FEET

PORT AUTHORITY OF ALLEGHENY COUNTY  
PITTSBURGH PENNSYLVANIA

BUS RAPID TRANSIT  
CROSS SECTIONS  
FORBES AVE - STA 246+00.00 TO STA 246+46.00



CONTRACT NO. BRT-001

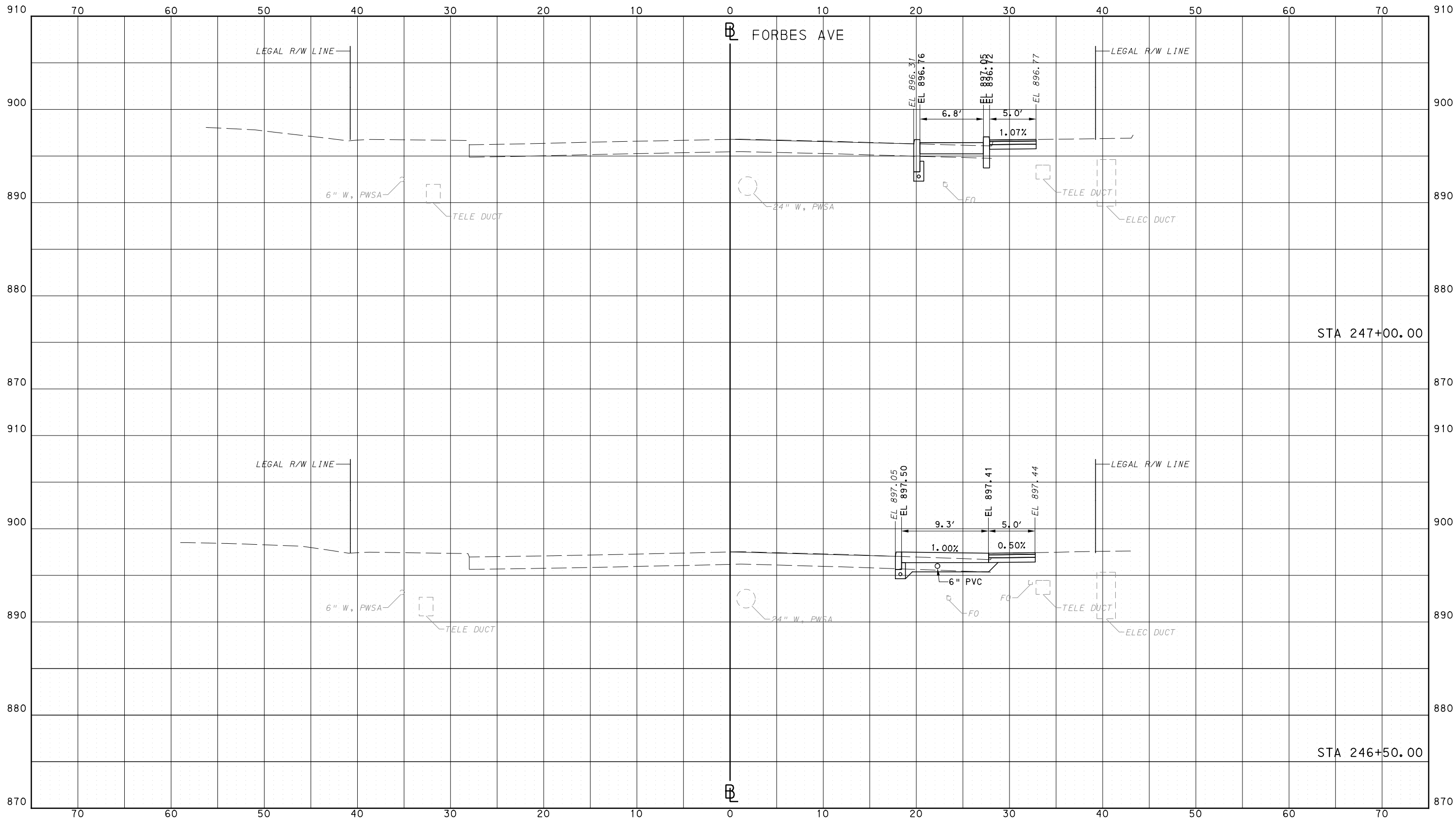
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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS



**AECOM**  
Gulf Tower  
707 Grant Street  
5th Floor  
Pittsburgh, PA 15219

**GANNETT FLEMING**  
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Foster Plaza 8  
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IN CHARGE	GEC
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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT**  
CROSS SECTIONS  
FORBES AVE - STA 246+50.00 TO STA 247+00.00

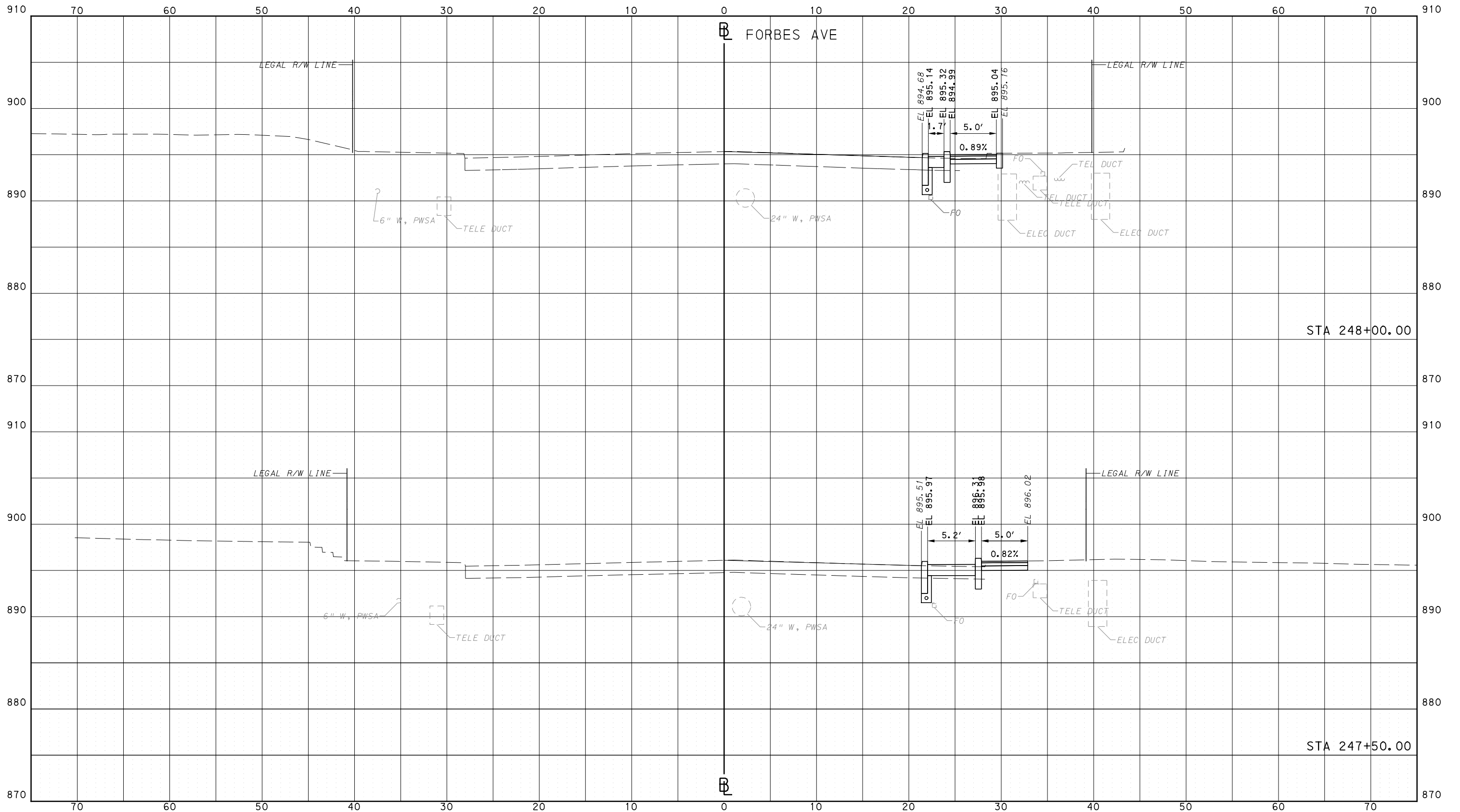
**Port Authority** connecting people to life

CONTRACT NO. BRT-001  
DWG. NO. XS281 SHT. 1487

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PORT AUTHORITY OF ALLEGHENY COUNTY  
CROSS SECTIONS



Gulf Tower  
707 Grant Street  
5th Floor  
Pittsburgh, PA 15219



GANNETT FLEMING, INC.  
Foster Plaza 8  
Suite 400  
730 Holiday Drive  
Pittsburgh, PA. 15220

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REVISIONS		

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(NOT FOR CONSTRUCTION)

DESIGNED	RRH
DRAWN	DVP
CHECKED	KCF
IN CHARGE	GEC
DATE	05/01/24
SCALE	0 5 10 FEET

PORT AUTHORITY OF ALLEGHENY COUNTY  
PITTSBURGH PENNSYLVANIA

BUS RAPID TRANSIT  
CROSS SECTIONS  
FORBES AVE - STA 247+50.00 TO STA 248+00.00



CONTRACT NO. BRT-001  
DWG. NO. XS282 SHT. 1488

PLOTTED: \$DATE\$ \$TIME\$

**GREEN INFRASTRUCTURE NOTES**

**GENERAL STORMWATER NOTES:**

1. THE CONTRACTOR SHALL VERIFY BY FIELD MEASUREMENT THE EXISTING AND REQUIRED LOCATIONS OF ALL PIPES, FITTINGS, DUCT BANKS, SITE UTILITIES, EQUIPMENT AND STRUCTURES TO ASSURE PROPER CLEARANCE AND SPACING PRIOR TO FABRICATION OR INSTALLATION.
2. PRIOR TO REMOVING ANY EXISTING PIPING, EQUIPMENT, STRUCTURES, FACILITIES OR WORK FROM SERVICE, THE CONTRACTOR SHALL DEMONSTRATE THAT ALL NEW ITEMS AND WORK ARE AVAILABLE FOR CONSTRUCTION AND INSTALLATION. ONCE EXISTING ITEMS ARE REMOVED FROM SERVICE, THE CONTRACTOR SHALL WORK DILIGENTLY AND CONTINUOUSLY IN ACCORDANCE WITH ITS APPROVED CONSTRUCTION SCHEDULE TO MINIMIZE THE TIME PERIOD THAT ANY EXISTING ITEM IS OUT OF SERVICE. EXISTING ITEMS SHALL BE RETURNED TO SERVICE AS QUICKLY AS POSSIBLE.
3. THE CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANIES TO CONFIRM ALL UTILITIES SHOWN AS ABANDONED ARE NO LONGER ACTIVE UTILITIES PRIOR TO REMOVAL.
4. ALL COSTS ASSOCIATED WITH COMPLIANCE WITH THESE GENERAL NOTES SHALL BE INCLUDED IN THE VARIOUS CONTRACT ITEMS AND NO SEPARATE PAYMENT WILL BE MADE THEREFORE.
5. THE CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO AVOID DAMAGE TO EXISTING UTILITIES. IF ANY UNDERGROUND UTILITY IS DAMAGED, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER. ANY DAMAGE SUSTAINED TO UTILITIES ABOVE AND BELOW GROUND SHALL BE REPAIRED BY CONTRACTOR AT ITS OWN EXPENSE TO THE SATISFACTION OF THE ENGINEER.
6. EXISTING PAVEMENT COMPOSITION AND DEPTH VARIES THROUGHOUT PITTSBURGH. THE CONTRACTOR SHALL REMOVE AND DISPOSE VARYING TYPES AND DEPTHS OF EXISTING PAVEMENT AS NECESSARY. NO ADDITIONAL COMPENSATION WILL BE PAID FOR REMOVING AND DISPOSING VARYING PAVEMENT COMPOSITION AND DEPTH.
7. ANY UNCHARTED FOOTINGS, STRUCTURES, UTILITIES, ETC. ENCOUNTERED DURING EXCAVATION SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE ANY ACTION IS TAKEN. ANY WORK REQUIRED FOR THESE UNCHARTED ITEMS IS PART OF THE BASIC DEMOLITION WORK.
8. ALL WORK SHALL BE PERFORMED ACCORDING TO PWSA AND CITY OF PITTSBURGH STANDARDS UNLESS OTHERWISE SPECIFIED.
9. THE CONTRACTOR IS RESPONSIBLE FOR REMOVAL AND LEGAL DISPOSAL OF ALL DEBRIS RESULTING FROM DEMOLITION AND SITE CLEARING.
10. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DEVIATION FROM THESE PLANS PRIOR TO ANY CHANGES BEING MADE. ANY DEVIATIONS FROM THESE PLANS WITHOUT WRITTEN CONSENT FROM THE OWNER WILL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
11. POSITIVE DRAINAGE SHALL BE MAINTAINED DURING ALL PHASES OF CONSTRUCTION. PONDING OR STANDING WATER WILL NOT BE PERMITTED.
12. UPON INSTALLATION, KEEP ALL DRAINAGE STRUCTURES, PRETREATMENT DEVICES (E.G., TRASH RACKS AND SUMPS), AND STORMWATER IMPROVEMENTS IN CLEAN AND WORKING ORDER. TRANSPORT AND DISPOSAL OF ACCUMULATED SEDIMENT OFF-SITE SHALL BE IN ACCORDANCE WITH APPLICABLE LOCAL, STATE AND FEDERAL GUIDELINES AND REGULATIONS.
13. THE CONTRACTOR SHALL MAINTAIN ALL EXISTING WATER AND SEWERAGE FACILITIES IN OPERATION DURING THE WORK. THE CONTRACTOR IS OBLIGED TO COMMUNICATE AND COORDINATE TO ENSURE SMOOTH, CONTINUOUS DAILY OPERATION OF THE SEWER SYSTEM. THE CONTRACTOR SHALL CONTINUALLY UPDATE ITS PROPOSED PLAN AND SCHEDULE FOR TEMPORARY FLOW CONTROLS AND SHALL OBTAIN APPROVAL FROM PWSA PRIOR TO IMPLEMENTING ANY ACTIVITIES WHICH AFFECT OPERATION OF THE SEWER SYSTEM AT LEAST 24 HOURS PRIOR TO SUCH ACTIVITY.
14. EXCAVATION FOR STORMWATER TRENCHES IS COVERED BY PAY ITEM 02976.03 IS INCIDENTAL TO AASHTO #57 STONE AND IS DEFINED IN THE TECHNICAL PROVISIONS, PWSA SECTION 02976 - SUBSURFACE STORAGE BEDS.



**EROSION AND SEDIMENT CONTROL NOTES:**

1. INFILTRATION SYSTEM CONSTRUCTION: UNLESS OTHERWISE NOTED, THE IN-SITU SOILS SHALL NOT BE DISTURBED OR COMPACTED WITHIN 12 INCHES OF THE FINAL DESIGN EXCAVATION OF THE BOTTOM OF ANY INFILTRATION OR UNLINED TRENCH. IF THE SUB-GRADE IS IMPACTED THE IMPACTED AREA SHALL BE TILLED TO A DEPTH OF 12-INCHES BELOW THE BOTTOM OF THE RESERVOIR LAYER. INFILTRATION TESTS SHALL BE PERFORMED PRIOR TO THE INSTALLATION OF INFILTRATION TRENCHES TO ENSURE THE INFILTRATION RATE IS STILL ACCEPTABLE. IF THERE IS A LOSS IN INFILTRATION RATE, DEEP TILLING AND/OR OTHER RESTORATION PRACTICES WILL BE REQUIRED TO RESTORE THE RATE.
2. UNLESS OTHERWISE NOTED, KEEP THE STORMWATER IMPROVEMENTS OFF-LINE UNTIL CONSTRUCTION IS COMPLETE. PREVENT SEDIMENT FROM ENTERING THE STORMWATER IMPROVEMENTS BY USING SUPER SILT FENCE, COIR LOGS, DIVERSION BERMS, SAND BAGS OR OTHER MEANS.

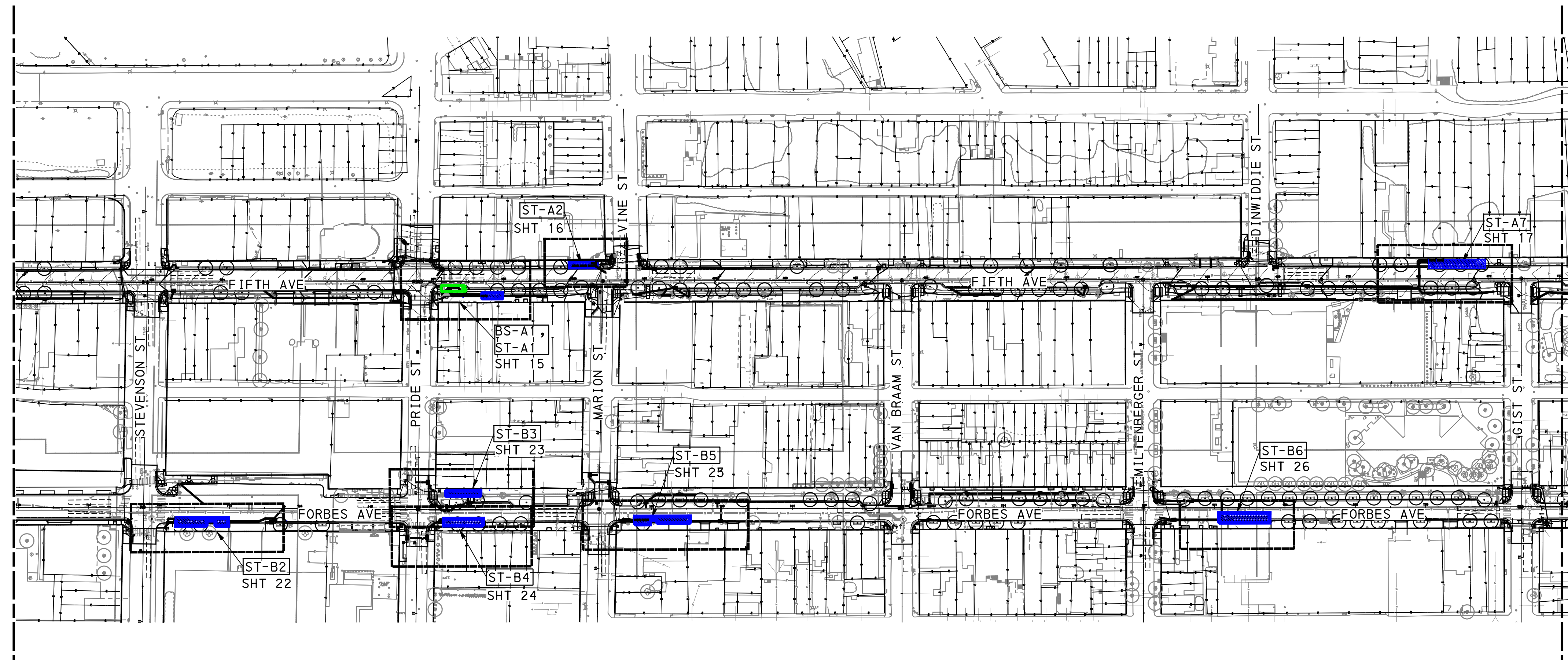
STORMWATER MANAGEMENT PLANS INDEX	
SWM1	GREEN INFRASTRUCTURE NOTES AND INDEX
SWM2	KEY PLAN
SWM3	KEY PLAN
SWM4	GI DETAILS
SWM5	GI DETAILS
SWM6	GI DETAILS
SWM7	GI DETAILS
SWM8	GI DETAILS
SWM9	GI DETAILS
SWM10	GI DETAILS
SWM11	GI DETAILS
SWM12	GI DETAILS
SWM13	STRUCTURE TABLE - FIFTH AVENUE
SWM14	STRUCTURE TABLE - FORBES AVENUE
SWM15	FIFTH AVE - STA 456+50 TO STA 458+50
SWM16	FIFTH AVE - STA 458+50 TO STA 460+00
SWM17	FIFTH AVE - STA 470+50 TO STA 472+50
SWM18	FIFTH AVE - STA 474+50 TO STA 477+50
SWM19	FIFTH AVE - STA 484+50 TO STA 486+50
SWM20	FIFTH AVE - STA 488+00 TO STA 491+00
SWM21	FIFTH AVE - STA 491+50 TO STA 493+50
SWM22	FORBES AVE - STA 142+00 TO STA 144+00
SWM23	FORBES AVE - STA 145+50 TO STA 147+50
SWM24	FORBES AVE - STA 145+50 TO STA 147+50
SWM25	FORBES AVE - STA 148+00 TO STA 150+50
SWM26	FORBES AVE - STA 156+50 TO STA 158+00
SWM27	FORBES AVE - STA 164+50 TO STA 166+50
SWM28	FORBES AVE - STA 169+50 TO STA 171+50
SWM29	FORBES AVE - STA 246+50 TO STA 248+50
SWM30	BIOSWALE GRADING PLANS
SWM31	BIOSWALE GRADING PLANS
SWM32	LANDSCAPE PLANS
SWM33	LANDSCAPE PLANS
SWM34	LANDSCAPE PLANS
SWM35	LANDSCAPE PLANS
SWM36	LANDSCAPE PLANS

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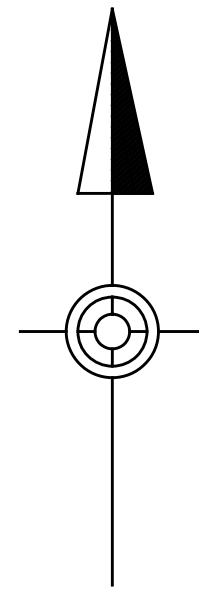
[SEE BRT PLAN SET FOR ROADWAY DRAWINGS]

 Gulf Tower 707 Grant Street 5th Floor Pittsburgh, PA 15219	 1550 Coraopolis Heights Road, Suite 400 Moon Township, PA 15108	<table border="1"> <thead> <tr> <th>NO.</th> <th>DATE</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td colspan="3" style="text-align: center;">REVISIONS</td> </tr> </tbody> </table>	NO.	DATE	DESCRIPTION	REVISIONS			THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE FEDERAL TRANSIT ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, UNDER THE URBAN MASS TRANSPORTATION ACT OF 1984, AS AMENDED, FOR THE PORT AUTHORITY OF ALLEGHENY COUNTY, PENNSYLVANIA.	<p style="font-size: 24pt; color: red; margin: 0;"><b>NOT FOR CONSTRUCTION</b></p>	DESIGNED <u>SAB</u> DRAWN <u>IDL</u> CHECKED <u>DPW</u> IN CHARGE <u>ALP</u> DATE <u>05/01/24</u> SCALE AS SHOWN	PORT AUTHORITY OF ALLEGHENY COUNTY PITTSBURGH PENNSYLVANIA BUS RAPID TRANSIT UPTOWN TO OAKLAND STORMWATER MANAGEMENT PLANS GREEN INFRASTRUCTURE NOTES AND INDEX	Port Authority <small>connecting people to life®</small>	CONTRACT NO. BRT-001 DWG. NO. SWM1 SHT. 1
			NO.	DATE	DESCRIPTION									
REVISIONS														
SIGNATURE _____ APPROVED _____ DATE _____														

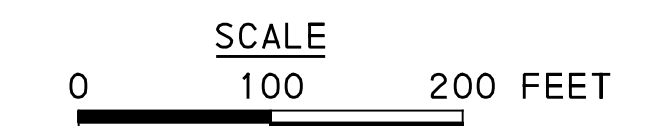




MATCH LINE SEE SWM 3



LEGEND	
	DRAINAGE STRUCTURE IDENTIFICATION
	DRAINAGE STRUCTURE
	GI CONTROL STRUCTURE WITH WEIR
	GI STORAGE TRENCH (ST)
	GI BIORETENTION (BR) OR BIOSWALE (BS)
	GEOMEMBRANE ROOT INTRUSION BARRIER (SIDE FACING TREE PITS)
	PROPOSED TREE (SEE LANDSCAPE PLANS)
	ROADWAY DRAINAGE PIPE, TYP. REFER TO ROADWAY PLANS FOR MORE INFORMATION
	2' X 2' PRECAST CONCRETE INLET
	SOLID GI PIPE (SIZE PER PLAN)
	PERFORATED GI PIPE (SIZE PER PLAN)
	VERTICAL BEND ON GI DISTRIBUTION / UNDERDRAIN PIPE
	ANTI-SEEP COLLAR ON GI DISTRIBUTION / UNDERDRAIN PIPE
	CHAMBER OBSERVATION PORT
	CLEANOUT



SEE BRT PLAN SET FOR ROADWAY DRAWINGS

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**Jacobs**

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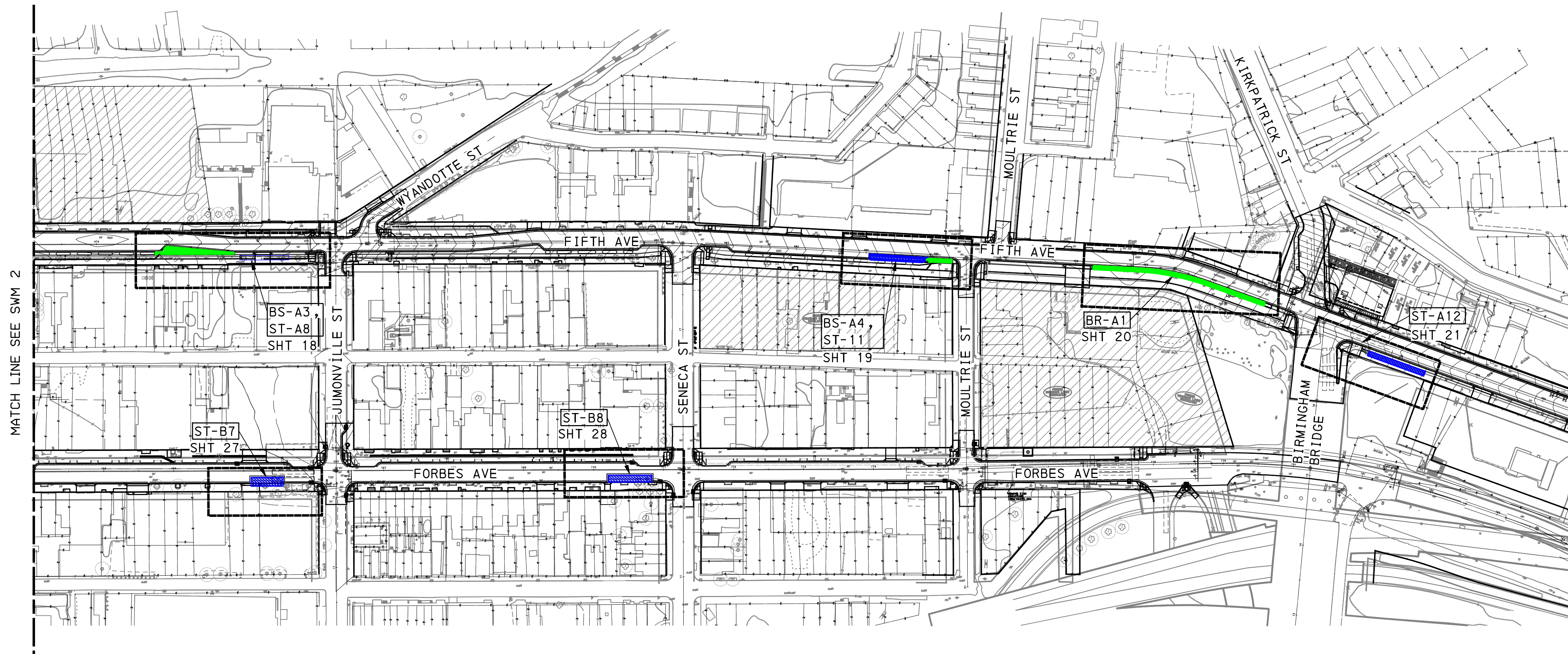
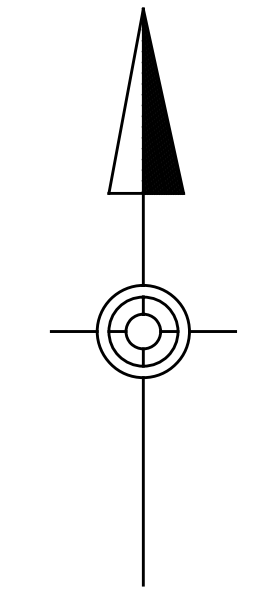
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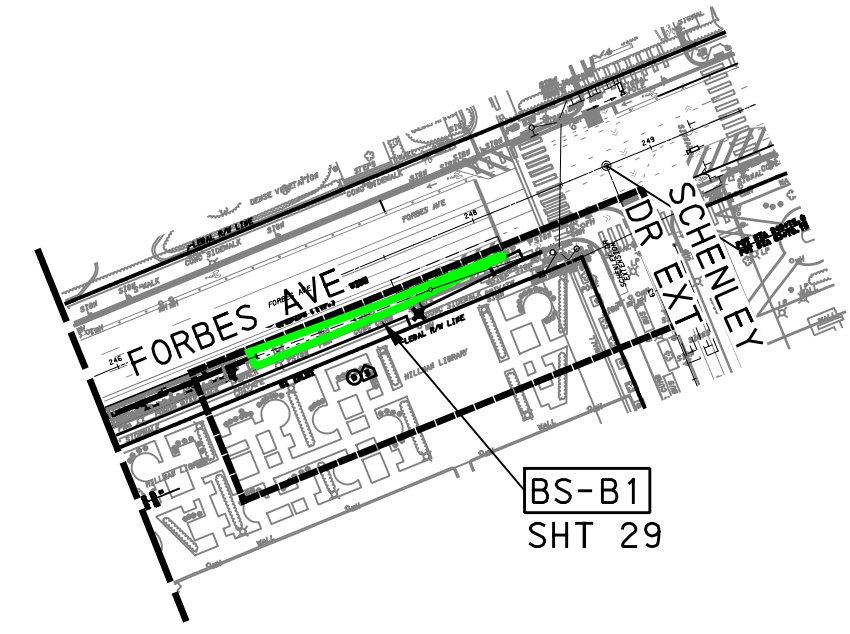
<b>PORT AUTHORITY OF ALLEGHENY COUNTY</b> PITTSBURGH PENNSYLVANIA	
<b>BUS RAPID TRANSIT UPTOWN TO OAKLAND</b> STORMWATER MANAGEMENT PLANS KEY PLAN	
<b>Port Authority</b> <small>connecting people to life</small>	CONTRACT NO. BRT-001
	DWG. NO. SWM2 SHT. 2



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\$TIME\$



MATCH LINE SEE SWM 2



FORBES AVE AND SCHENLEY DRIVE IN OAKLAND

LEGEND	
	DRAINAGE STRUCTURE IDENTIFICATION
	DRAINAGE STRUCTURE
	GI CONTROL STRUCTURE WITH WEIR
	GI STORAGE TRENCH (ST)
	GI BIORETENTION (BR) OR BIOSWALE (BS)
	GEOMEMBRANE ROOT INTRUSION BARRIER (SIDE FACING TREE PITS)
	PROPOSED TREE (SEE LANDSCAPE PLANS)
	ROADWAY DRAINAGE PIPE, TYP. REFER TO ROADWAY PLANS FOR MORE INFORMATION
	2' X 2' PRECAST CONCRETE INLET
	SOLID GI PIPE (SIZE PER PLAN)
	PERFORATED GI PIPE (SIZE PER PLAN)
	VERTICAL BEND ON GI DISTRIBUTION / UNDERDRAIN PIPE
	ANTI-SEEP COLLAR ON GI DISTRIBUTION / UNDERDRAIN PIPE
	CHAMBER OBSERVATION PORT
	CLEANOUT



SEE BRT PLAN SET FOR ROADWAY DRAWINGS

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Pittsburgh, PA 15219

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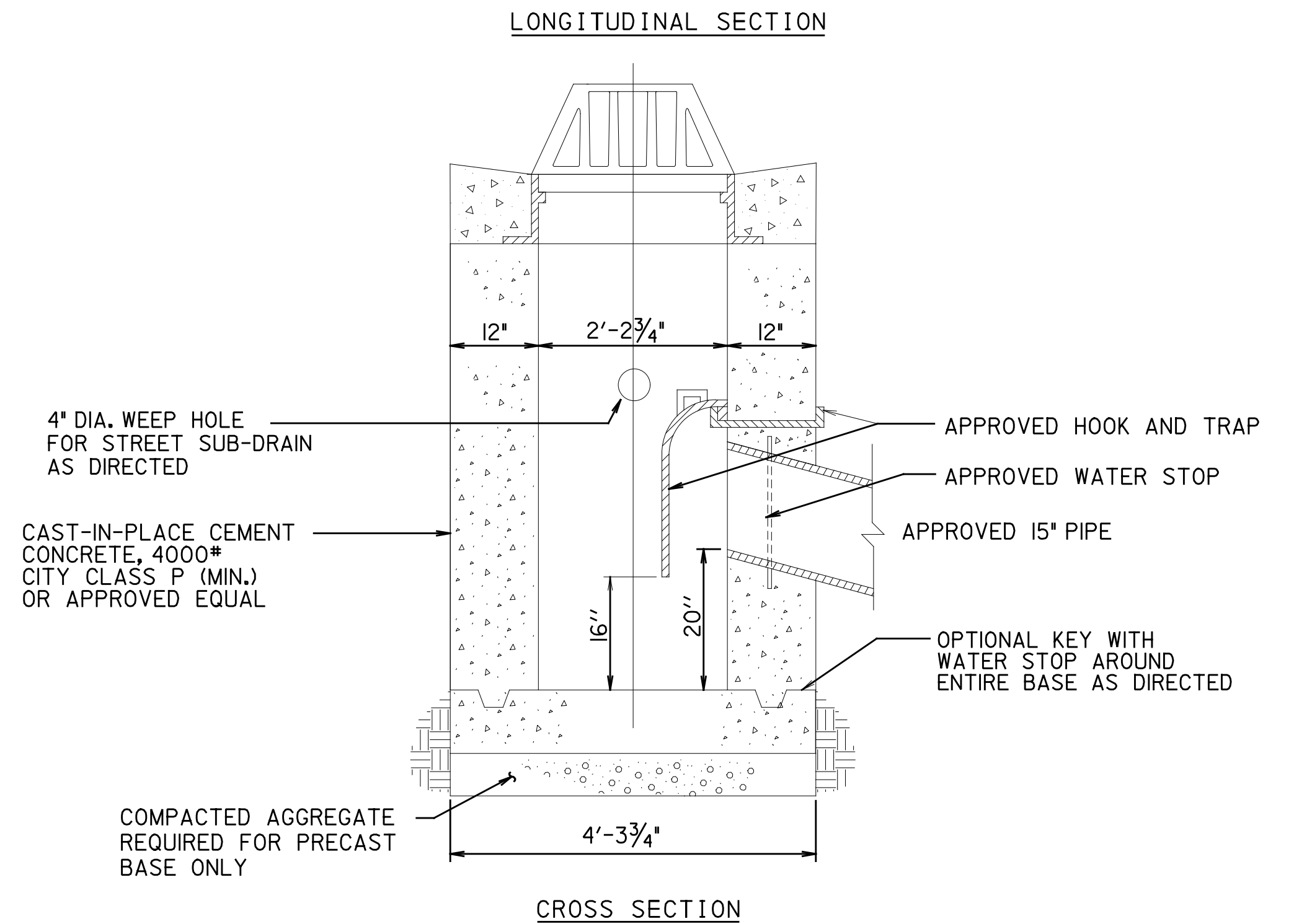
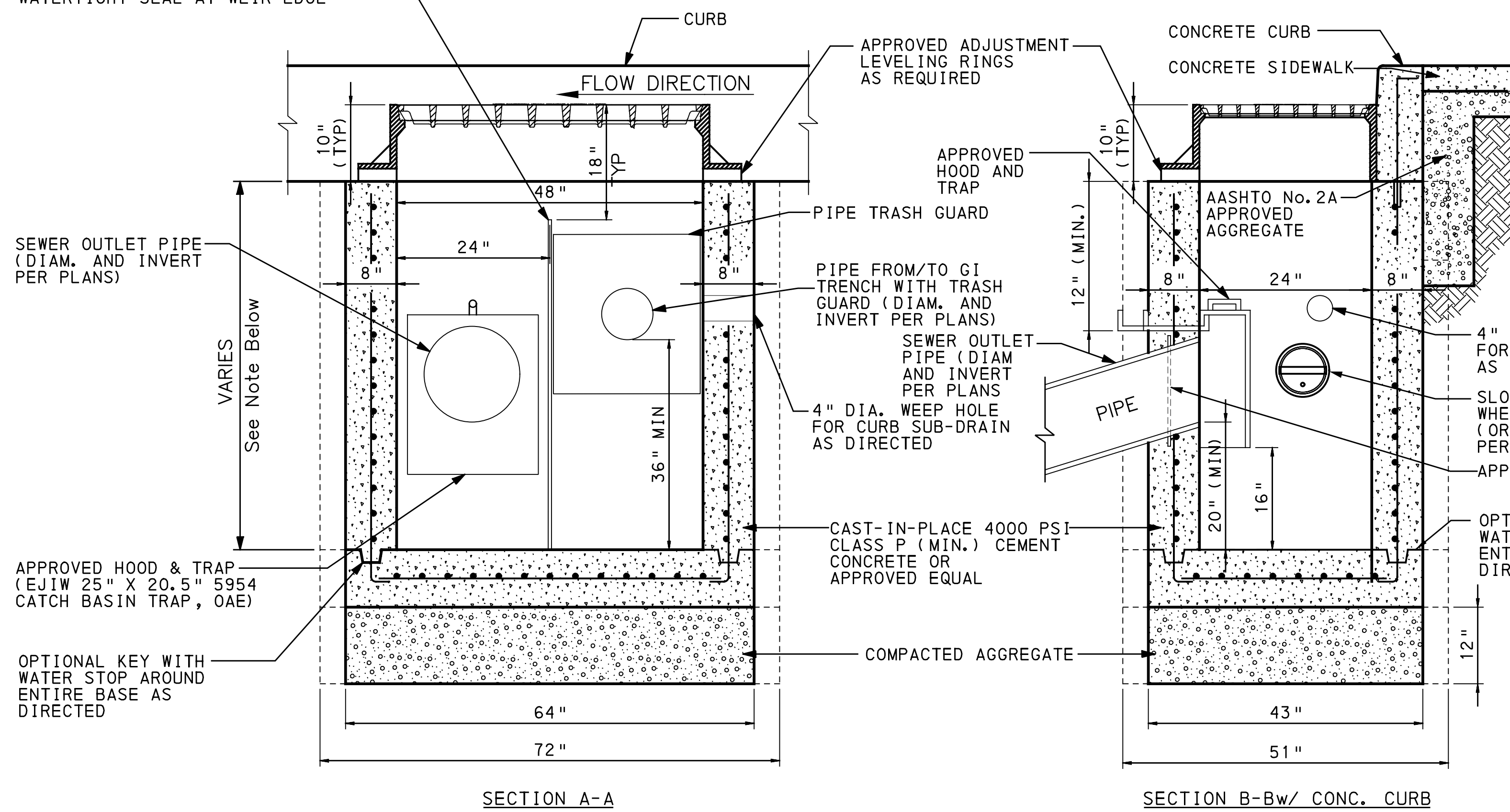
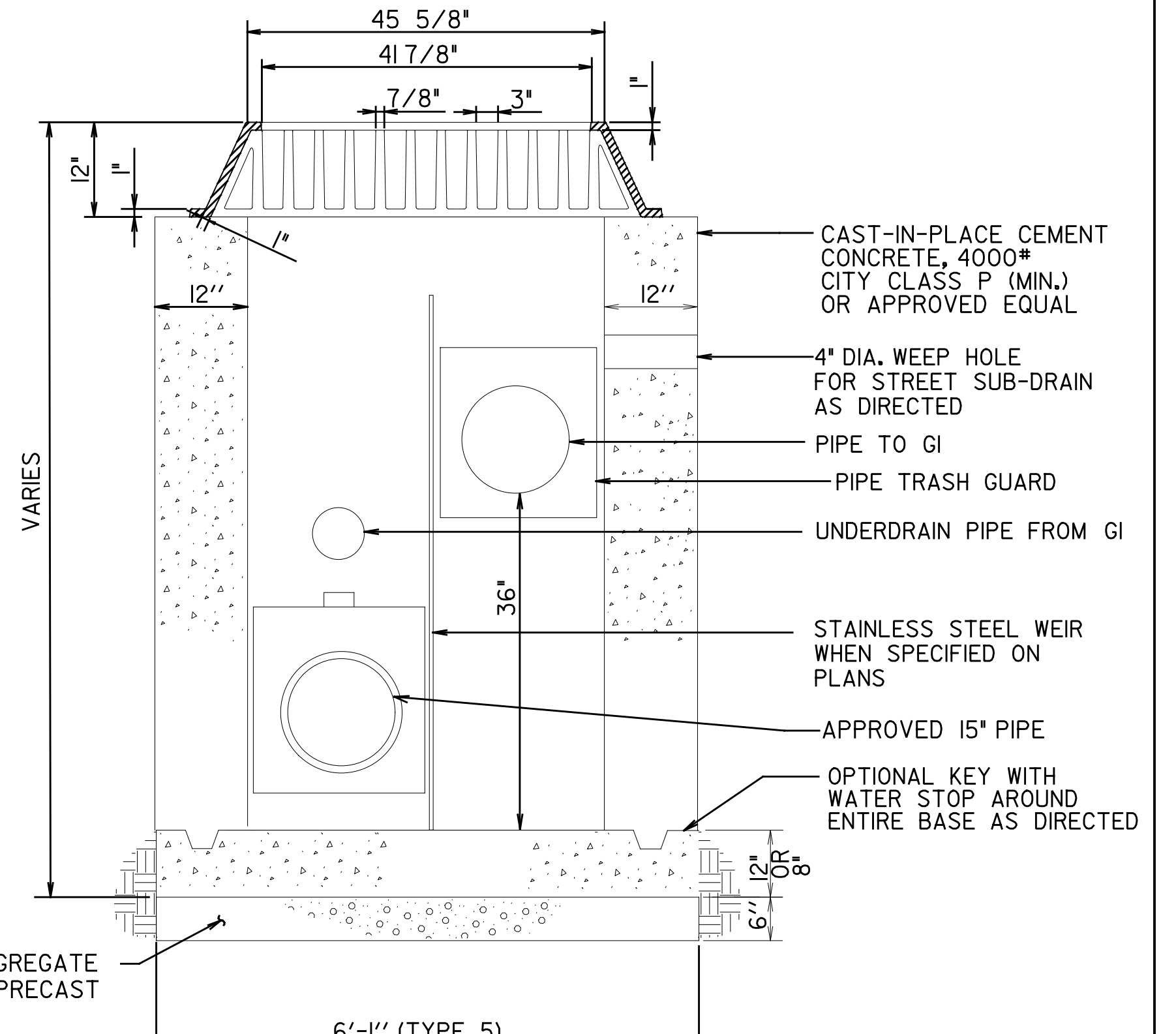
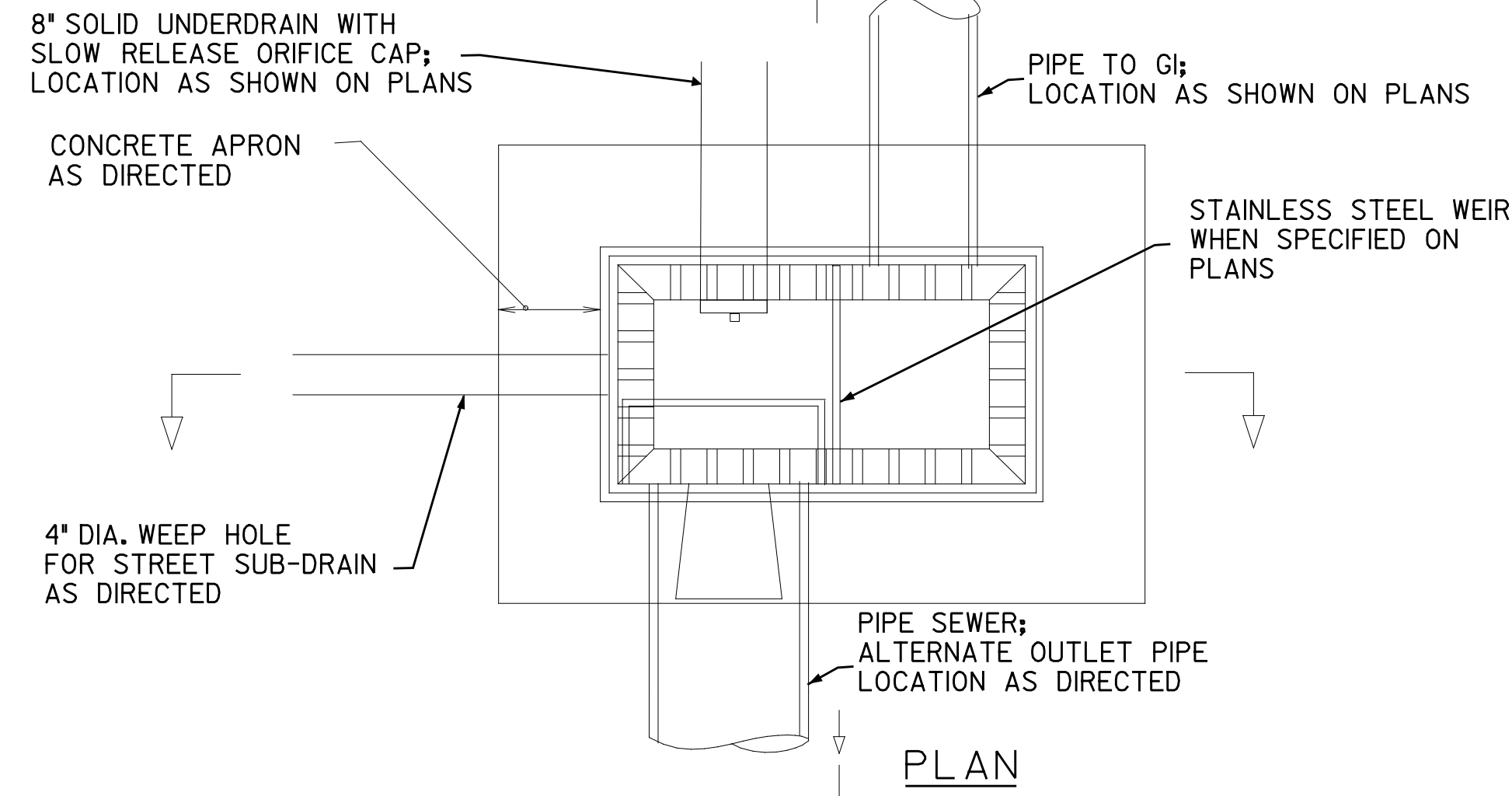
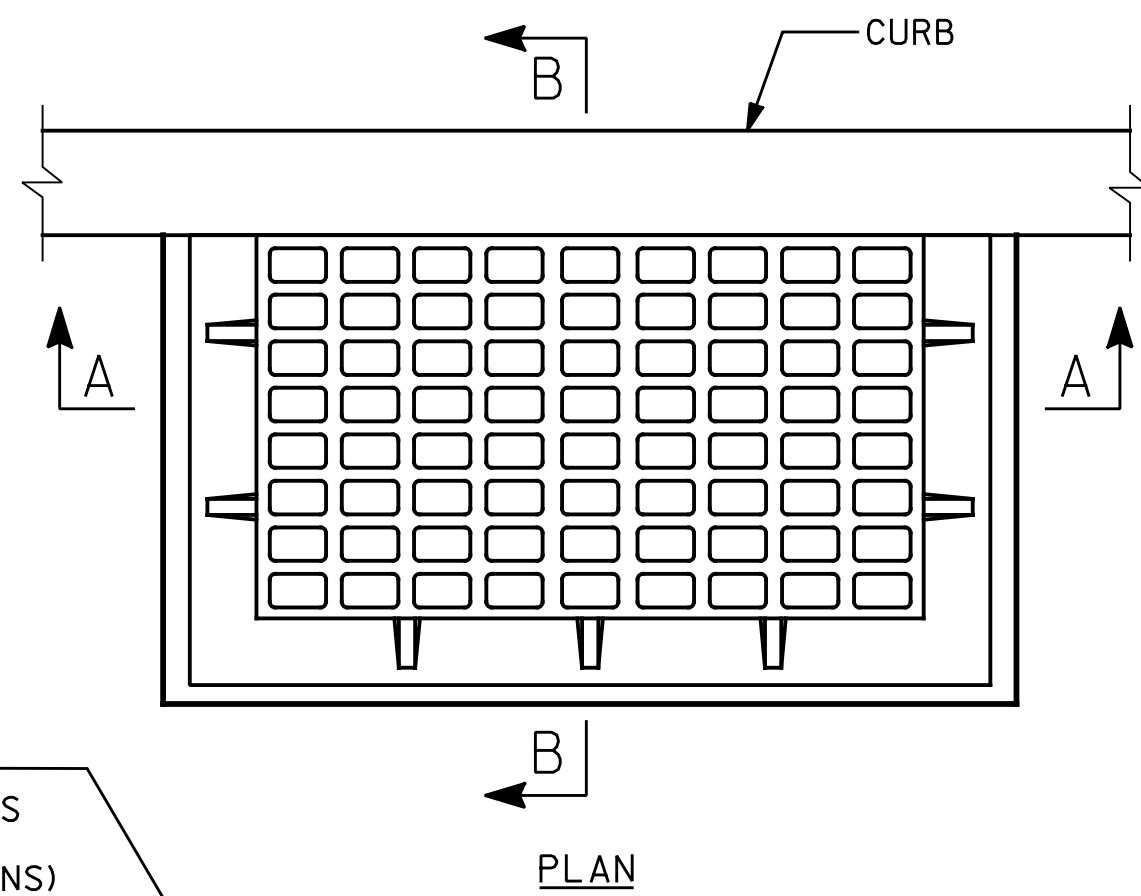
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<b>PORT AUTHORITY OF ALLEGHENY COUNTY</b> PITTSBURGH PENNSYLVANIA	
<b>BUS RAPID TRANSIT UPTOWN TO OAKLAND</b> STORMWATER MANAGEMENT PLANS KEY PLAN	
<b>Port Authority</b> <small>connecting people to life</small>	CONTRACT NO. BRT-001
DWG. NO. SWM3	SHT. 3



PLOTTED: \$DATE\$ \$TIME\$

1/4" THICK STAINLESS STEEL WEIR WITH ORIFICE AND DEBRIS SCREEN WHEN SPECIFIED ON PLANS (SIZE AND EL. PER PLANS) ATTACH TO CONCRETE WALL W/ L-BRACKETS AND BOLTS; PROVIDE WATERTIGHT SEAL AT WEIR EDGE



- NOTES:
- CONSTRUCTION SHALL BE PER PWSA SPECIFICATION SECTION 02630.
  - ALL OUTSIDE JOINTS TO BE STRUCK FLUSH.
  - CHAMFER ALL EXPOSED EDGES 1" MINIMUM.
  - PRECAST INLETS PERMITTED, BUT MUST BE SUBMITTED FOR APPROVAL BEFORE CONSTRUCTION.
  - TYPICAL CATCH BASIN DEPTH IS 6' FROM BOX FLOOR TO TOP OF BOX WALL. SEE STRUCTURE TABLES FOR RIM AND BOTTOM ELEVATIONS.
  - HOOD AND TRAP MUST BE SEALED TO CATCH BASIN WALL AS DIRECTED.

GREEN INFRASTRUCTURE (GI) CONTROL STRUCTURE (PWSA TYPE 13 CATCH BASIN)  
NOT TO SCALE

GREEN INFRASTRUCTURE (GI) CONTROL STRUCTURE  
(PWSA TYPE 5 STORM/CATCH BASIN)  
NOT TO SCALE

[SEE BRT PLAN SET FOR ROADWAY DRAWINGS]

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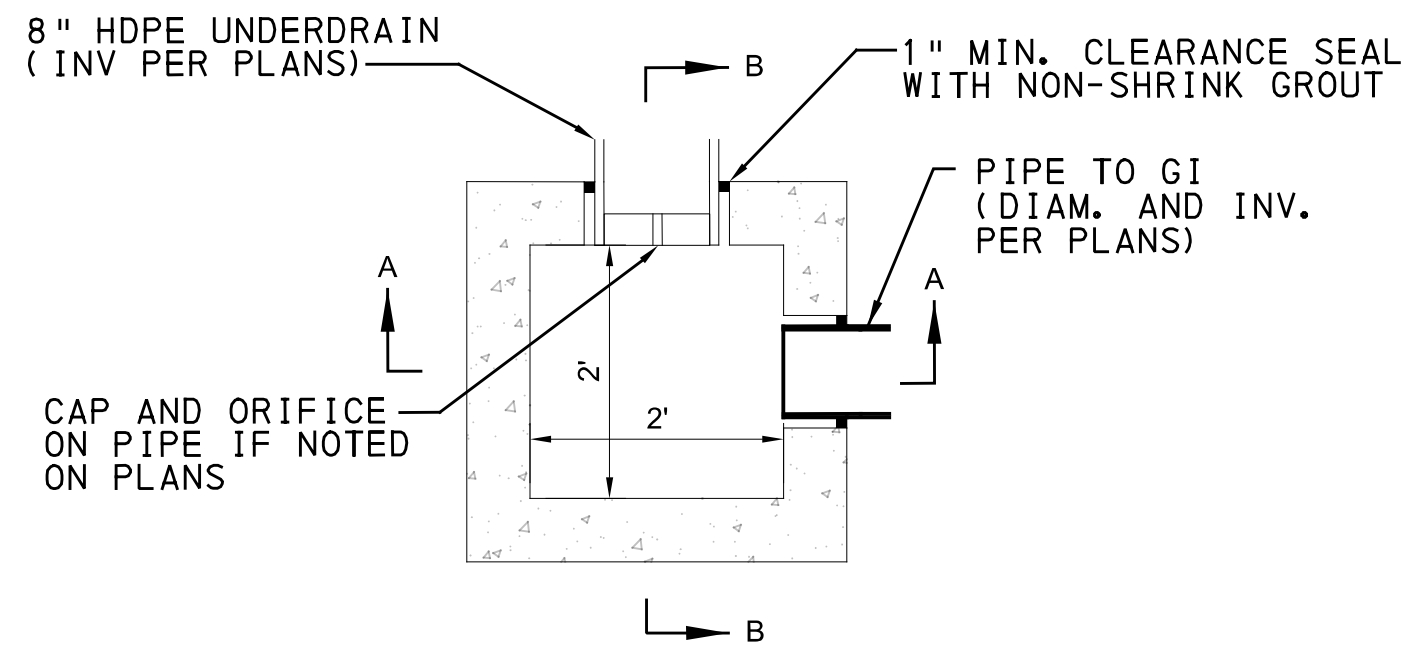
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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA  
**BUS RAPID TRANSIT UPTOWN TO OAKLAND**  
STORMWATER MANAGEMENT PLANS  
GI DETAILS

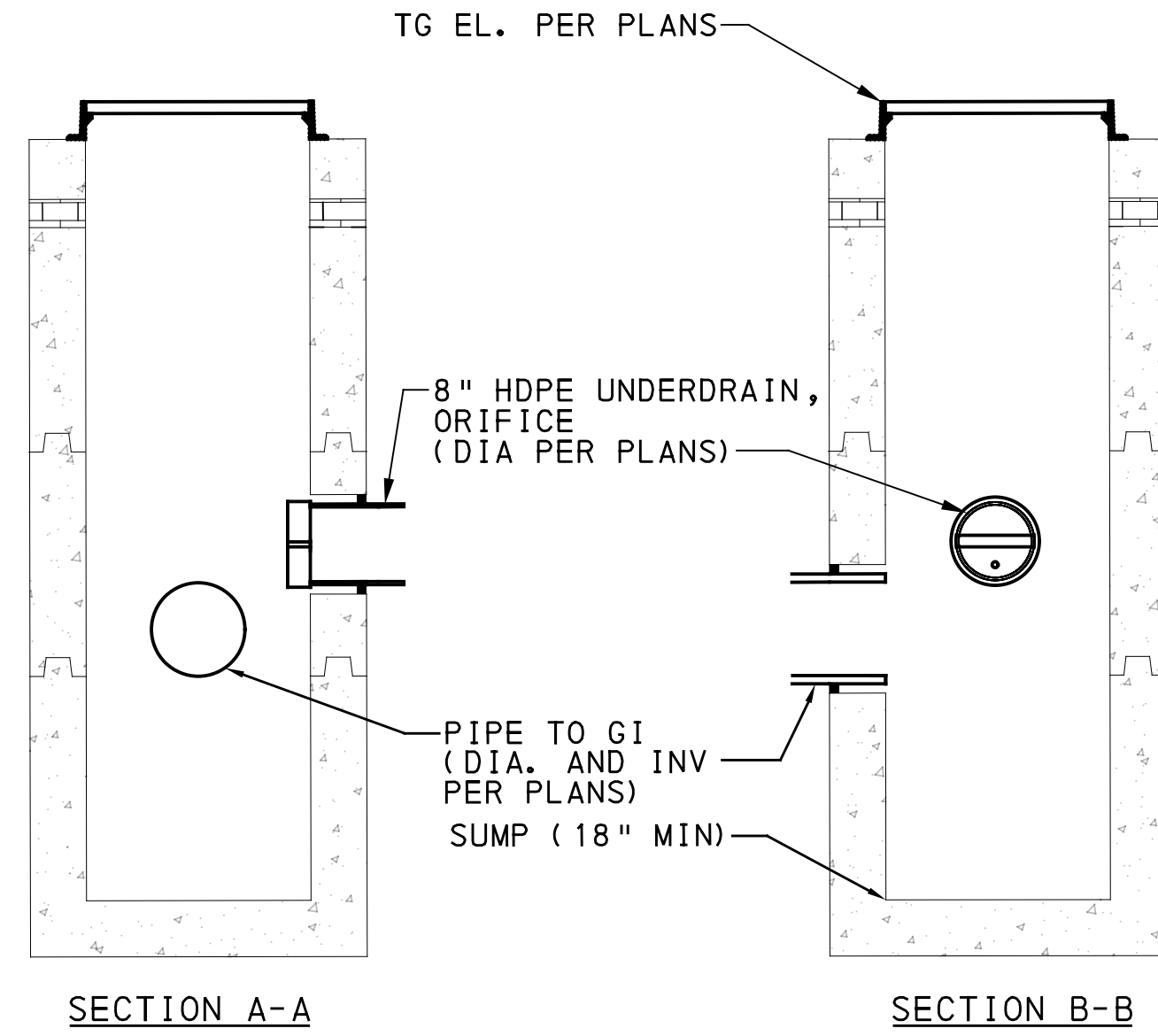
**Port Authority** connecting people to life®  
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DWG. NO. SWM4 SHT. 4

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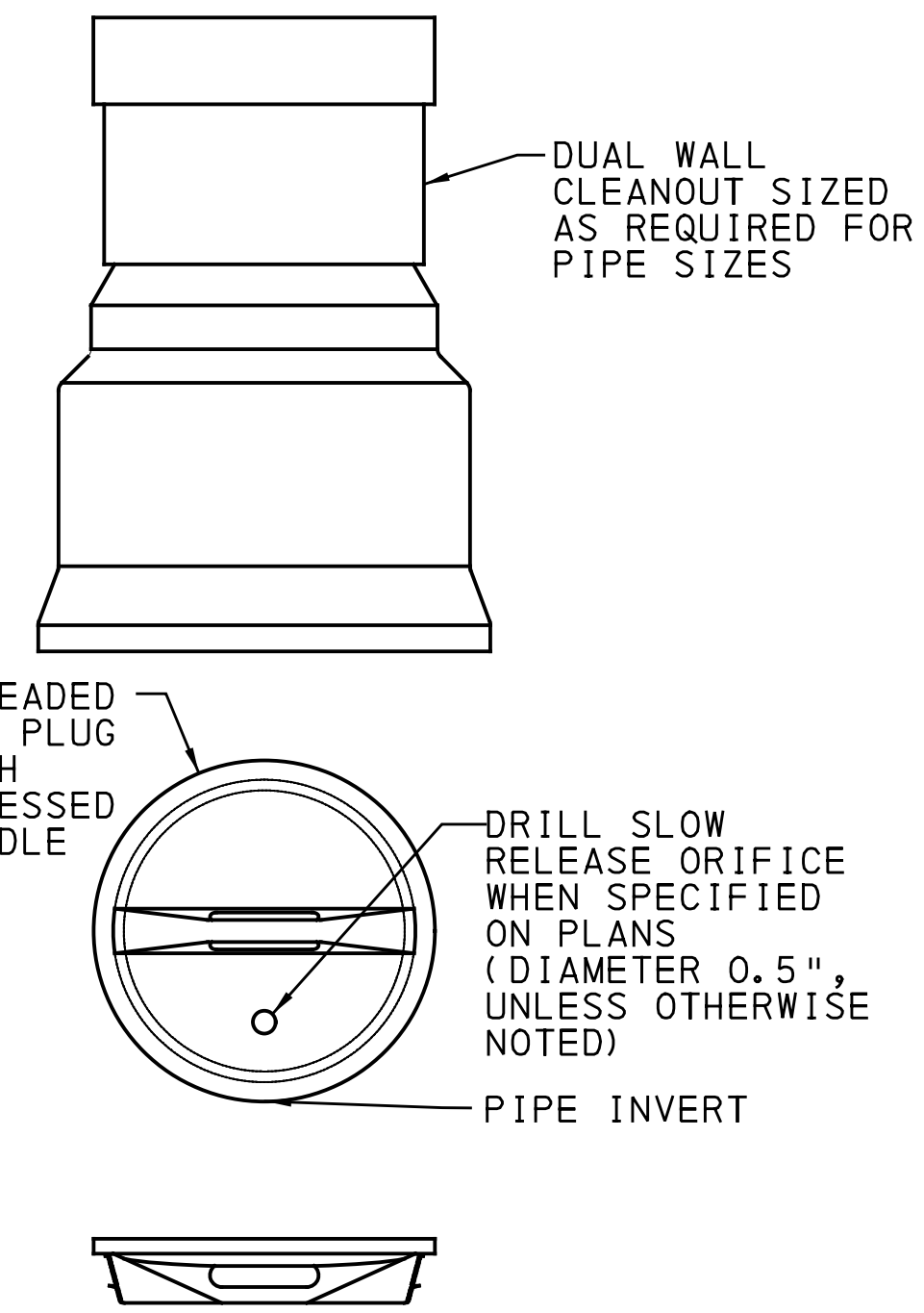
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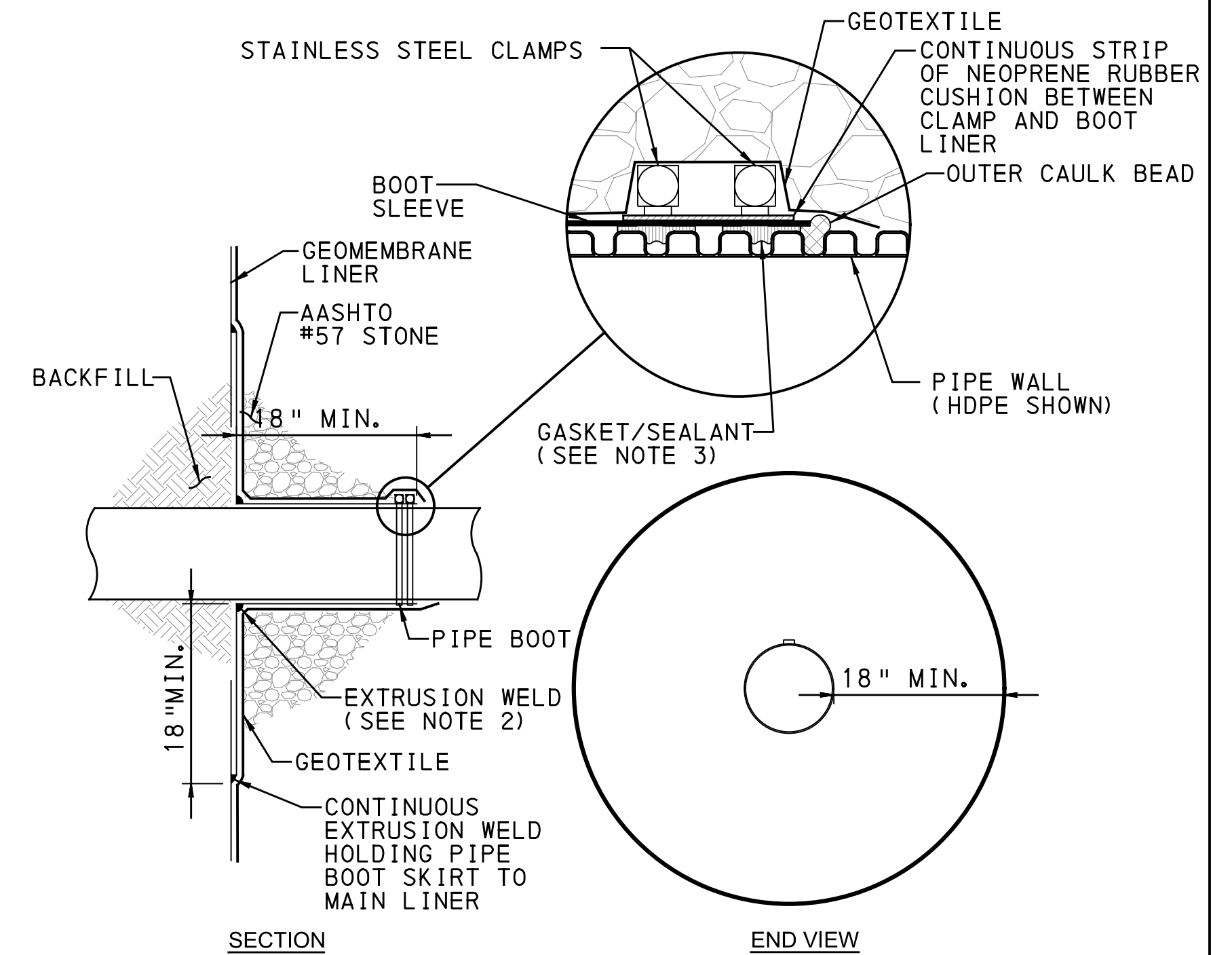
- NOTES:
1. 2' X 2' JUNCTION BOX WITH LOCKABLE STEEL FRAME AND HS-20 COVER OR GRATE; SEE PLANS AND SPECIFICATIONS.
  2. INLET / OUTLET PIPES TO BE LOCATED AS INDICATED ON PLANS.
  3. TOTAL EXTENSION OF PIPE AND CAP ASSEMBLY INTO INLET TO BE 0'-3" FROM INLET WALL TO END OF CAP.



2' X 2' PRECAST CONCRETE INLET  
NOT TO SCALE

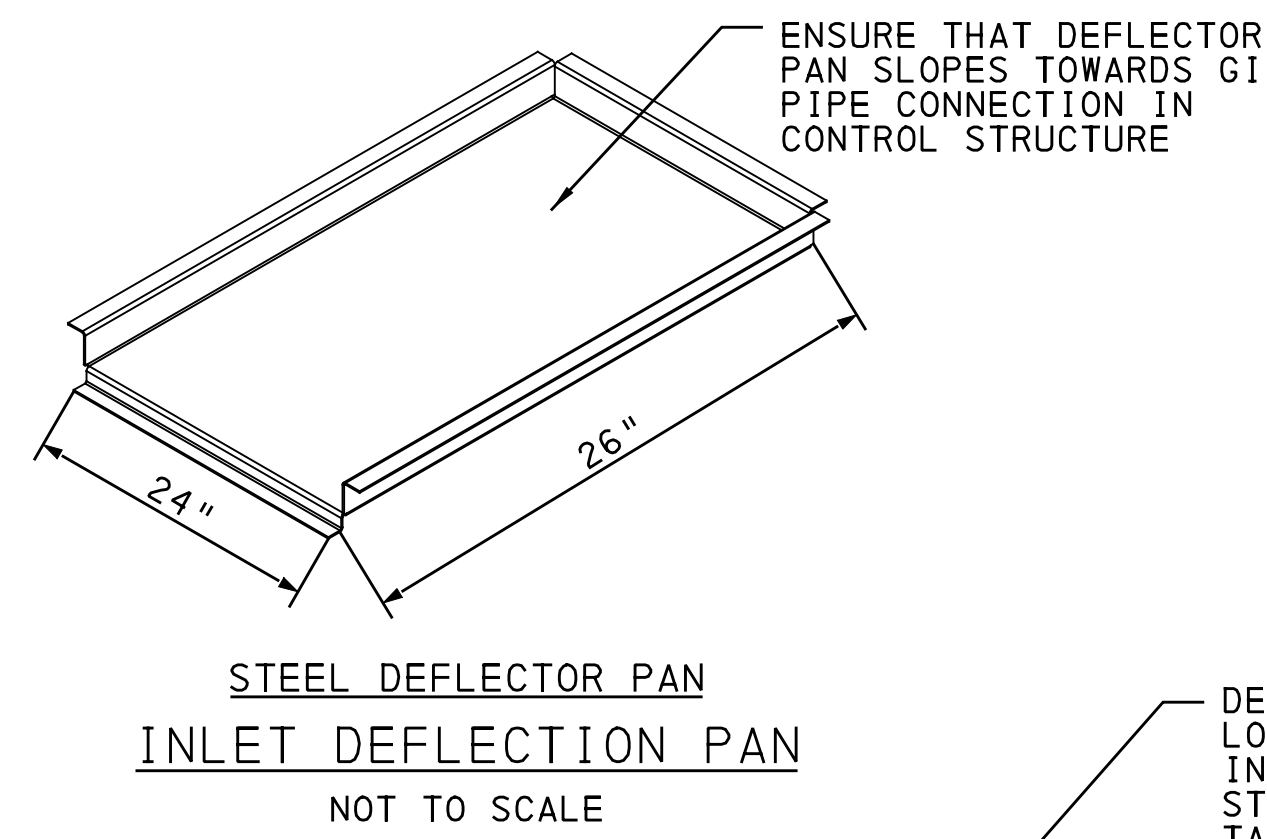


SLOW RELEASE ORIFICE CAP  
NOT TO SCALE

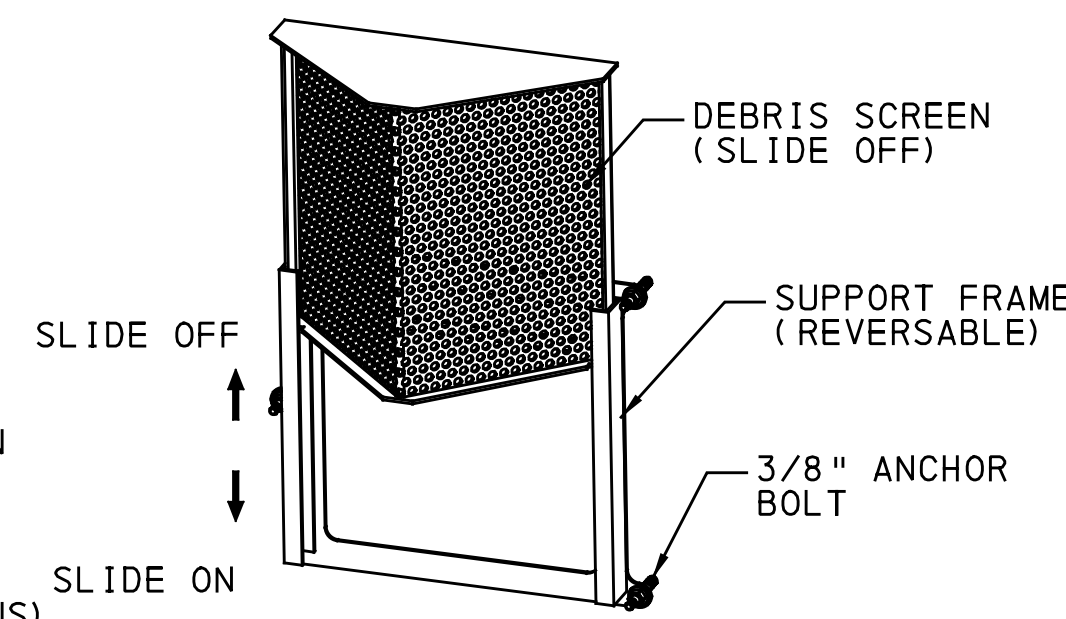


- NOTES:
1. THIS DETAIL APPLIES TO ALL PIPE PENETRATIONS THROUGH GEOMEMBRANE LINER. SEE PLANS FOR LOCATION, PIPE SIZE, PIPE MATERIAL, AND PIPE ANGLE.
  2. WELD CONNECTING PIPE BOOT TO SKIRT NOT NECESSARY IF PREFABRICATED.
  3. FOR CORRUGATED PIPE, INSERT PIPE ADAPTERS TO CREATE SMOOTH SURFACE FOR CLAMPS.

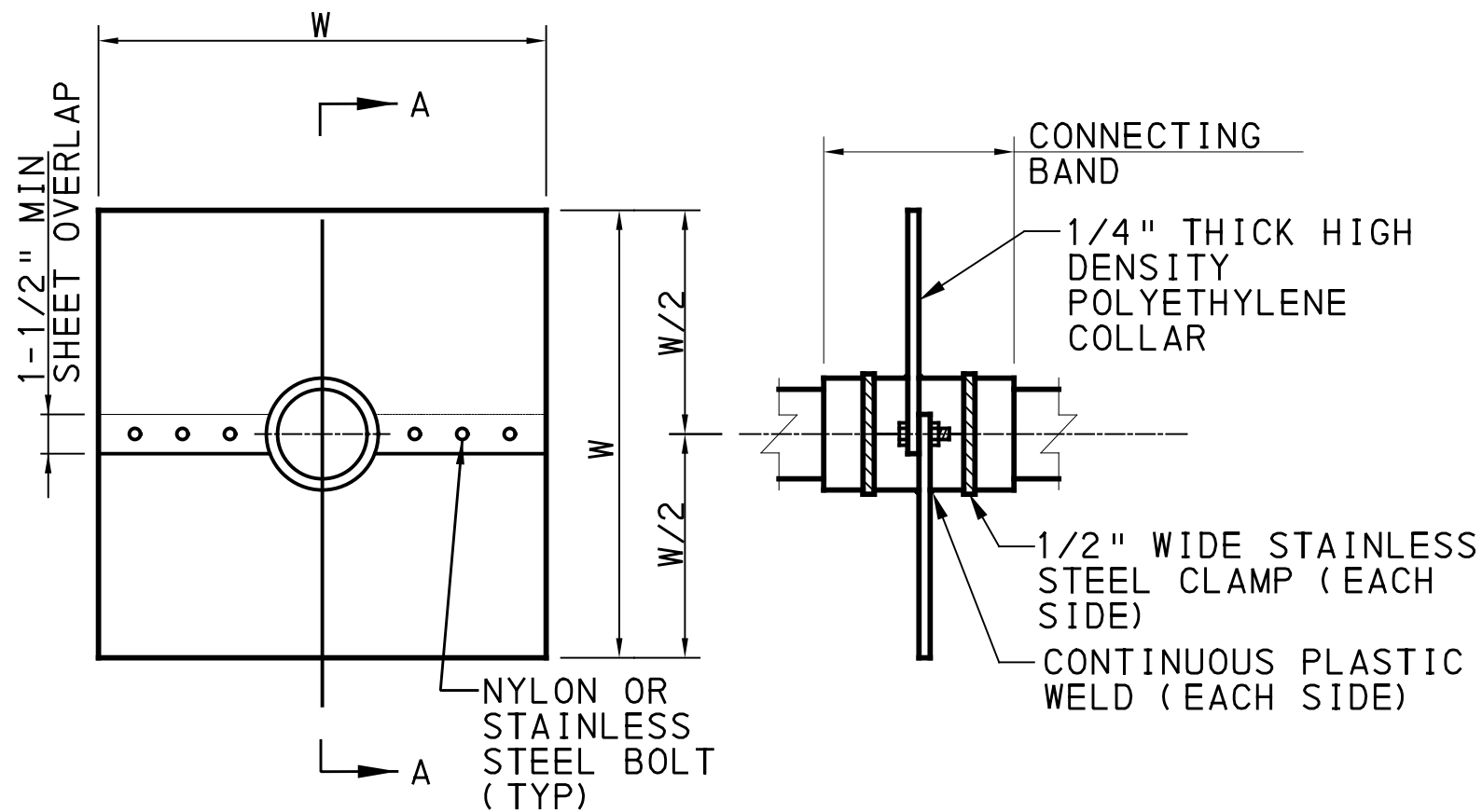
GEOMEMBRANE PIPE PENETRATION  
NOT TO SCALE



STEEL DEFLECTOR PAN  
INLET DEFLECTION PAN  
NOT TO SCALE

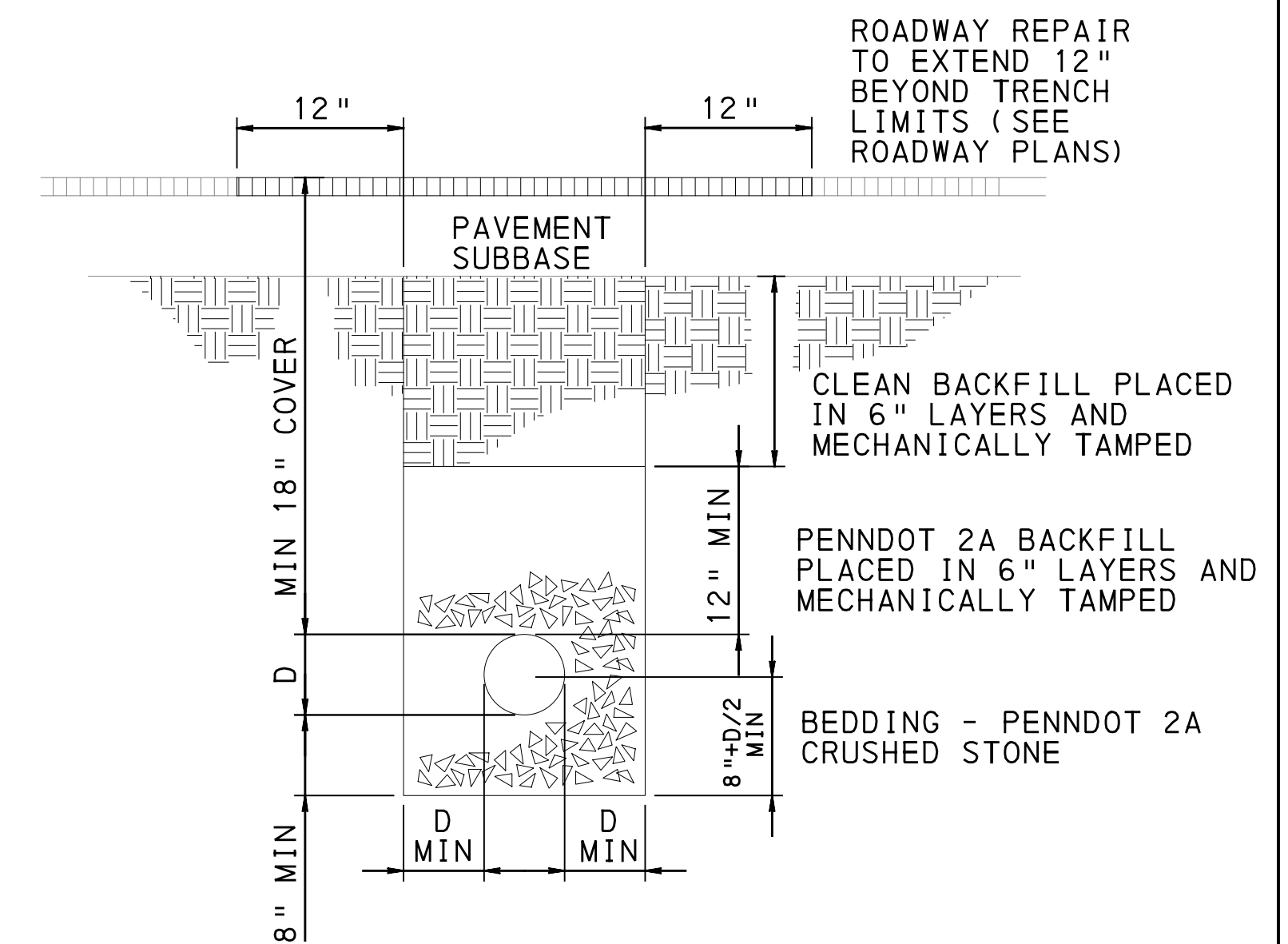


PIPE TRASH GUARD  
NOT TO SCALE



- UPSTREAM ELEVATION SECTION A-A
- NOTES:
1. DIMENSION "W" SHALL BE THREE TIMES THE DIAMETER OF THE INTERSECTING PIPE.
  2. CONNECTING BAND SHALL BE SEALED AT BOTH ENDS WITH NON-SHRINK GROUT.
  3. COLLAR MATERIAL SHALL BE RIGID POLYETHYLENE SHEET MATERIAL.
  4. STAINLESS STEEL SHALL BE GRADE 304 OR BETTER.
  5. AS MANUFACTURED BY LANE ENTERPRISES, OR APPROVED EQUAL. TO BE INSTALLED PER MANUFACTURERS RECOMMENDATIONS.

ANTI-SEEP COLLAR  
NOT TO SCALE



SOLID STORM PIPE TRENCHING  
(UNDER PAVEMENT)  
NOT TO SCALE

[SEE BRT PLAN SET FOR ROADWAY DRAWINGS]

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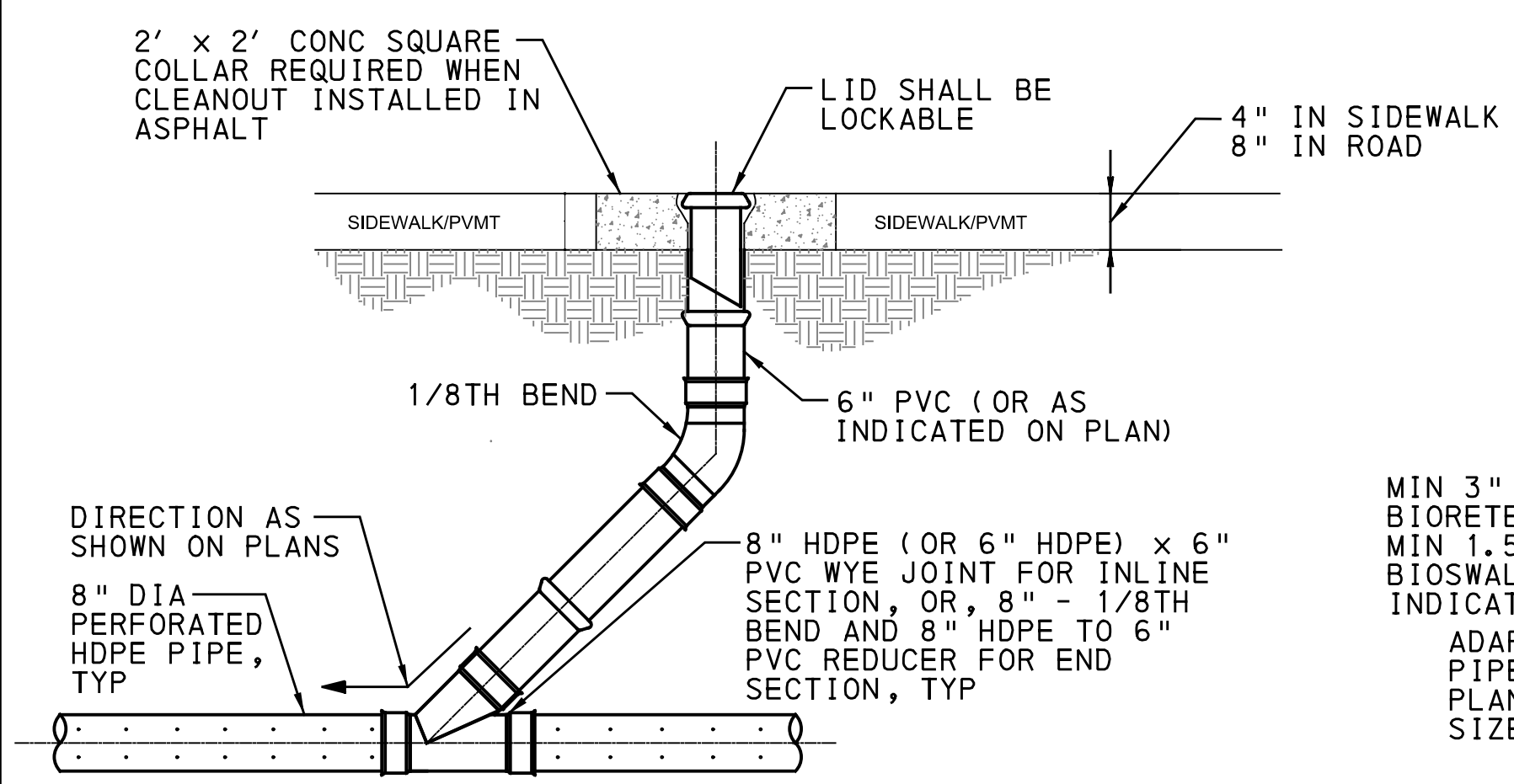
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<b>PORT AUTHORITY OF ALLEGHENY COUNTY</b> PITTSBURGH PENNSYLVANIA		
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<b>Port Authority</b> <small>connecting people to life</small>	CONTRACT NO. BRT-001	
	DWG. NO. SWM5	SHT. 5



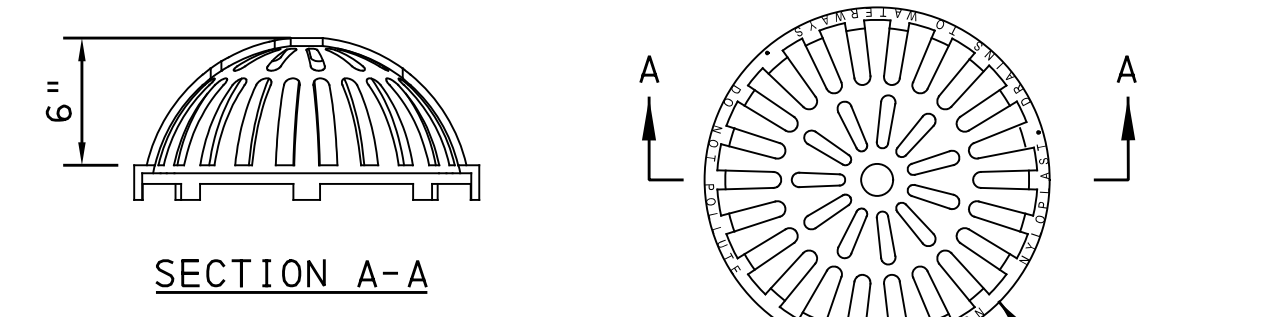
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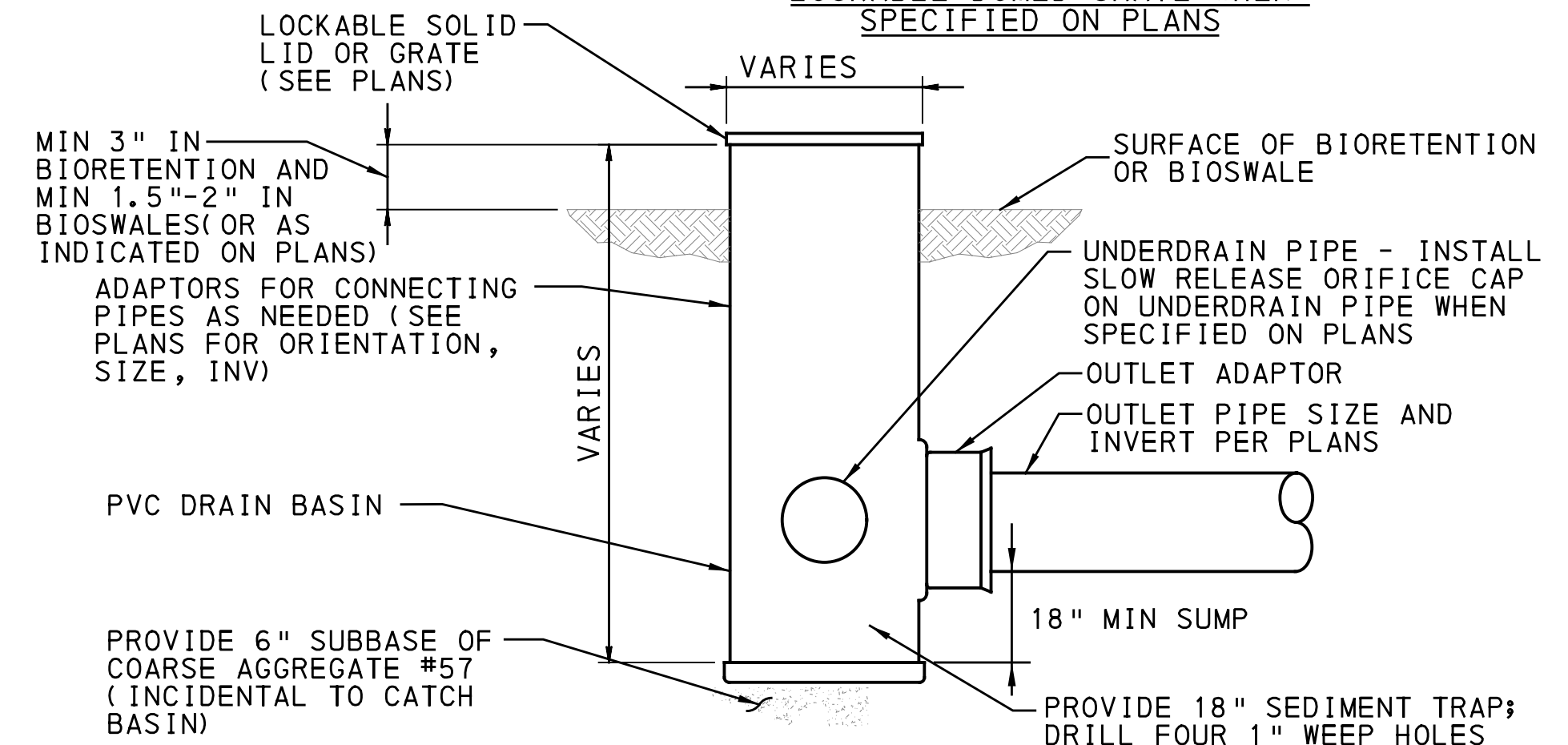
NOTES:  
1. INSTALL HEAVY DUTY GRATE ON CLEANOUT IN PAVED AREAS.  
2. ALL STEEL (LIDS) SHALL BE DOCUMENTED MADE IN THE USA

**CLEANOUT, SOLID LID IN PAVED AREAS AND SOLID LID IN NON-PAVED AREAS**

NOT TO SCALE



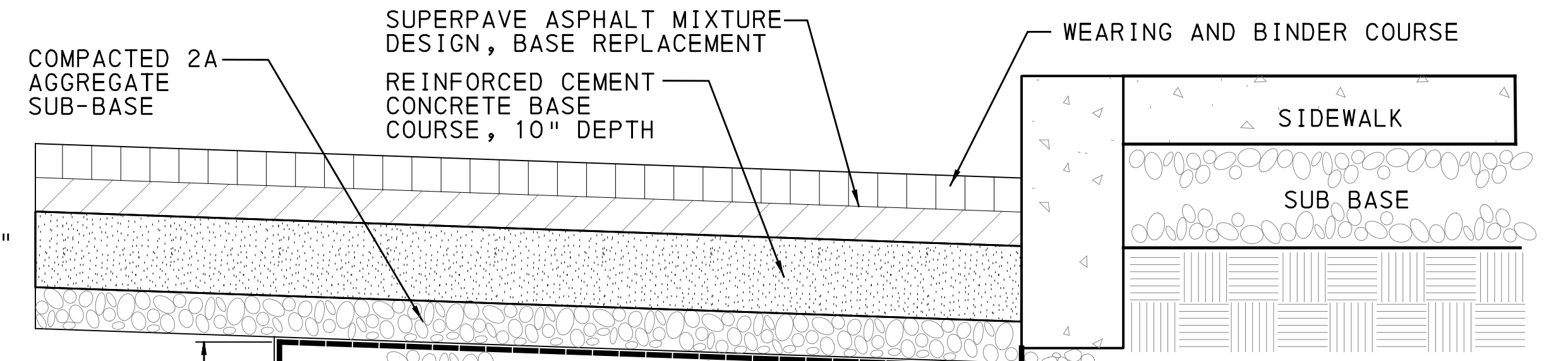
**LOCKABLE DOMED GRATE WHEN SPECIFIED ON PLANS**



NOTES:  
1. BASE AND BACKFILL SHALL BE HAND PLACED AND TAMPED IN 6" LIFTS. PLACE ALL CATCH BASINS ON 6" THICK AGGREGATE LEVELING COURSE ON COMPACTED SUBGRADE.  
2. SEE PLANS FOR RIM AND INVERT ELEVATIONS.

**PVC STORMWATER DRAIN BASIN**

NOT TO SCALE



PLACE NON-WOVEN GEOTEXTILE ALONG TOP, BOTTOM, AND VERTICAL SIDES OR TRENCH OR 30 MIL IMPERMEABLE LINER ON BOTTOM AND VERTICAL SIDES WHEN TRENCH IS SPECIFIED TO BE LINED

DETECTABLE UNDERGROUND UTILITY WARNING TAPE ALONG OUTSIDE PERIMETER OF STORMWATER TRENCH, MAX. DEPTH 18"

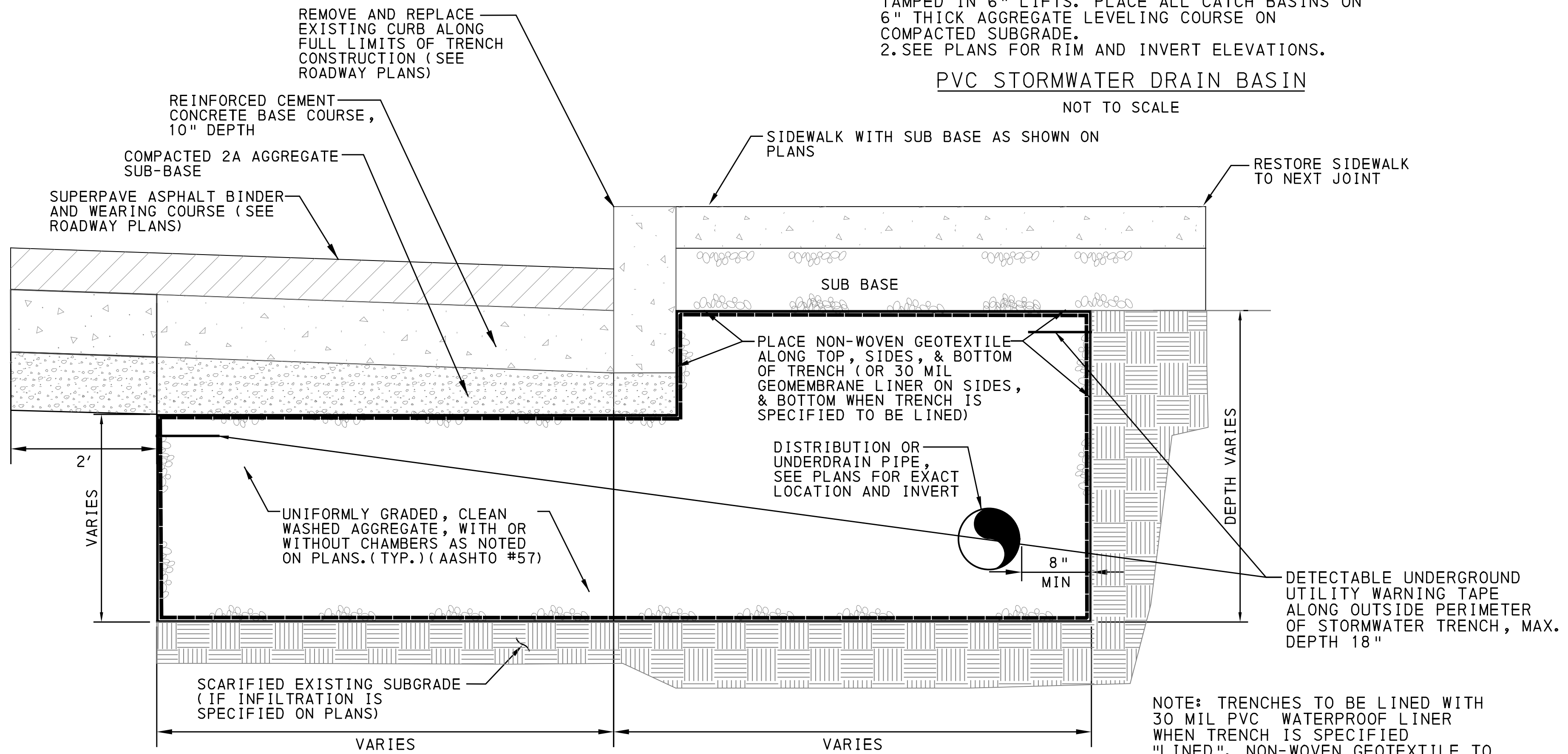
PERFORATED HDPE PIPE AND FITTINGS, 8" SEE DRAWINGS FOR EXACT LOCATION, PIPE SIZE, AND INVERT.

COARSE AGGREGATE (AASHTO #57) CLEAN WASHED

NOTE: TRENCHES TO BE LINED WITH 40 MIL PVC WATERPROOF LINER WHEN TRENCH IS SPECIFIED "LINED". NON-WOVEN GEOTEXTILE TO BE INSTALLED WHEN TRENCH IS SPECIFIED "UNLINED".

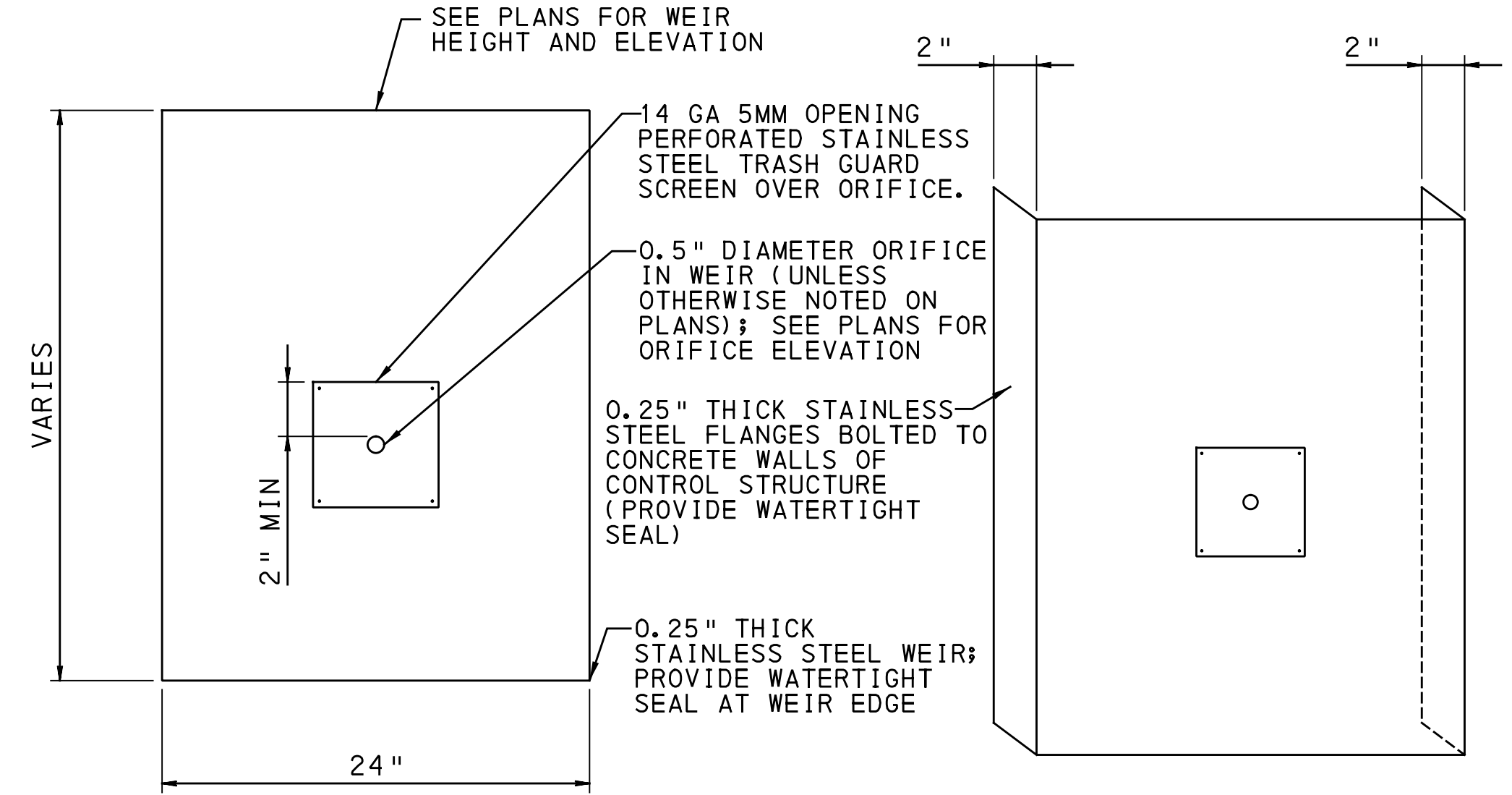
**TYPICAL STONE STORAGE TRENCH UNDER STREET (NO CHAMBERS) - SECTION**

NOT TO SCALE



**TYPICAL STORMWATER TRENCH UNDER SIDEWALK AND STREET**

NOT TO SCALE



NOTE: ALL SCREWS, NUTS, AND BOLTS SHALL BE STAINLESS STEEL UNLESS OTHERWISE SPECIFIED.

**SS WEIR WITH ORIFICE AND TRASH SCREEN**

NOT TO SCALE

SEE BRT PLAN SET FOR ROADWAY DRAWINGS



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Pittsburgh, PA 15219



1550 Coraopolis Heights Road,  
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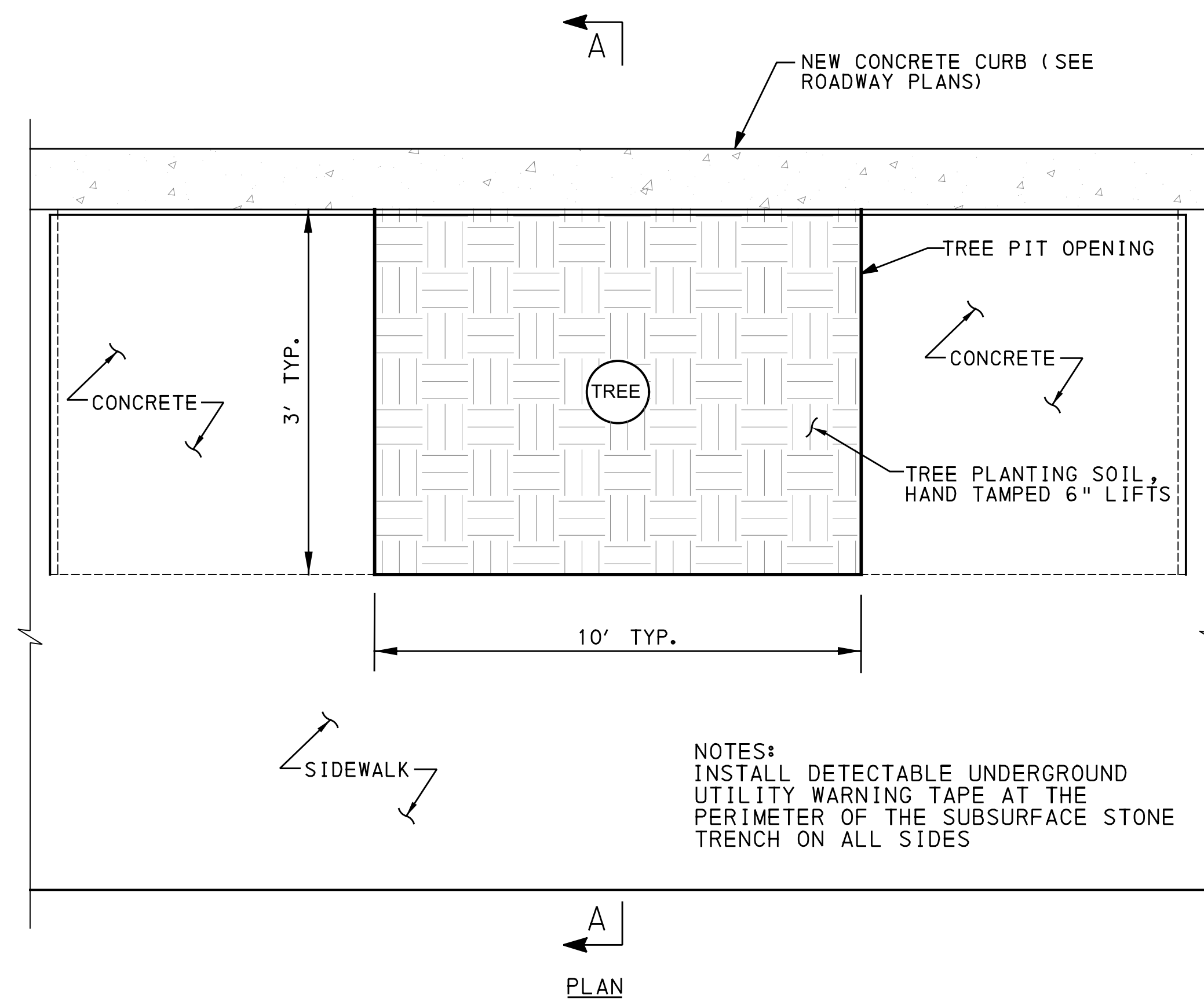
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CHECKED	DPW
IN CHARGE	ALP
DATE	05/01/24
SCALE	AS SHOWN
SIGNATURE	APPROVED
	DATE

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SCALE	AS SHOWN

PORT AUTHORITY OF ALLEGHENY COUNTY PITTSBURGH PENNSYLVANIA	
BUS RAPID TRANSIT UPTOWN TO OAKLAND STORMWATER MANAGEMENT PLANS GI DETAILS	
Port Authority connecting people to life	CONTRACT NO. BRT-001
DWG. NO. SWM6	SHT. 6

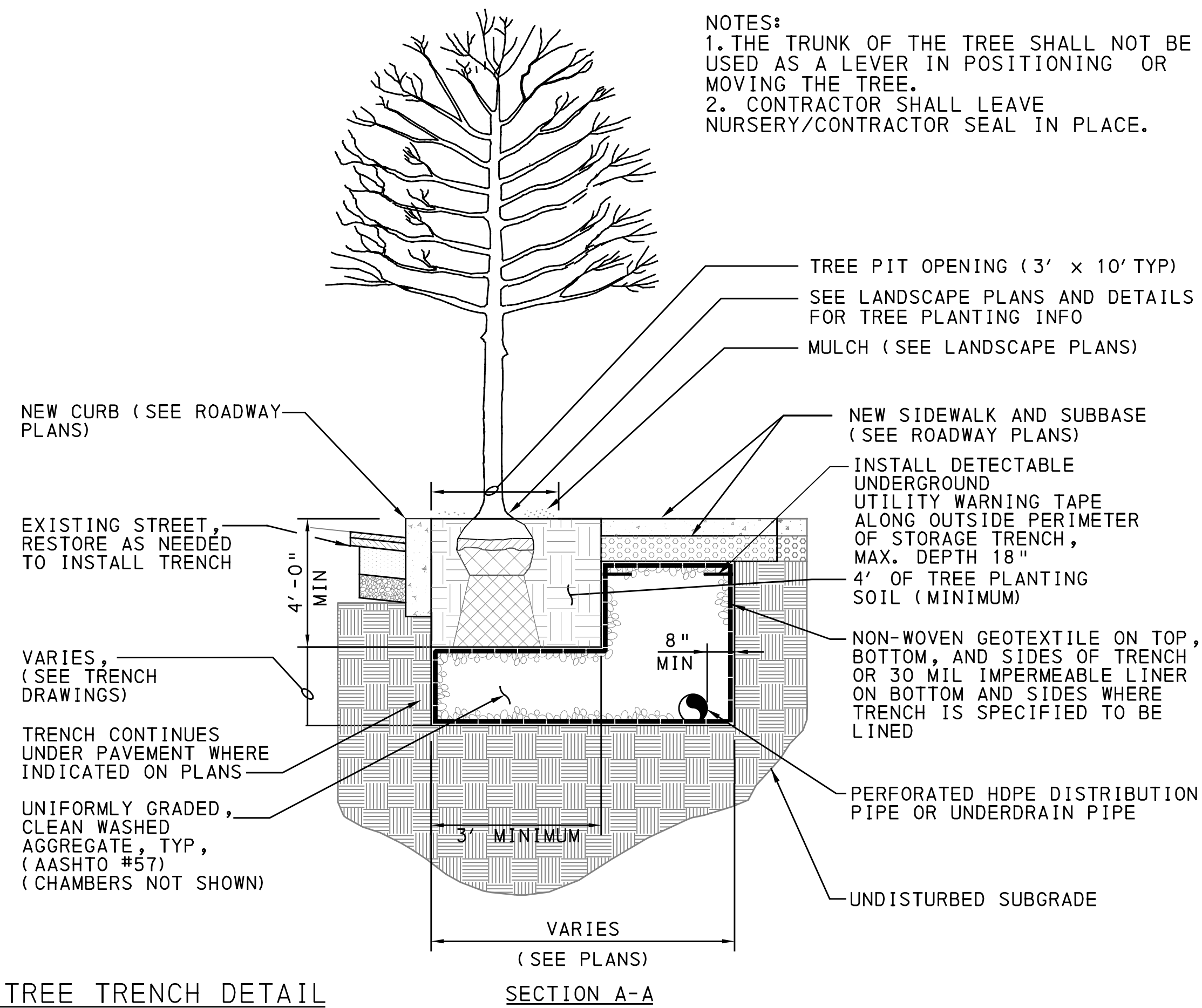
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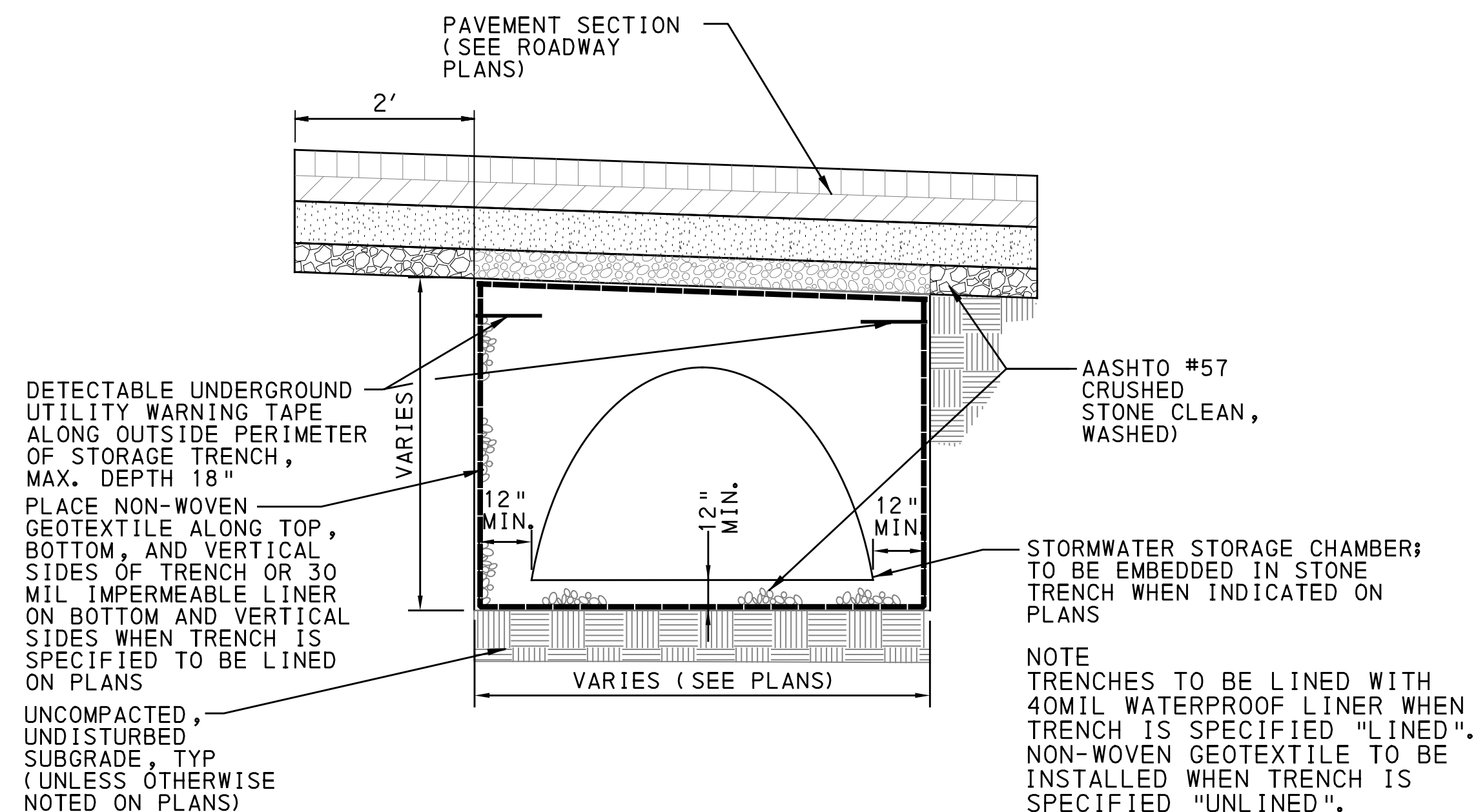
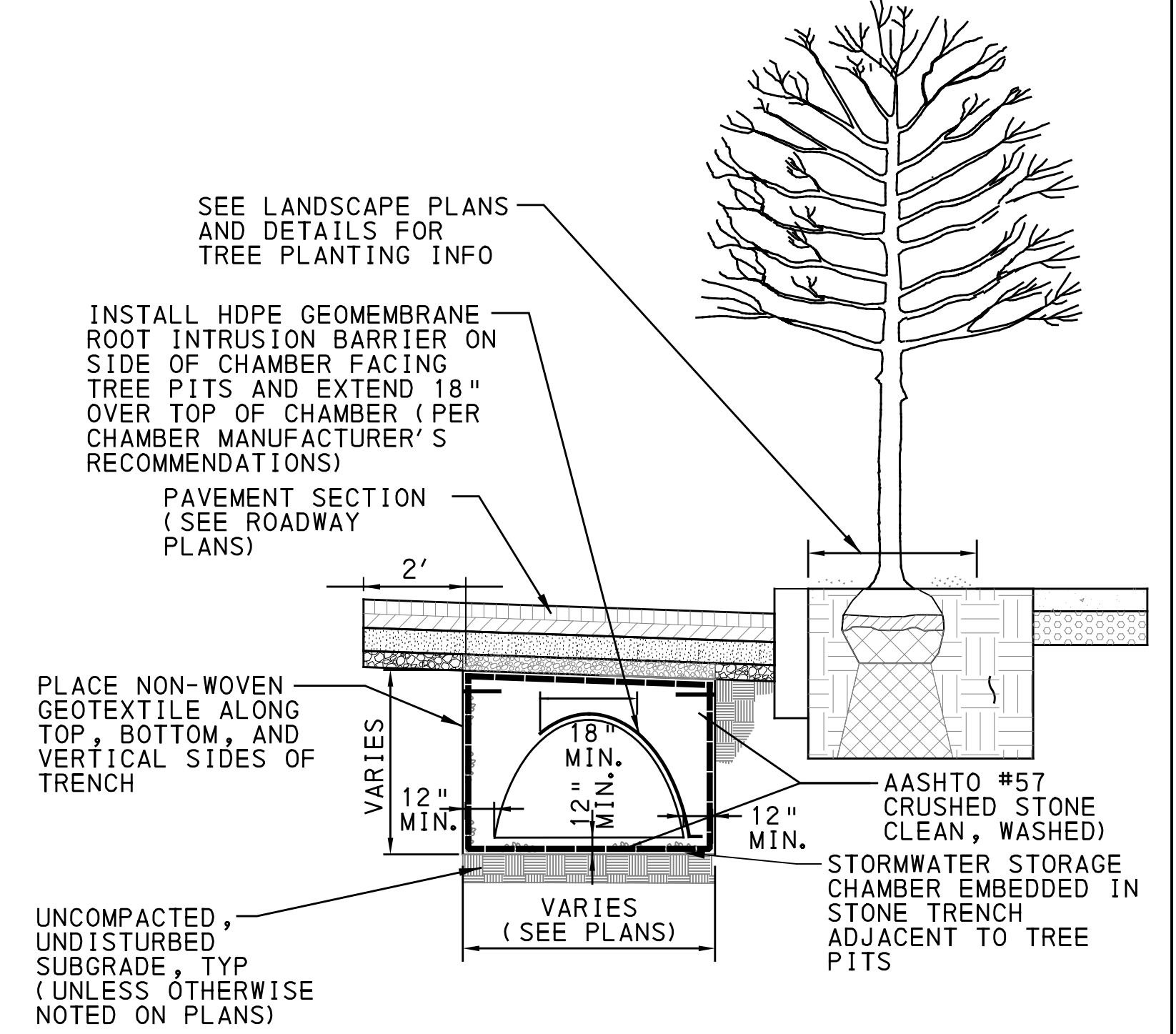
TYPICAL TREE TRENCH DETAIL

NOT TO SCALE



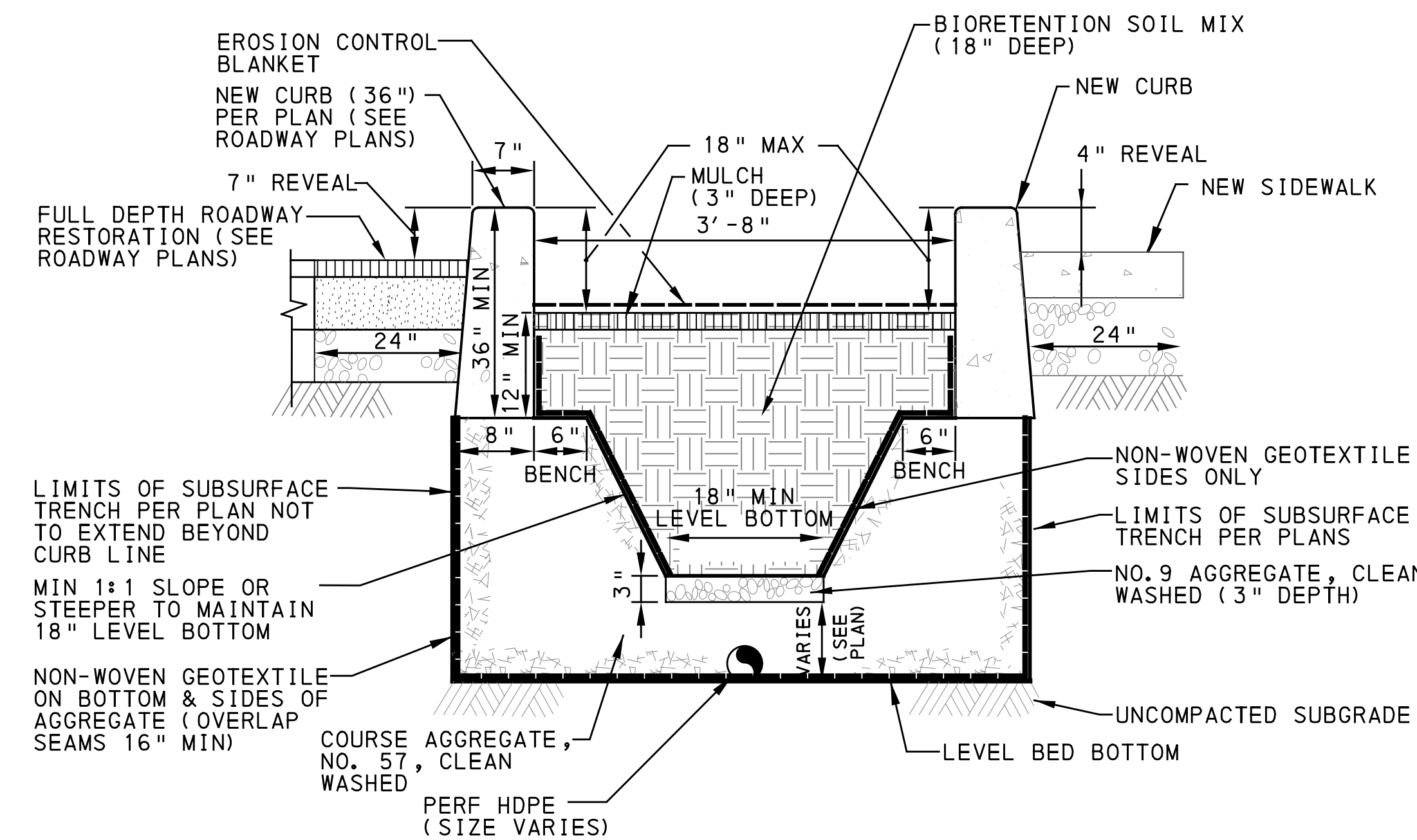
GEOMEMBRANE (HDPE) ROOT INTRUSION BARRIER INSTALLATION DETAIL FOR UNLINED STORAGE TRENCHES AND TREE TRENCHES

NOT TO SCALE



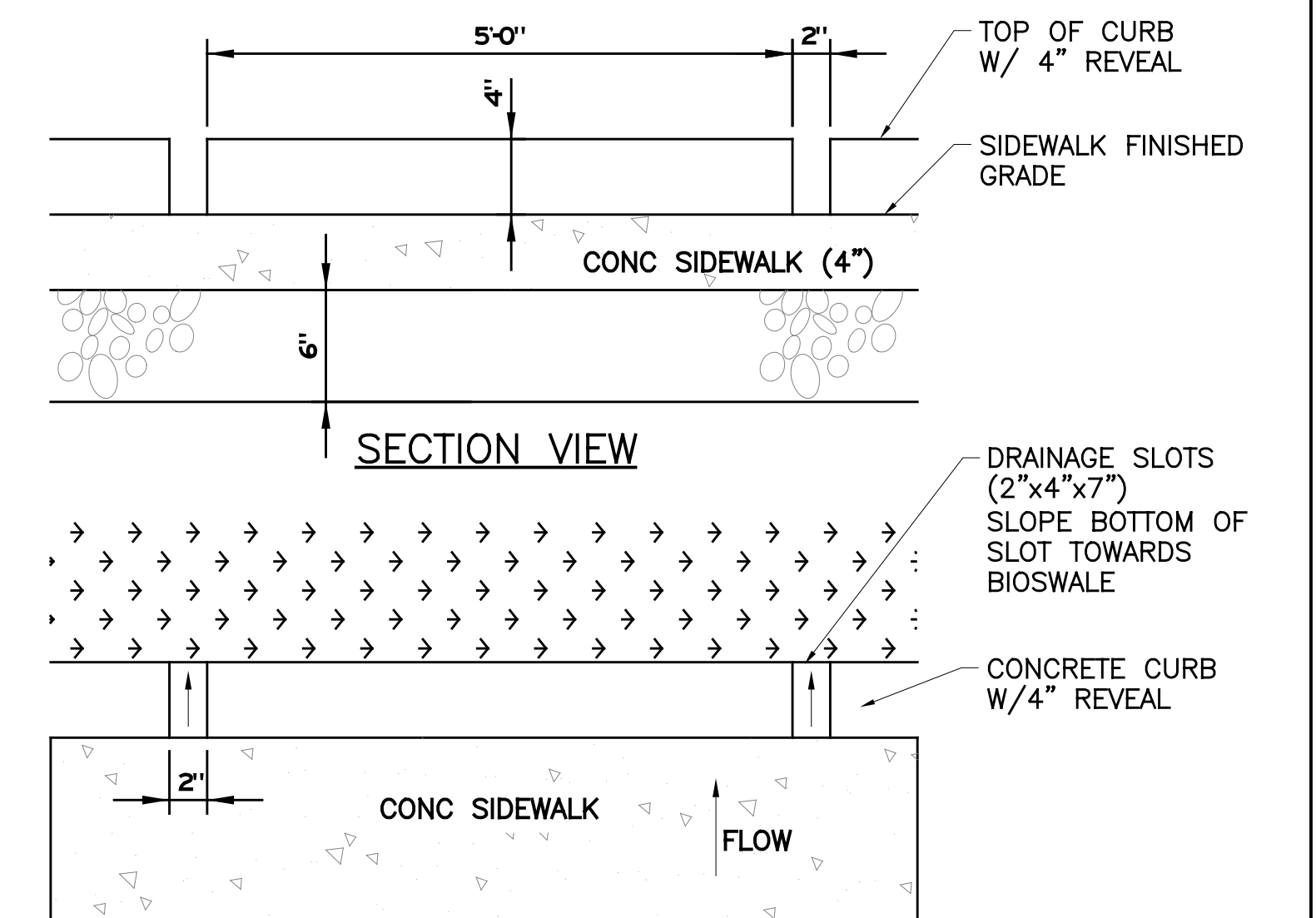
TYPICAL CHAMBER AND STONE STORAGE TRENCH UNDER STREET - SECTION

NOT TO SCALE



BIORETENTION (BR-A1) SECTION

NOT TO SCALE



DRAINAGE SLOTS AT BIOSWALES

NOT TO SCALE

[SEE BRT PLAN SET FOR ROADWAY DRAWINGS]

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SIGNATURE

APPROVED

DATE

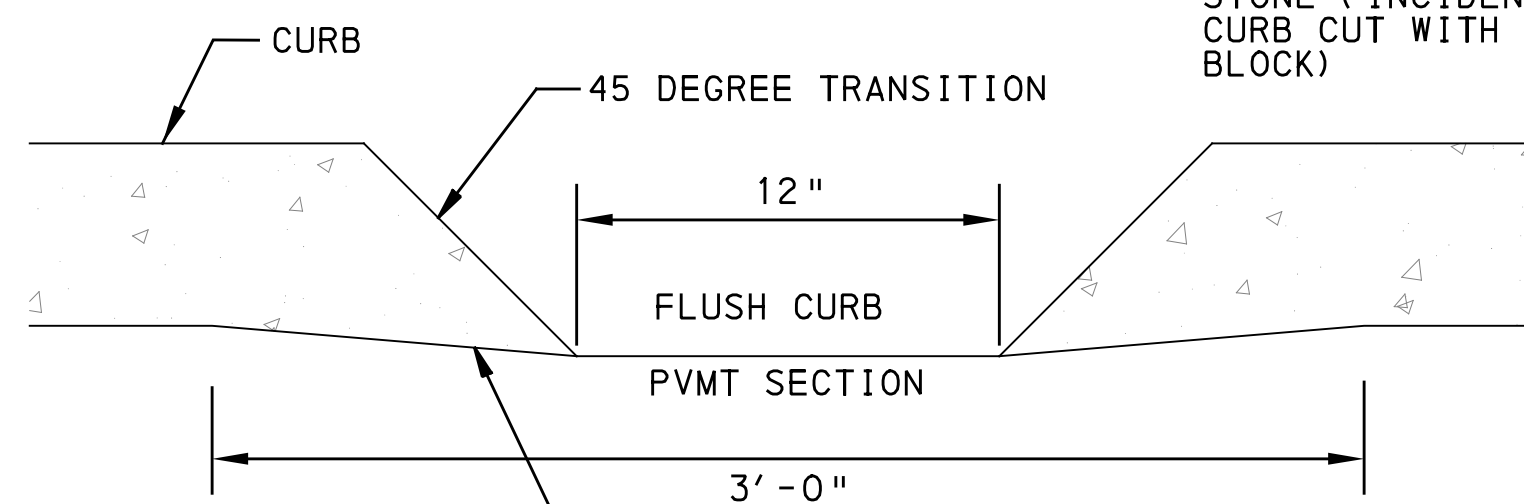
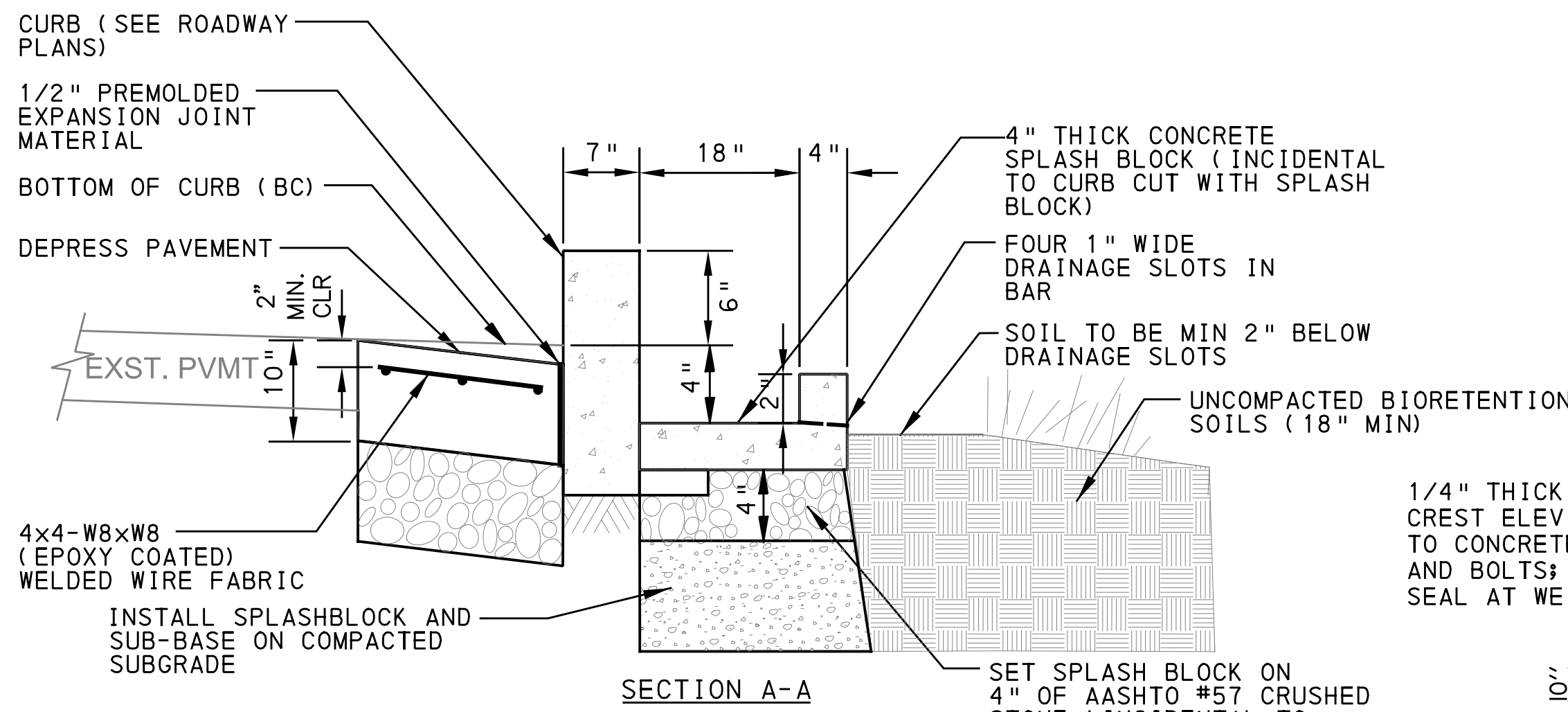
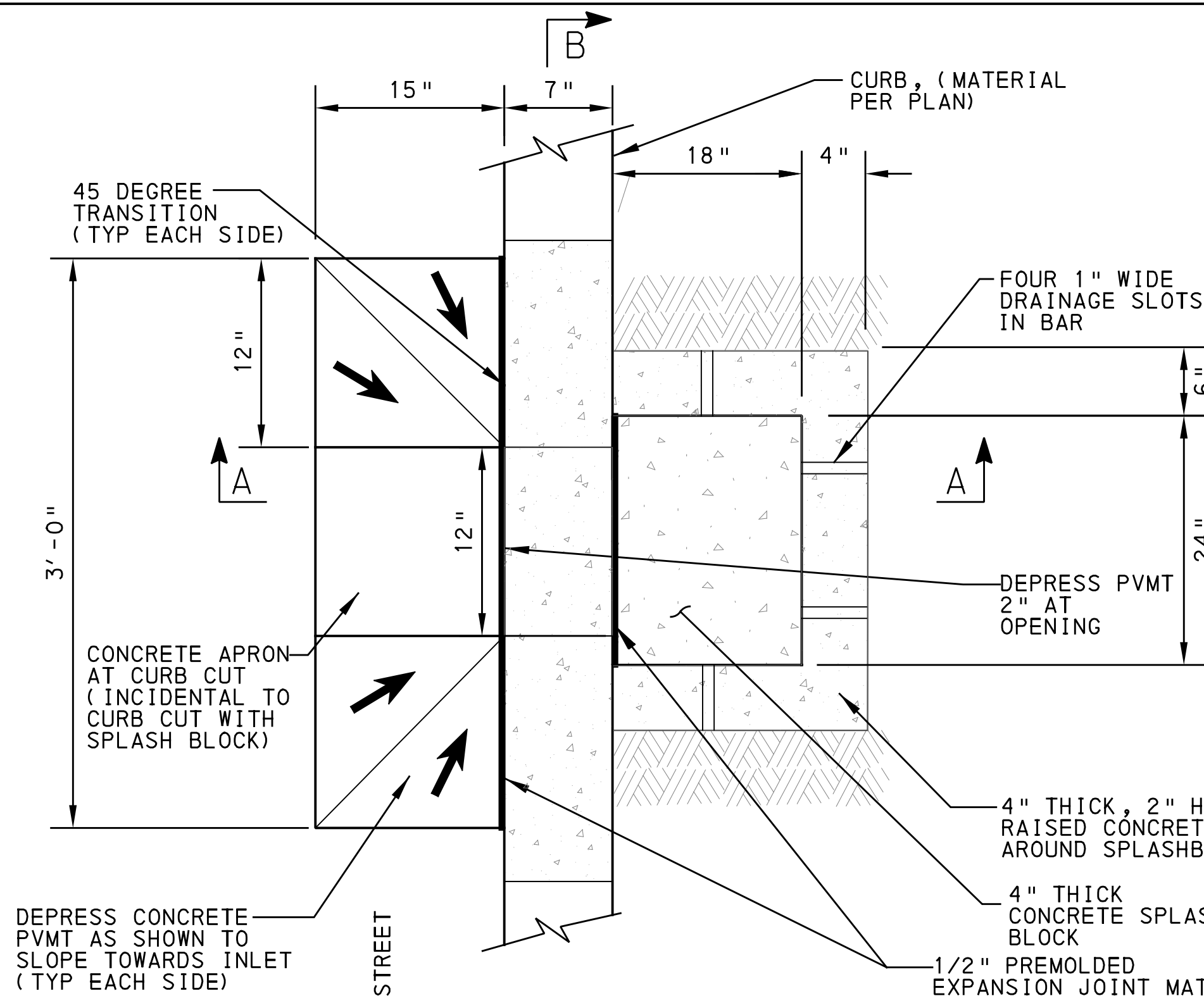
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PORT AUTHORITY OF ALLEGHENY COUNTY PITTSBURGH PENNSYLVANIA	
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Port Authority connecting people to life	CONTRACT NO. BRT-001
	DWG. NO. SWM7
	SHT. 7

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**CURB CUT AND SPLASH BLOCK**

NOT TO SCALE

NOTE:  
1. SEE PLANS FOR LOCATIONS OF CURB CUT AND SPLASH BLOCK.

2" DRAINAGE SLOT EVERY 5' ALONG SIDEWALK (SEE DETAIL, TYP.)

PWSA INLET OR PVC CATCH BASIN (SEE PLANS)

INTEGRATED INLET

SURFACE FLOW

PLAN

NEW SIDEWALK, SEE ROADWAY PLANS

NEW CURB (SEE ROADWAY PLANS)

GRADE TO LEVEL SURFACE; OR AS NOTED ON BIOSWALE GRADING PLANS

12" CURB CUT WITH SPLASH BLOCK AND CONCRETE APRON

SOIL/ MULCH SURFACE EL. PER PLANS

PWSA INLET OR PVC DRAIN BASIN 3" MIN ABOVE SOIL/ MULCH SURFACE UNLESS OTHERWISE NOTED

CONC SIDEWALK SUB-BASE

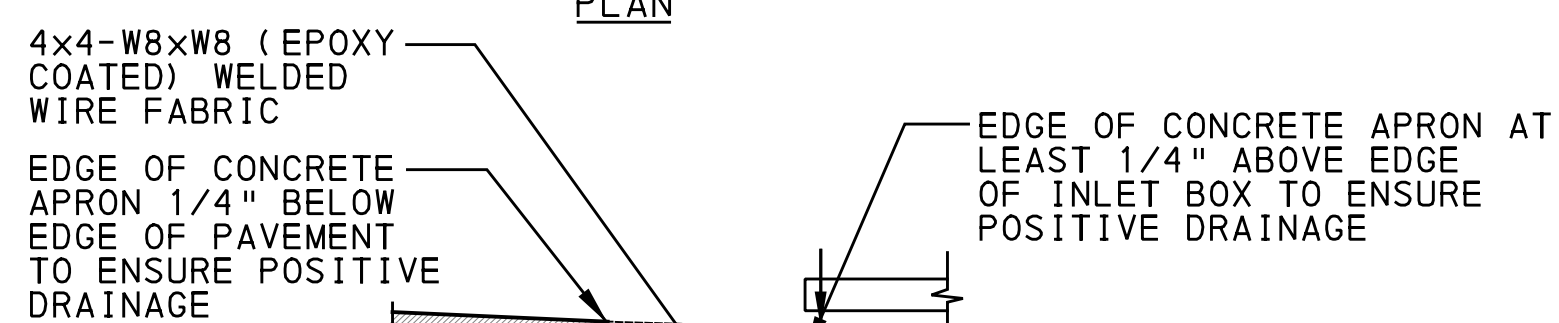
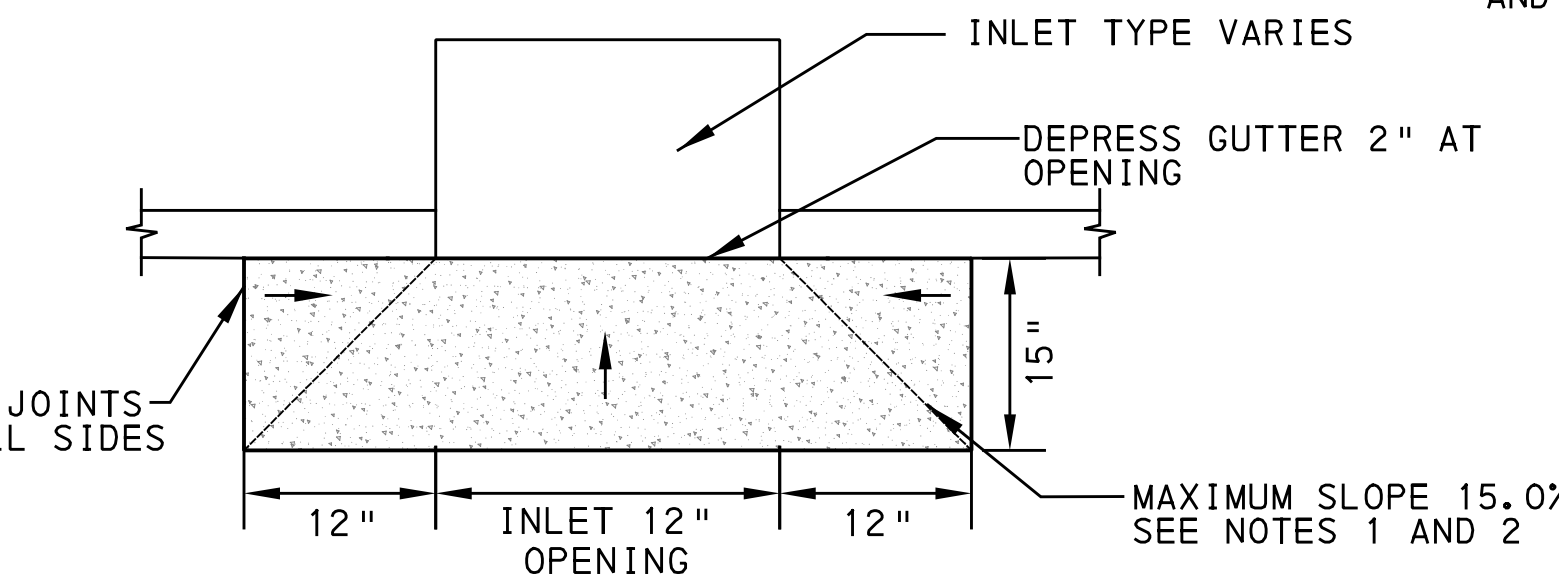
MIN 1.5"-2" (OR AS INDICATED ON PLANS)

UNCOMPACTED BIORETENTION SOILS (18" MIN)

SECTION A-A

**TYPICAL BIOSWALE SECTIONS W/ RELATIVE ELEVATIONS**

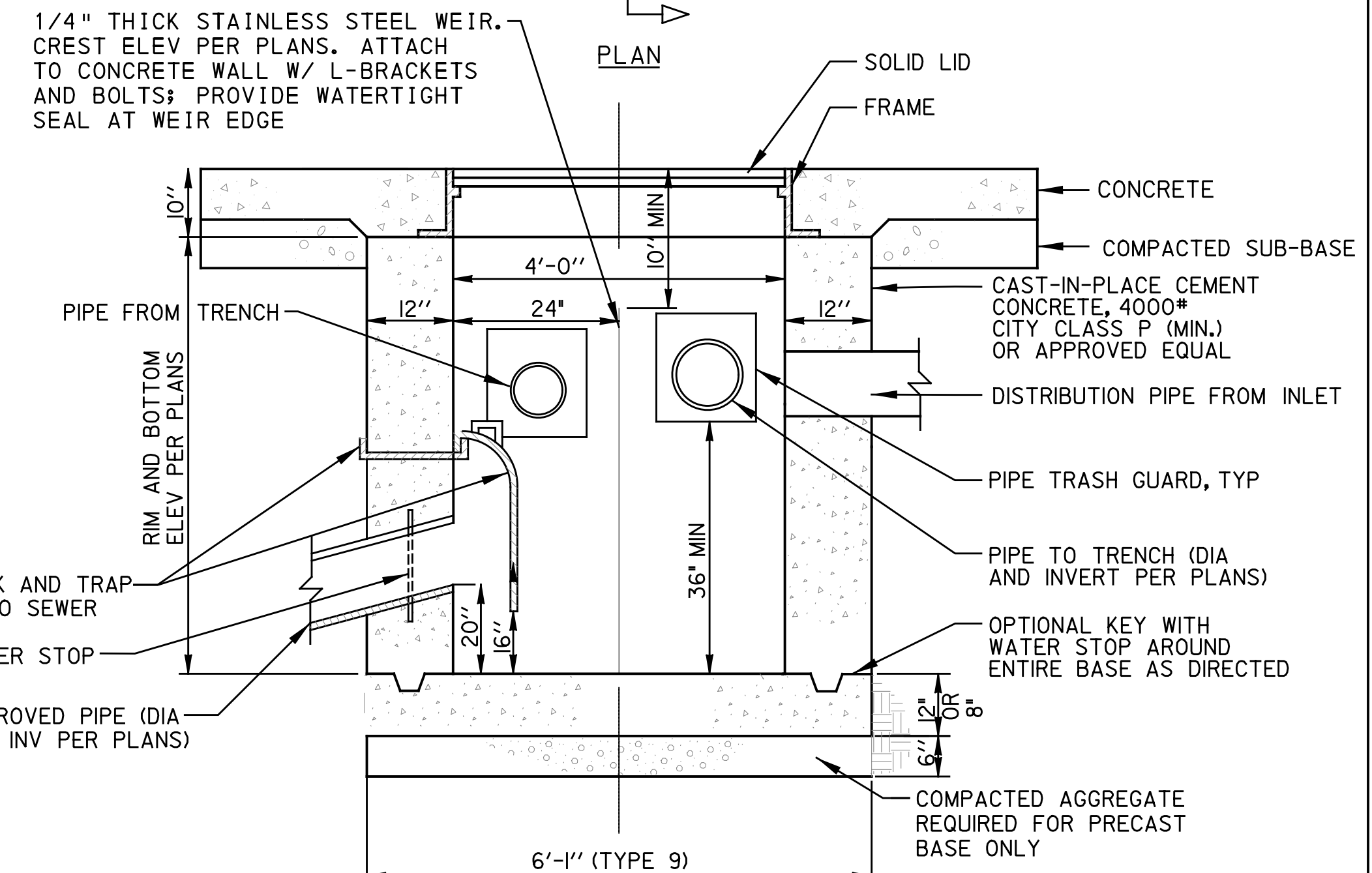
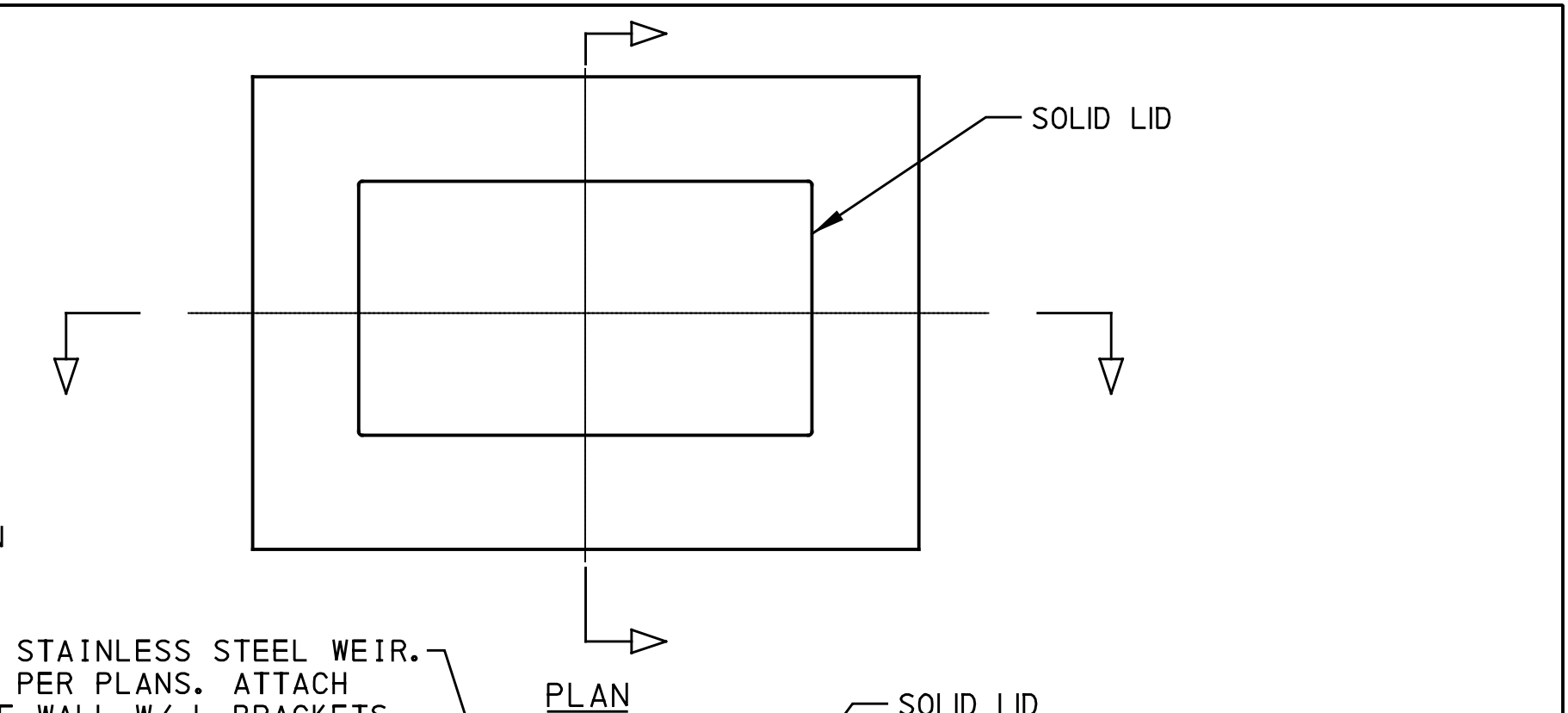
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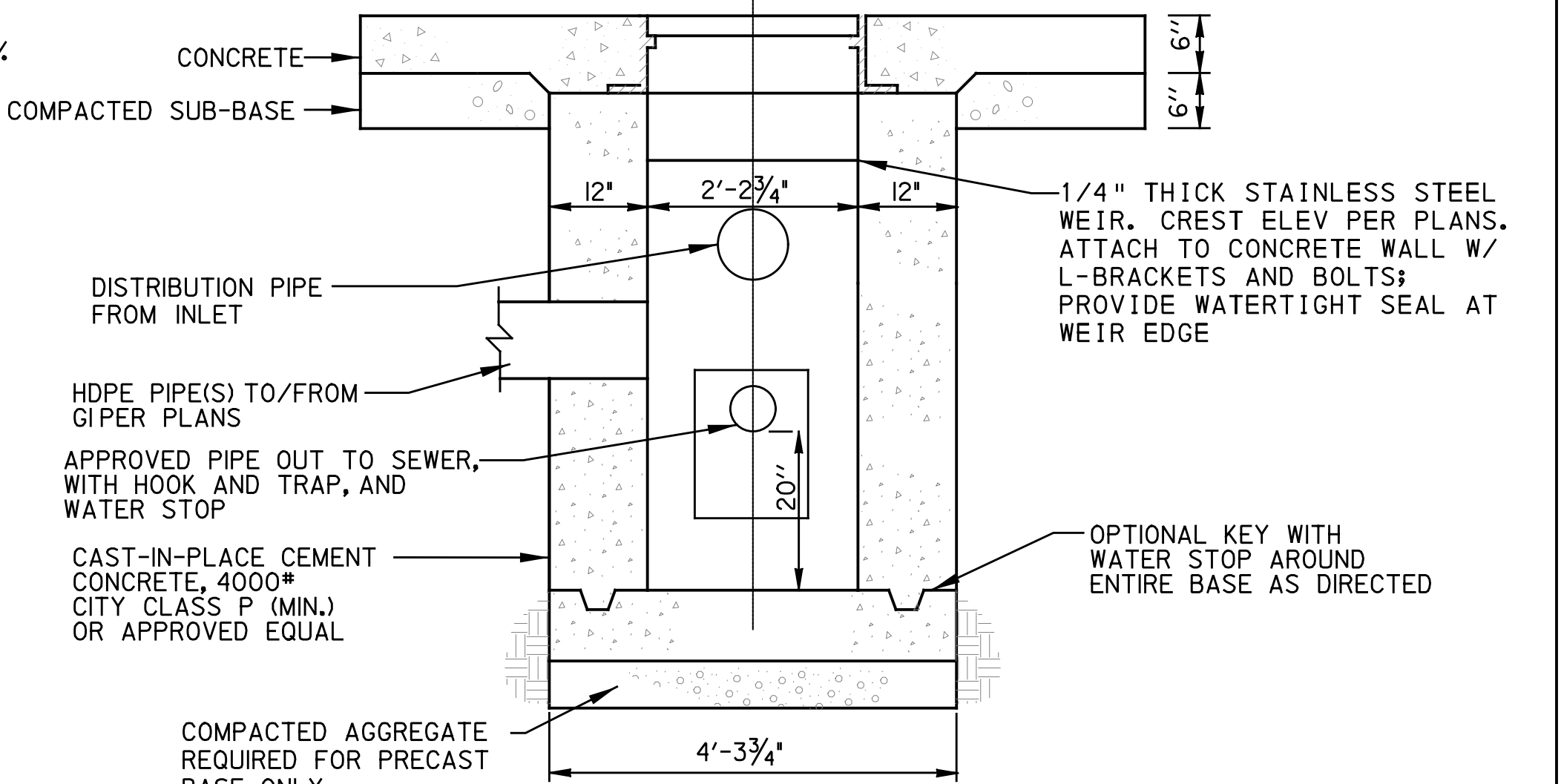
**CONCRETE APRON**

NOT TO SCALE

NOTE  
1. MAXIMUM SLOPE OF APRON PARALLEL TO CURB IS 7H:1V (15.0%), 12H:1V (8.5%) IS PREFERRED.  
2. MAXIMUM SLOPE OF APRON PERPENDICULAR TO CURB IS 7H:1V (15.0%), 12H:1V (8.5%) IS PREFERRED.  
3. CONCRETE APRON THICKNESS TO MATCH BOTTOM OF EXISTING CONCRETE BASE COURSE.  
4. CONCRETE BASE COURSE MINIMUM THICKNESS IS 10" ON CITY STREETS.



**LONGITUDINAL SECTION**



**4' X 2' PRECAST CONCRETE JUNCTION BOX**

NOT TO SCALE [SEE BRT PLAN SET FOR ROADWAY DRAWINGS]

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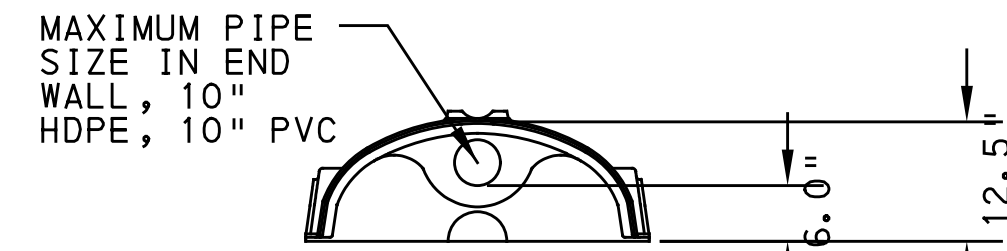
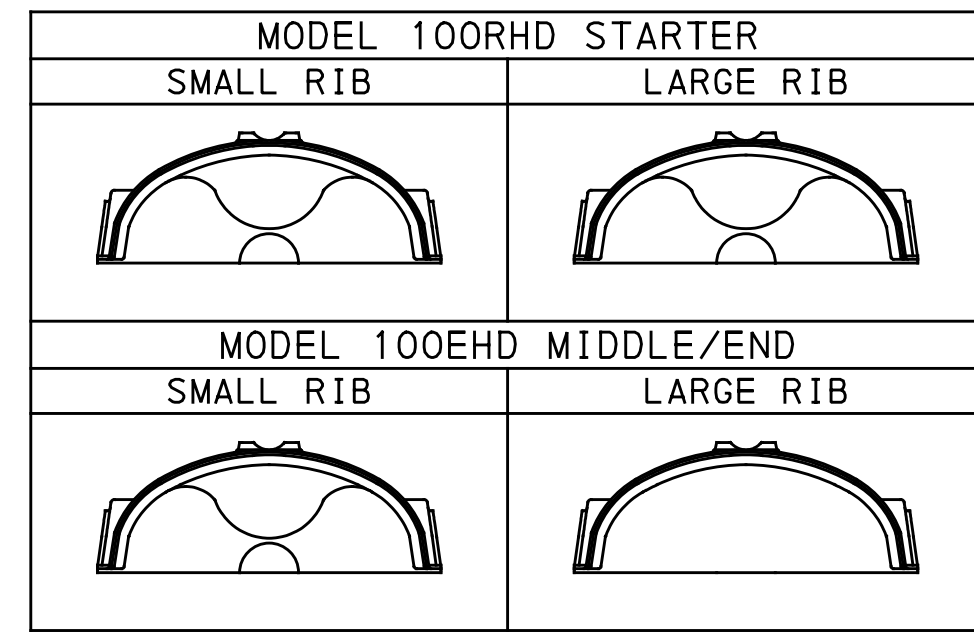
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SCALE	AS SHOWN

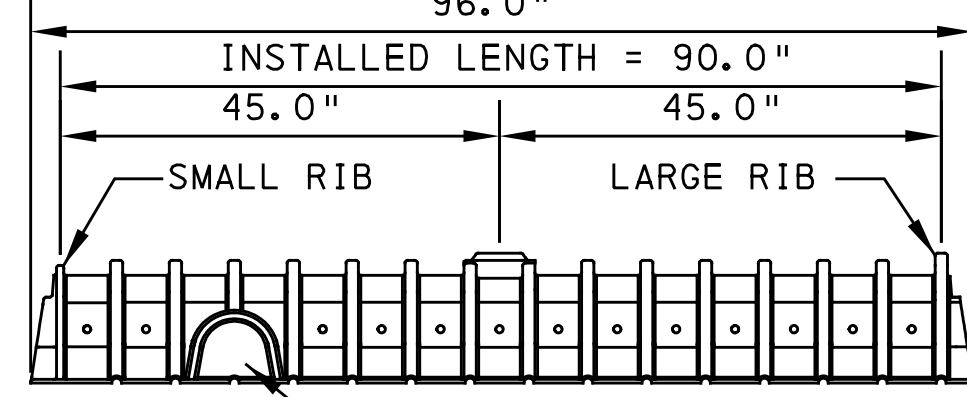
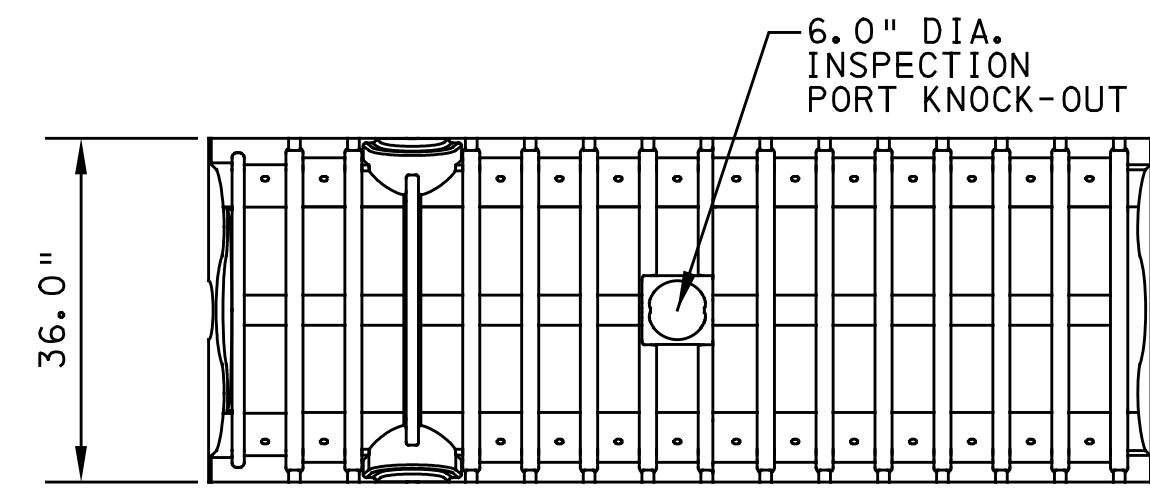
<b>PORT AUTHORITY OF ALLEGHENY COUNTY</b> PITTSBURGH PENNSYLVANIA	
<b>BUS RAPID TRANSIT UPTOWN TO OAKLAND</b> STORMWATER MANAGEMENT PLANS GI DETAILS	
<b>Port Authority</b> connecting people to life®	CONTRACT NO. BRT-001
DWG. NO. SWM8	SHT. 8

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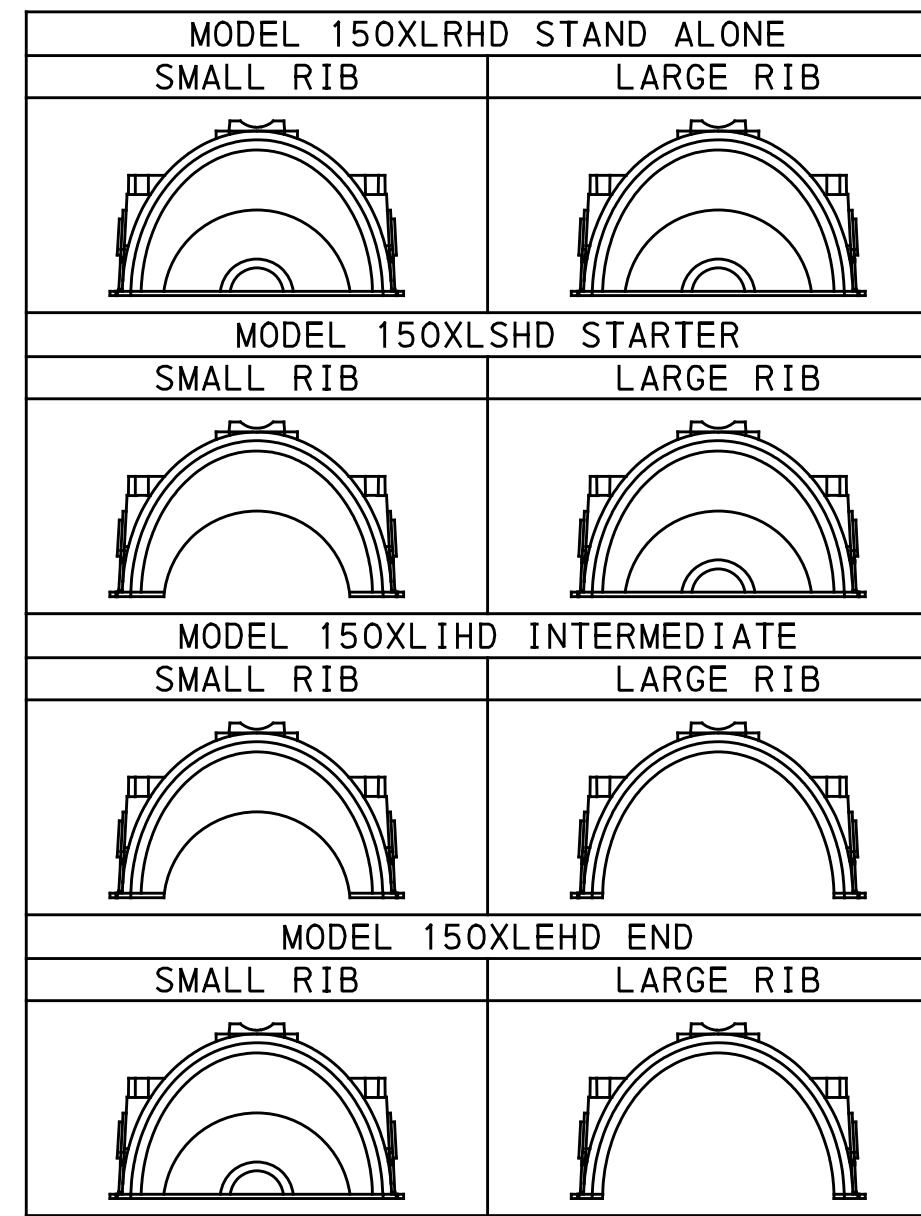
CULTEC CONTACTOR 100HD CHAMBER STORAGE = 1.866 CF/FT  
 INSTALLED LENGTH ADJUSTMENT = 0.5'  
 ALL CONTACTOR 100HD HEAVY DUTY UNITS ARE MARKED WITH A COLORED STRIPE FORMED INTO THE PART ALONG THE LENGTH OF THE CHAMBER. TOTAL SYSTEM LENGTH VARIES (SEE PLANS)



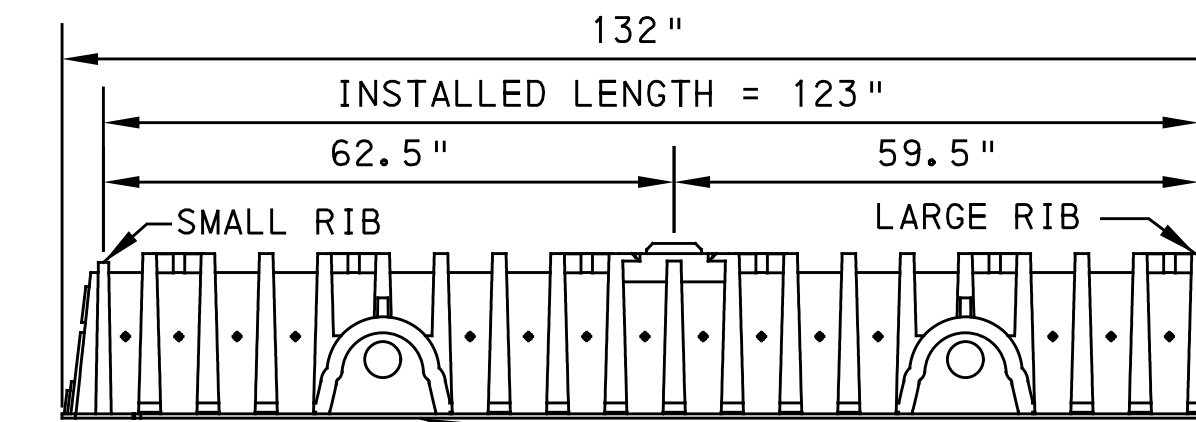
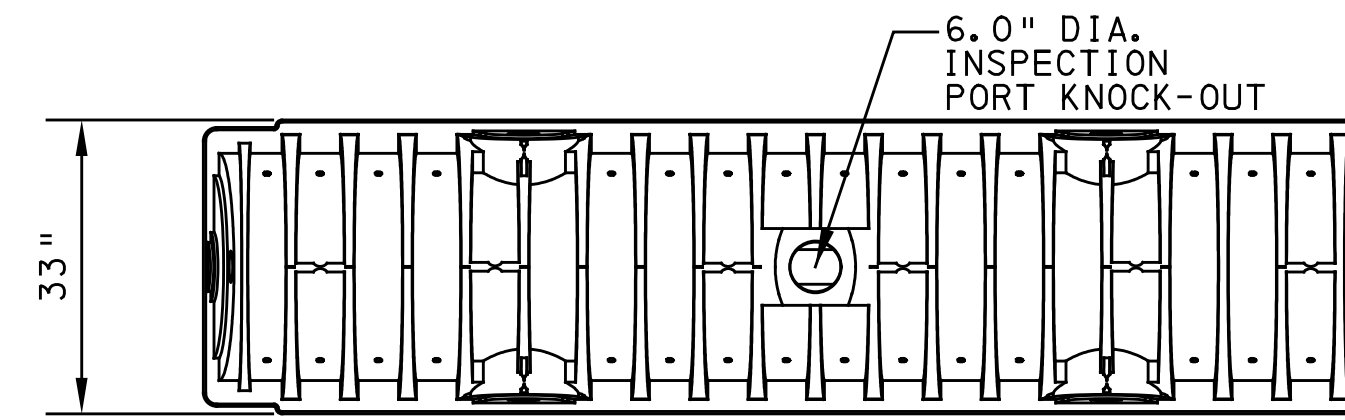
SIDE PORTAL FOR OPTIONAL INTERNAL MANIFOLD (ACCOMMODATES CULTEC HVLV SFCx2 FEED CONNECTOR OR STORM PIPE)  
 MAX. PIPE: 6\"/>

12" HEAVY DUTY CHAMBER UNIT THREE VIEW (CULTEC CONTACTOR 100HD, OAE)

NOT TO SCALE



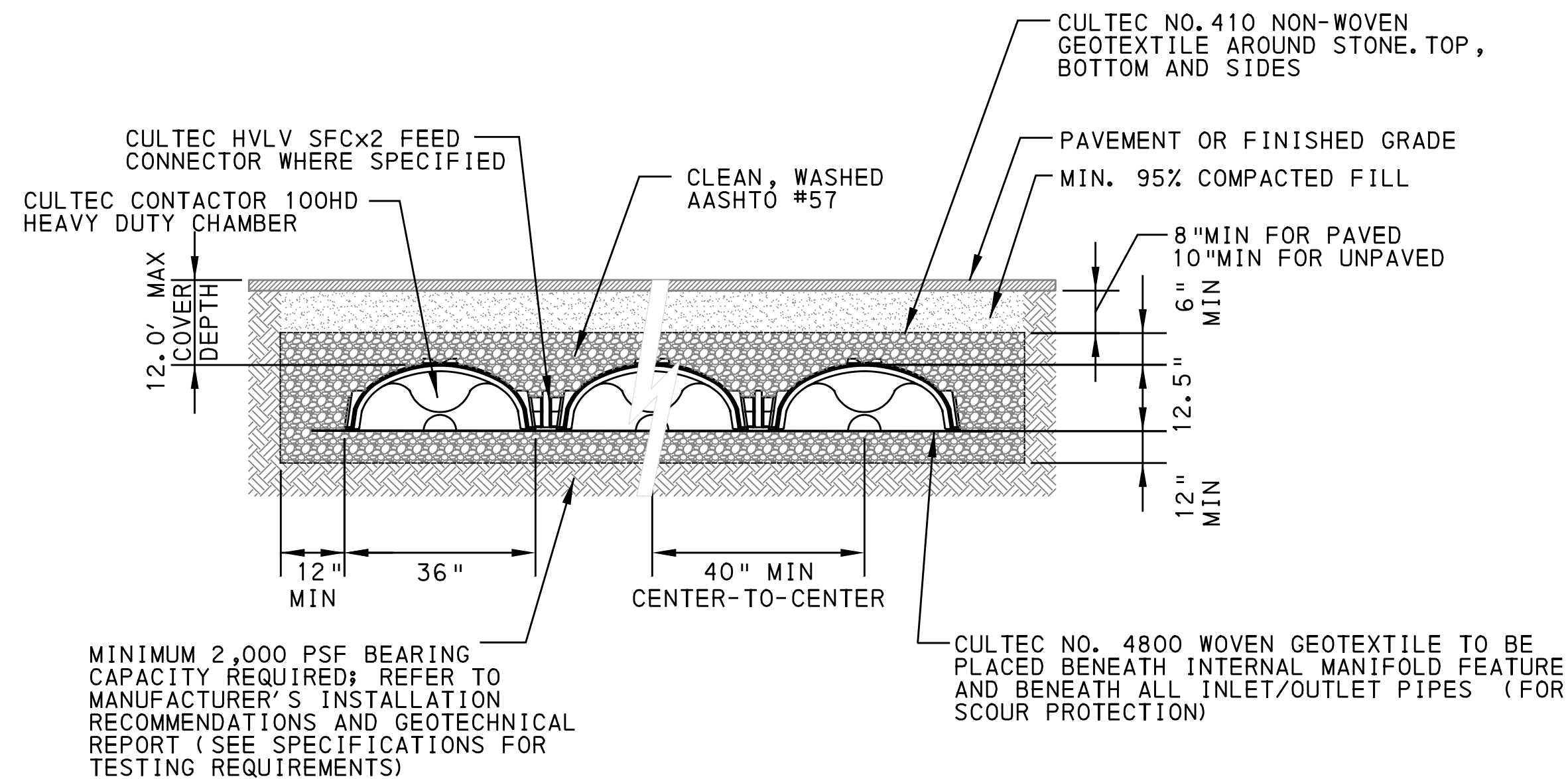
CULTEC RECHARGER 150XLHD CHAMBER STORAGE = 2.65 CF/FT  
 INSTALLED LENGTH ADJUSTMENT = 0.75'  
 TOTAL SYSTEM LENGTH VARIES (SEE PLANS)



SIDE PORTAL FOR OPTIONAL INTERNAL MANIFOLD (ACCOMMODATES CULTEC HVLV FC-24 FEED CONNECTOR OR STORM PIPE)  
 MAX. PIPE: 10\"/>

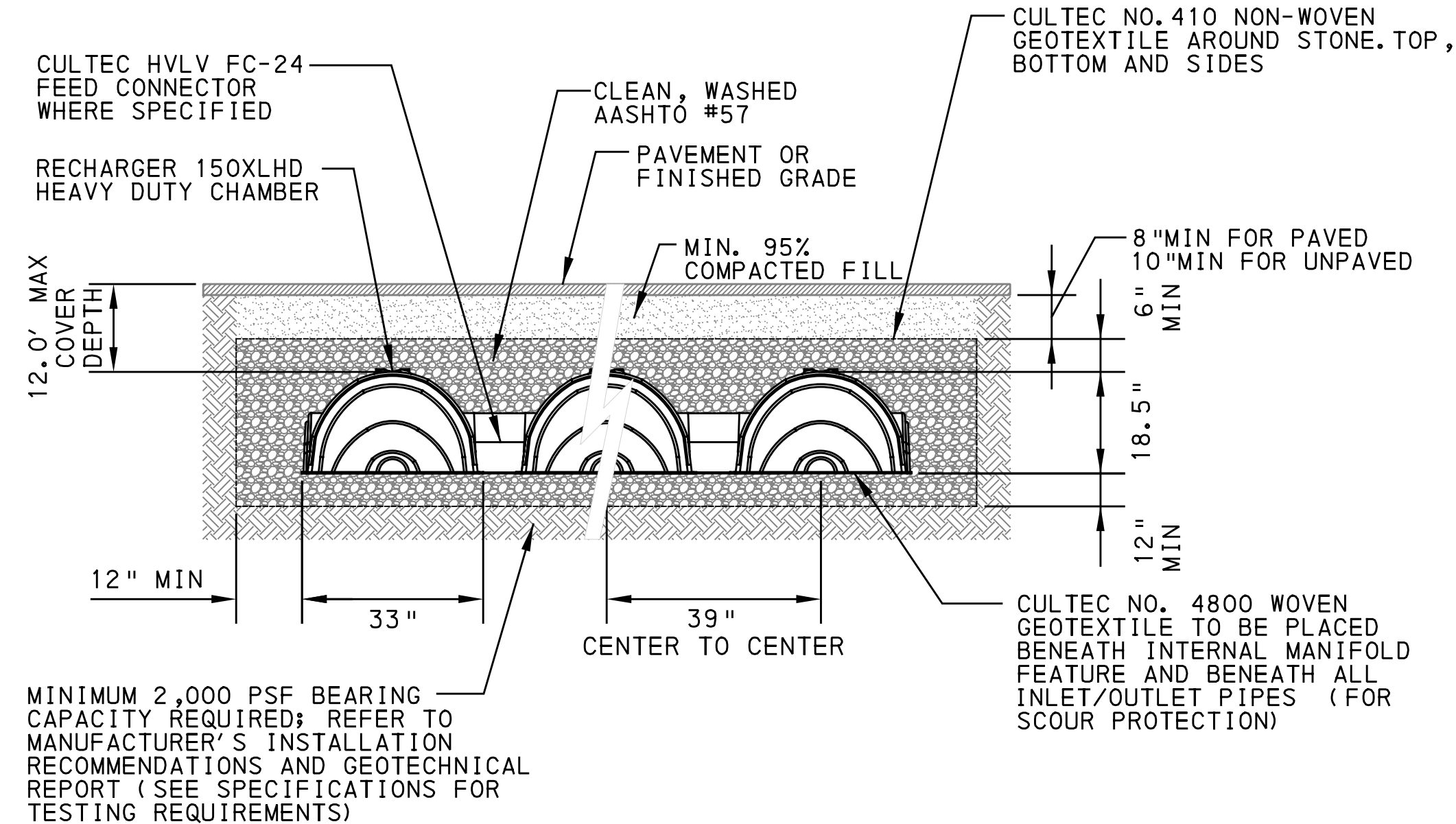
18" HEAVY DUTY CHAMBER UNIT THREE VIEW (CULTEC RECHARGER 150XLHD, OAE)

NOT TO SCALE



12" HEAVY DUTY CHAMBER UNIT SYSTEM CROSS SECTION (CULTEC CONTACTOR 100HD, OAE)

NOT TO SCALE



18" HEAVY DUTY CHAMBER UNIT SYSTEM CROSS SECTION (CULTEC RECHARGER 150XLHD, OAE)

NOT TO SCALE

CHAMBER SYSTEM NOTES:  
 INDIVIDUAL SYSTEMS MAY BE DESIGNED WITH SINGLE OR MULTIPLE ROWS OF CHAMBERS.  
 WHEN TRENCH IS SPECIFIED AS "LINED, TRENCH SLOW RELEASE SYSTEMS SHALL BE COMPLETELY WRAPPED IN IMPERMEABLE MEMBRANE.  
 TOP AND SIDES OF CHAMBERS TO BE LINED WITH HDPE GEOMEMBRANE ROOT-INTRUSION BARRIER IN TREE TRENCHES AS SPECIFIED ON PLANS. SEE DETAIL ON DWG SWM7

SEE BRT PLAN SET FOR ROADWAY DRAWINGS

**AECOM**

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**Jacobs**

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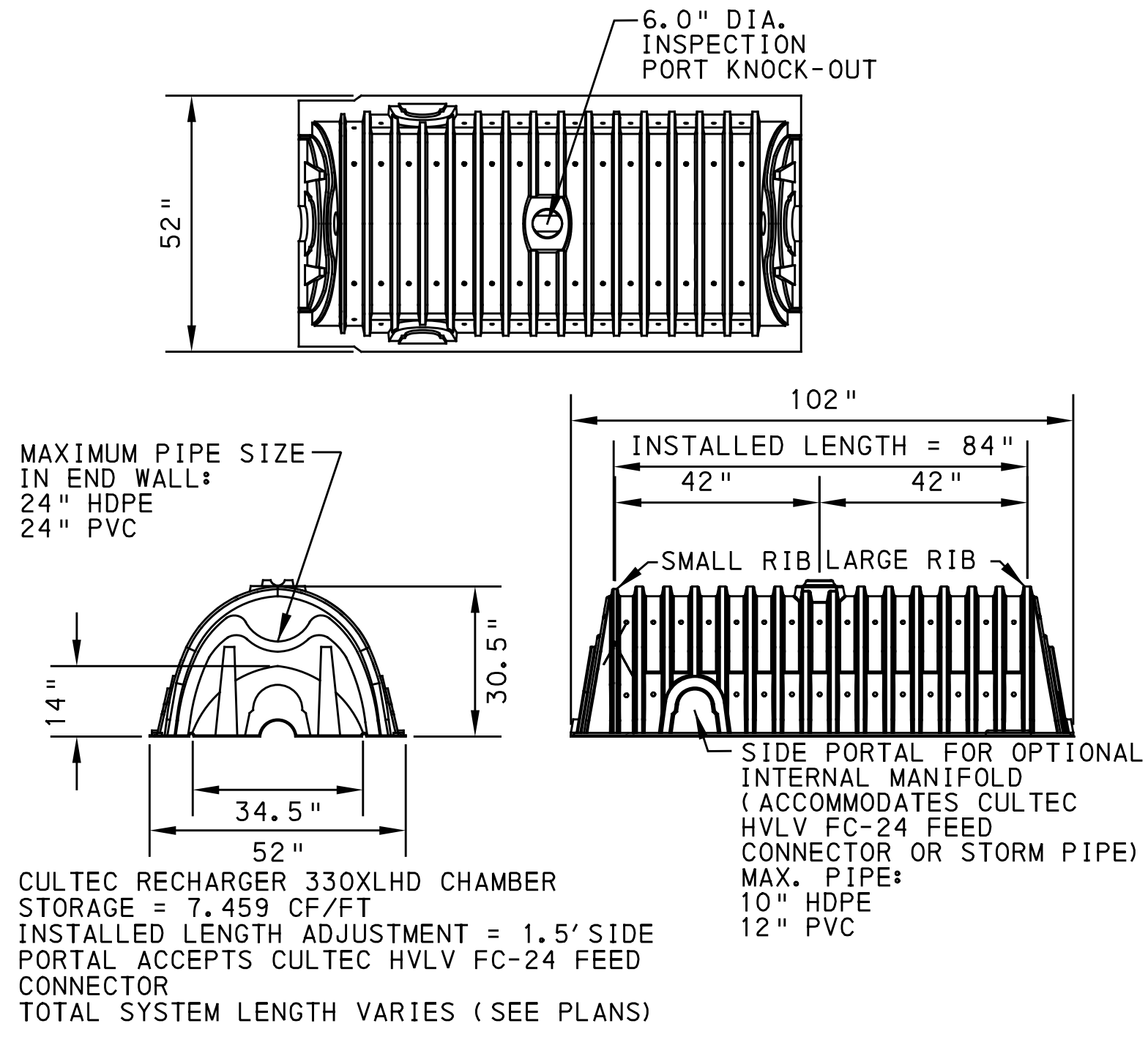
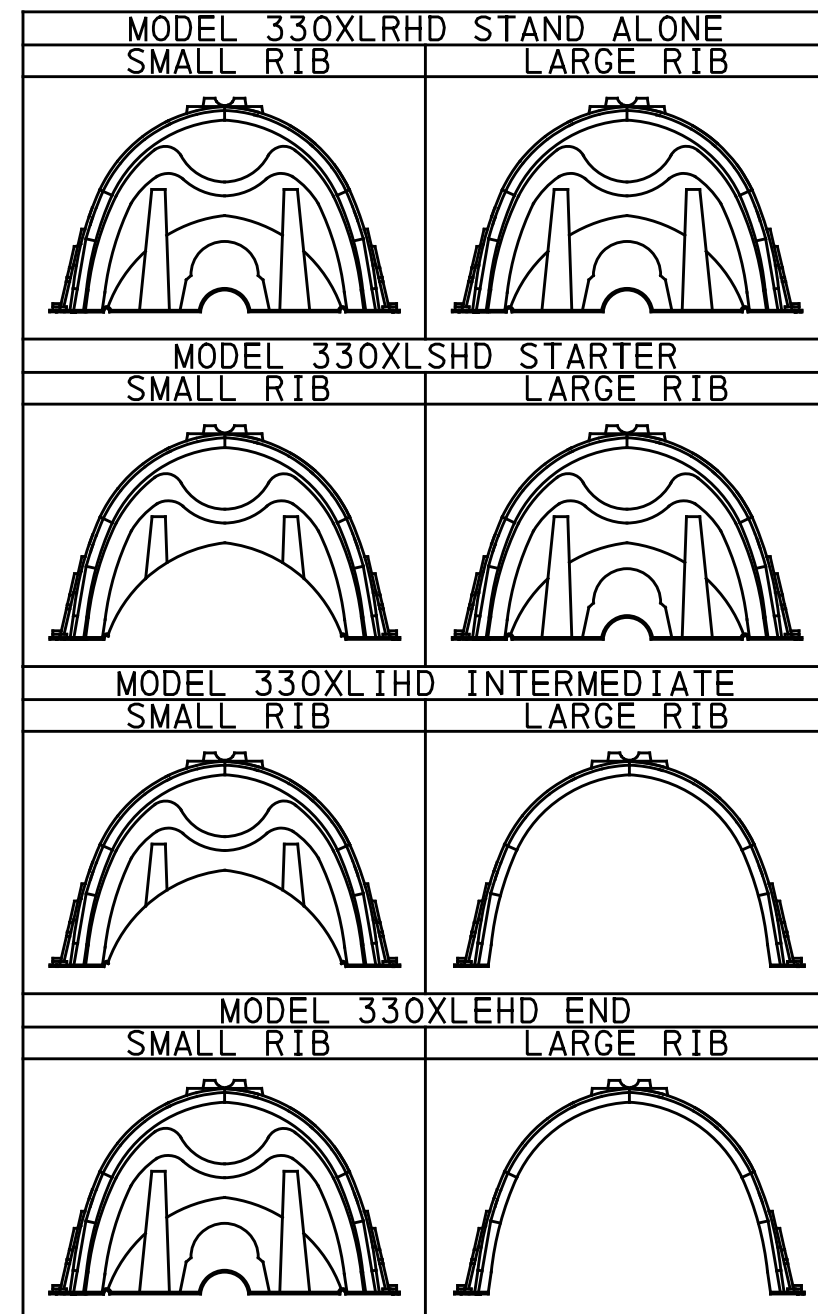
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<b>PORT AUTHORITY OF ALLEGHENY COUNTY</b> PITTSBURGH PENNSYLVANIA	
<b>BUS RAPID TRANSIT UPTOWN TO OAKLAND</b> STORMWATER MANAGEMENT PLANS GI DETAILS	
<b>Port Authority</b> <small>connecting people to life</small>	CONTRACT NO. BRT-001
	DWG. NO. SWM9 SHT. 9

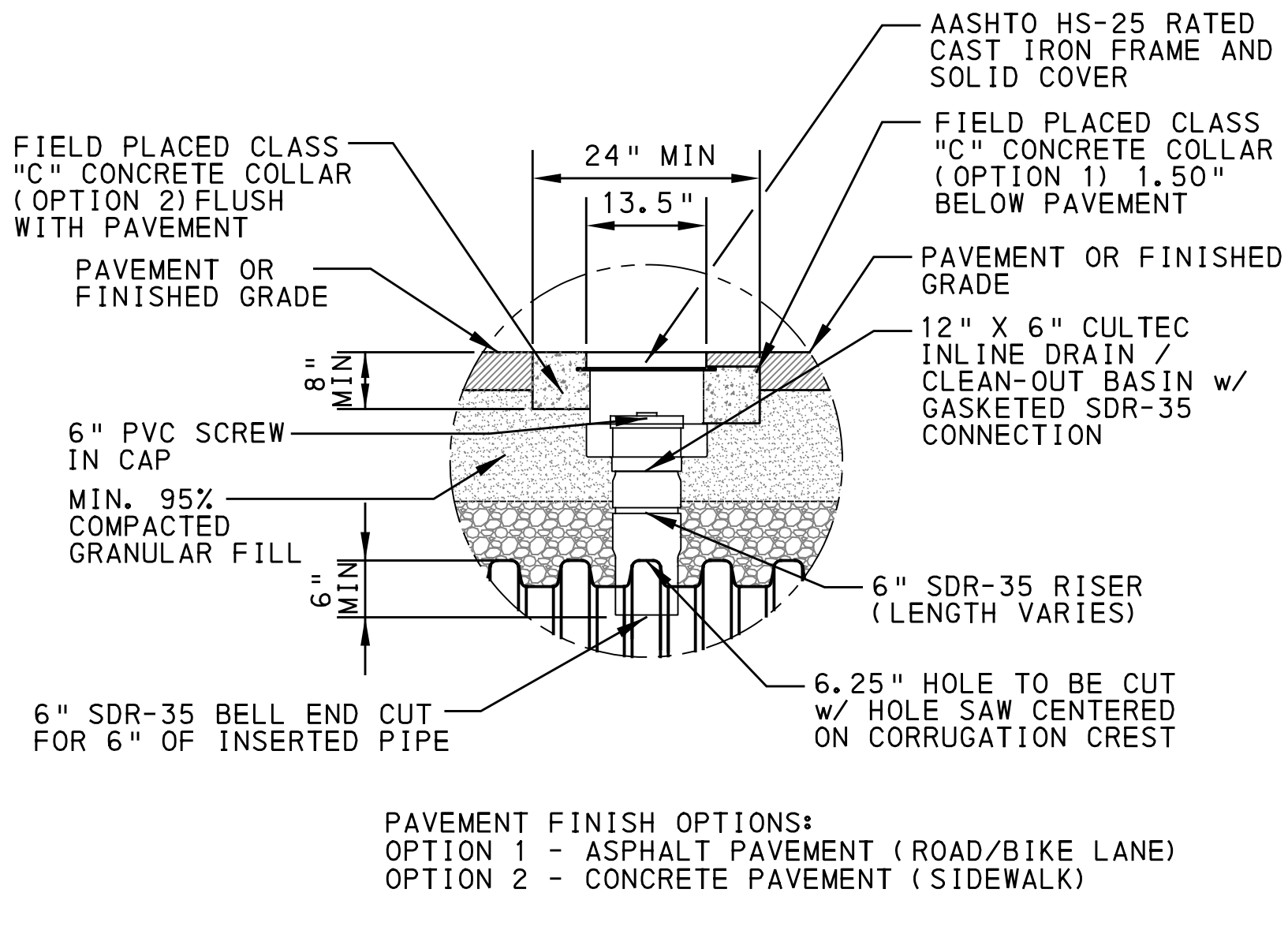
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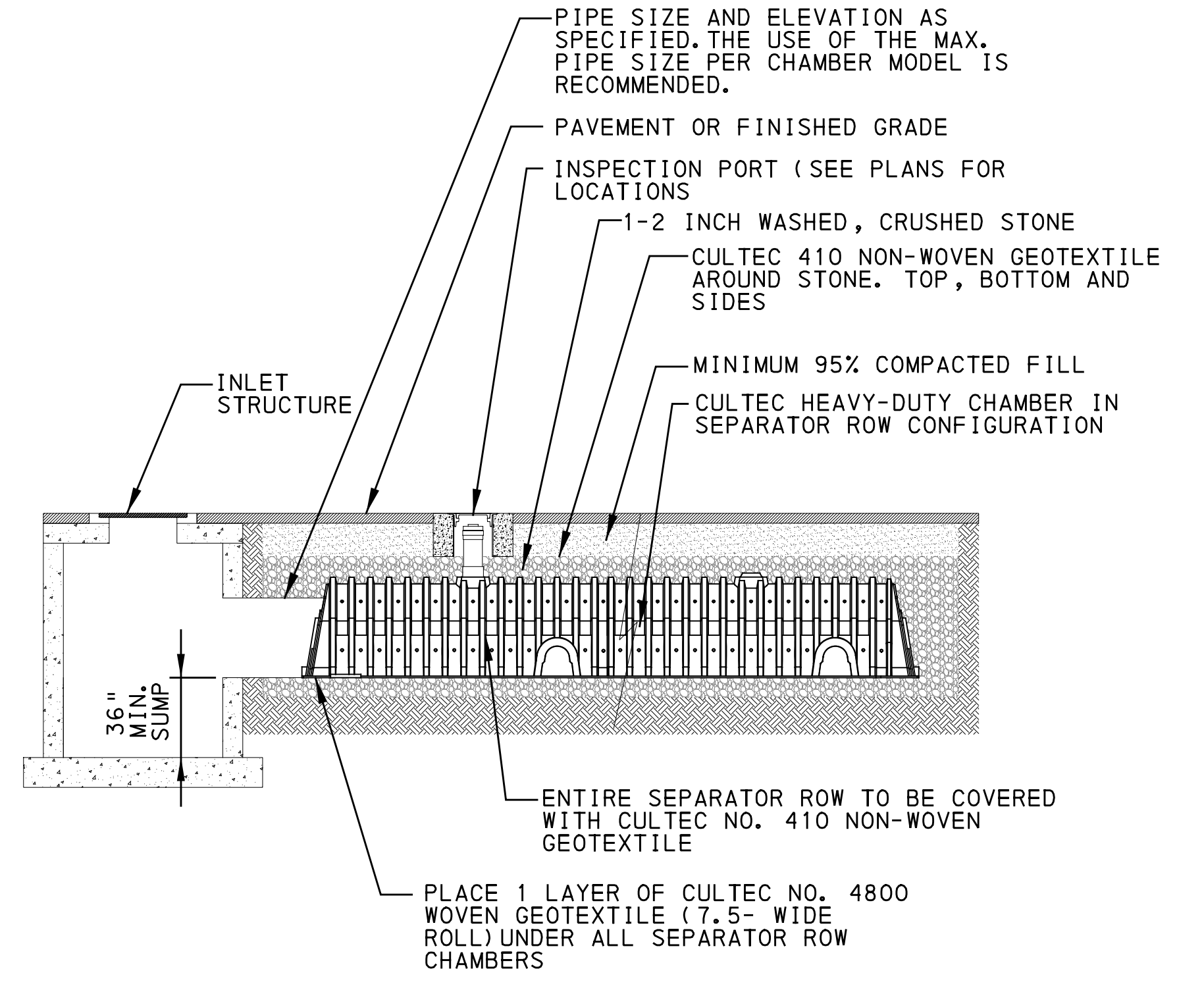
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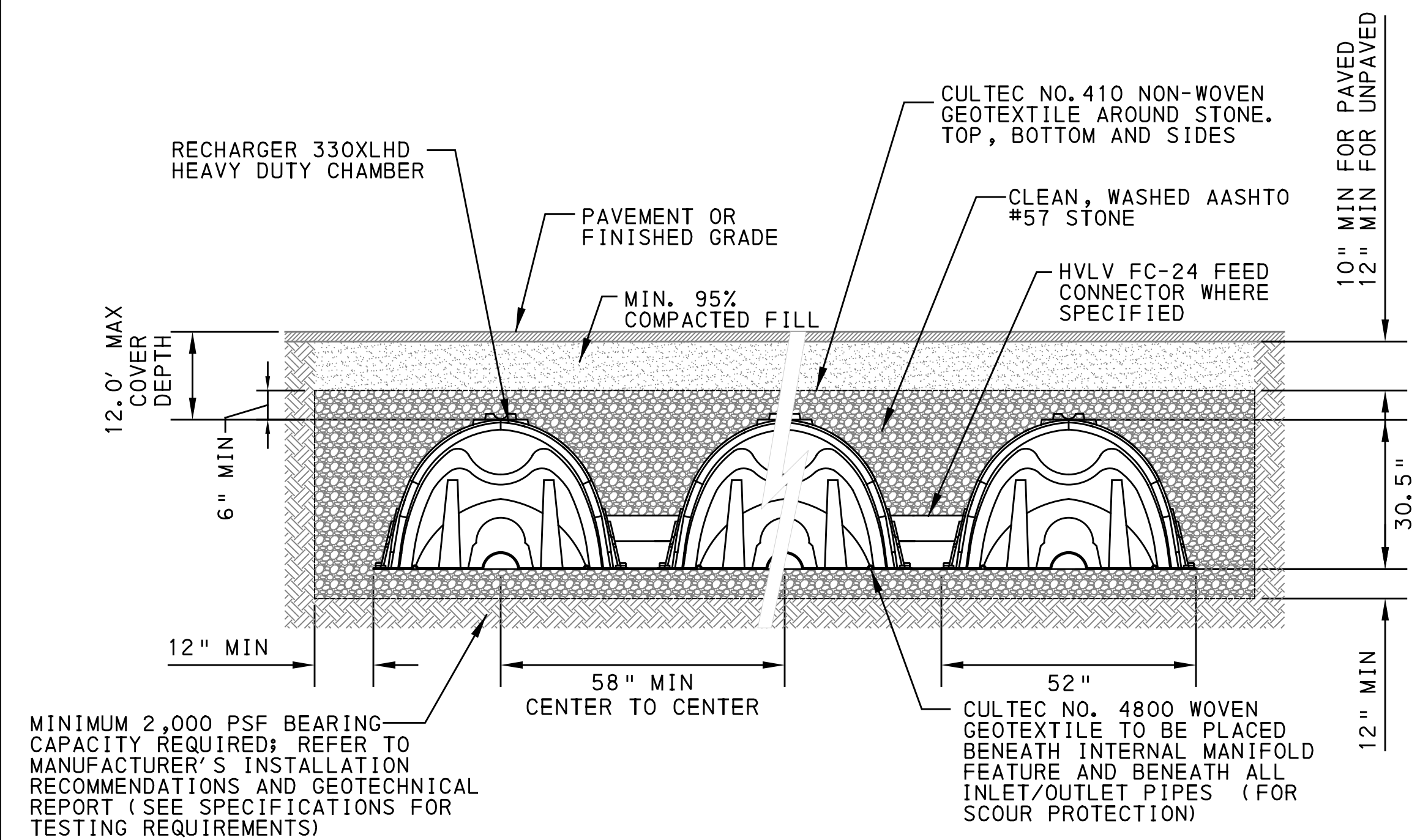
30" HEAVY DUTY CHAMBER UNIT THREE VIEW (CULTEC RECHARGER 330XLHD, OAE)  
NOT TO SCALE



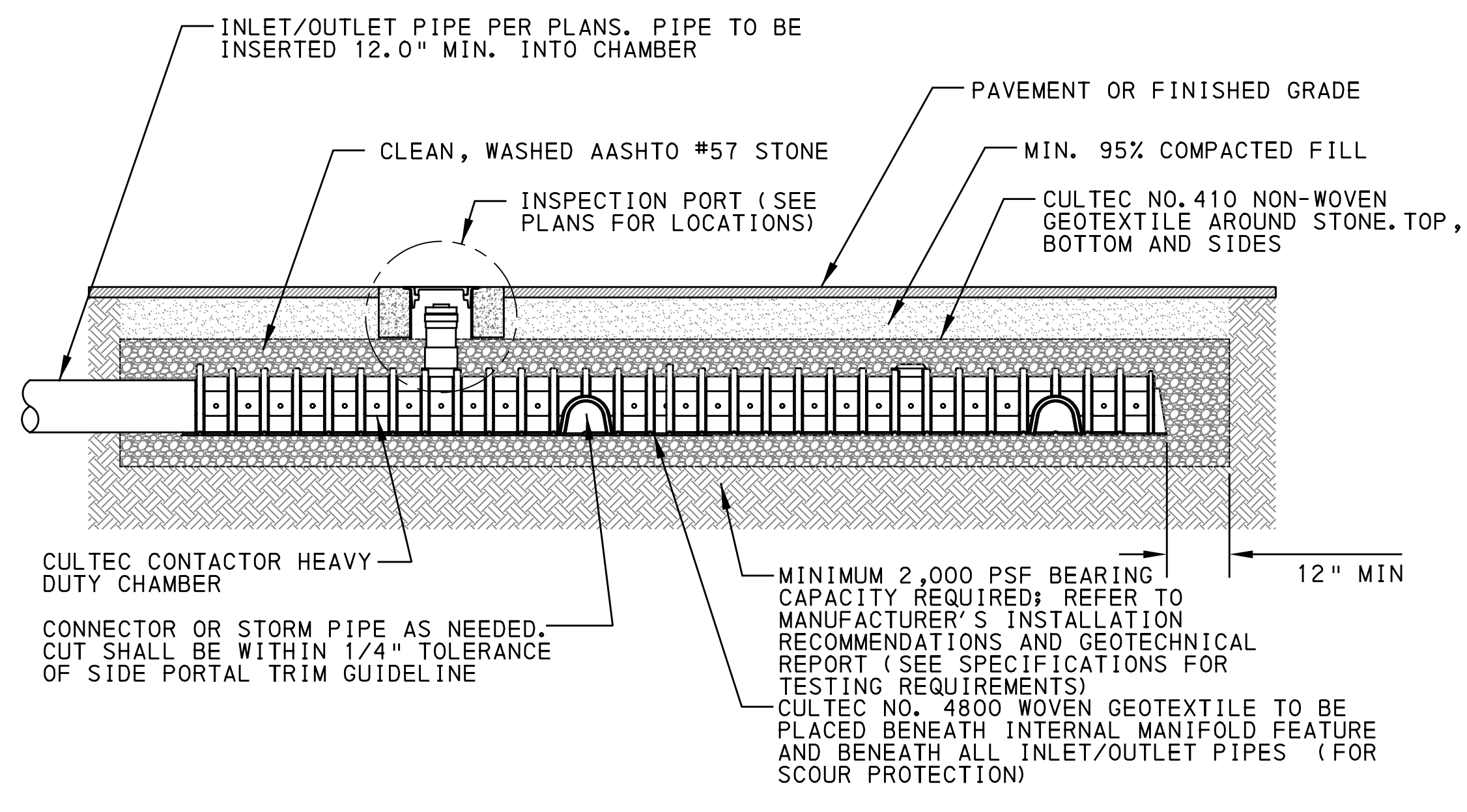
CHAMBER SYSTEM INSPECTION PORT - ZOOM DETAIL  
NOT TO SCALE



TYPICAL SEPARATOR ROW CONFIGURATION CROSS SECTION WITH INSPECTION PORT  
NOT TO SCALE



30" HEAVY DUTY CHAMBER UNIT CROSS SECTION (CULTEC RECHARGER 330XLHD, OAE)  
NOT TO SCALE



CHAMBER SYSTEM MANIFOLD - TYPICAL PROFILE  
NOT TO SCALE

CHAMBER SYSTEM NOTES:  
INDIVIDUAL SYSTEMS MAY BE DESIGNED WITH SINGLE OR MULTIPLE ROWS OF CHAMBERS. WHEN TRENCH IS SPECIFIED AS "LINED", TRENCH SLOW RELEASE SYSTEMS SHALL BE COMPLETELY WRAPPED IN IMPERMEABLE MEMBRANE. TOP AND SIDES OF CHAMBERS TO BE LINED WITH HDPE GEOMEMBRANE ROOT-INTRUSION BARRIER IN TREE TRENCHES AS SPECIFIED ON PLANS. SEE DETAIL ON DWG SWM7.

[SEE BRT PLAN SET FOR ROADWAY DRAWINGS]

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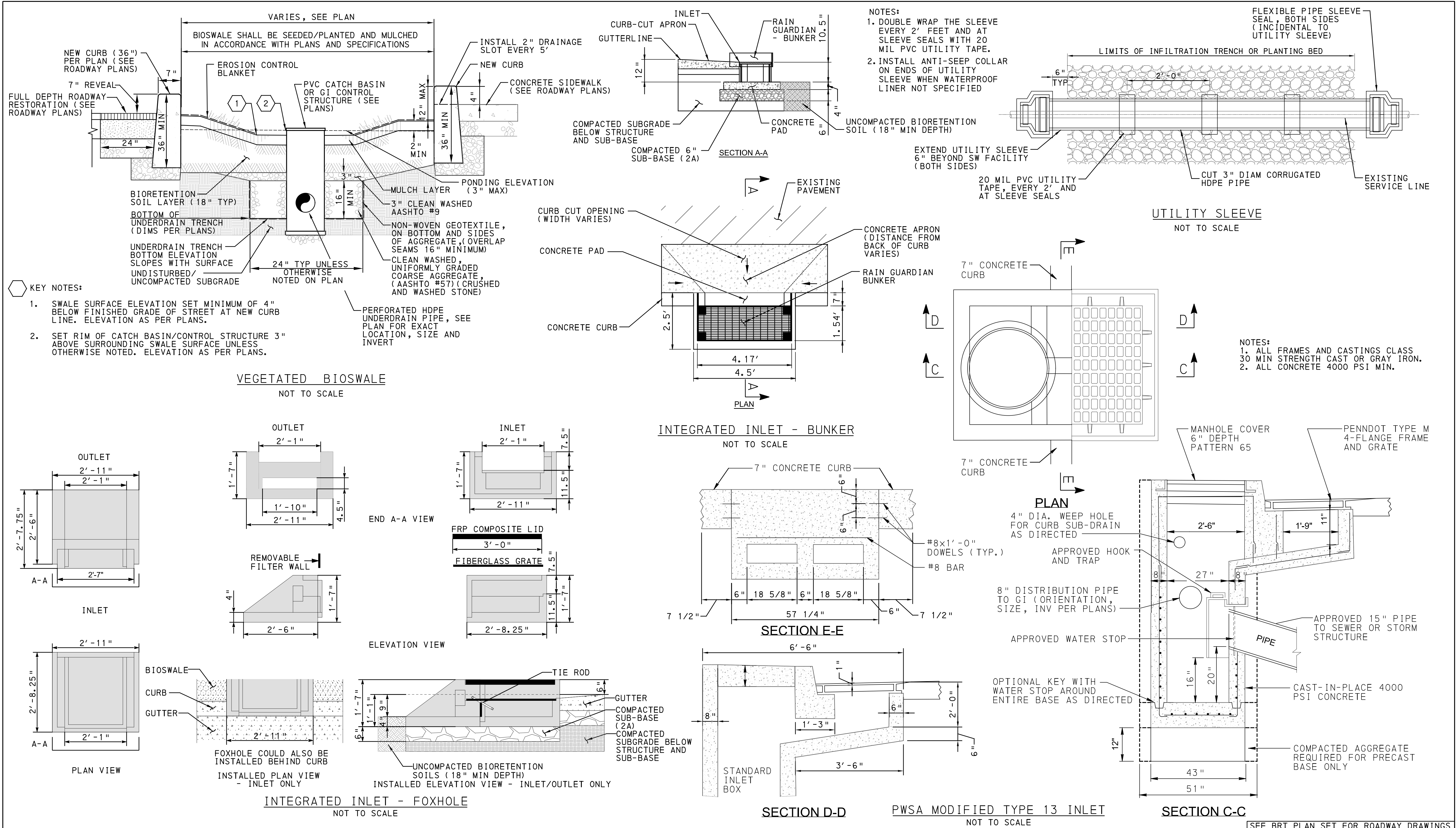
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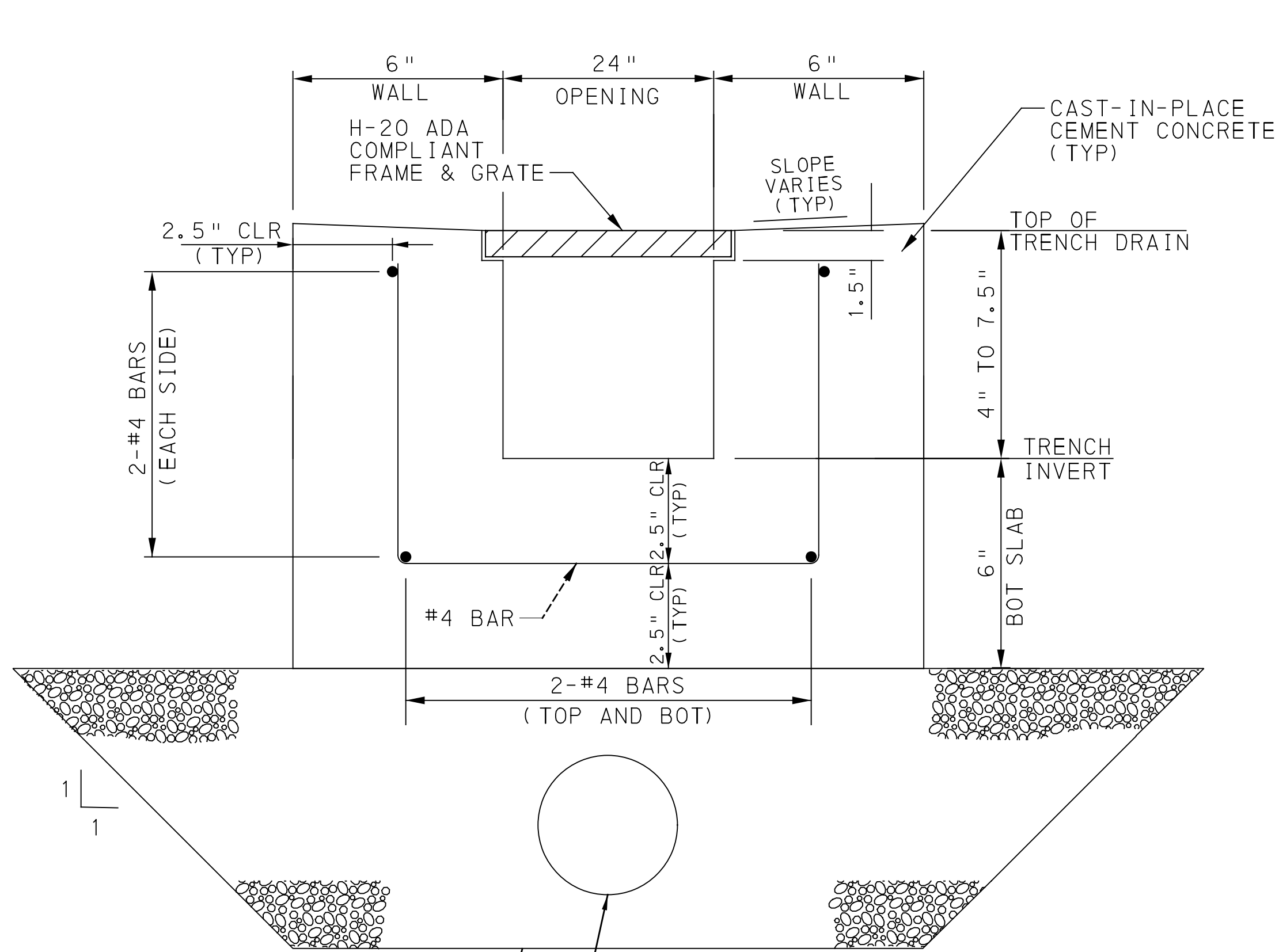
**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT UPTOWN TO OAKLAND**  
STORMWATER MANAGEMENT PLANS  
GI DETAILS

**Port Authority** connecting people to life™

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DWG. NO. SWM11 SHT. 11

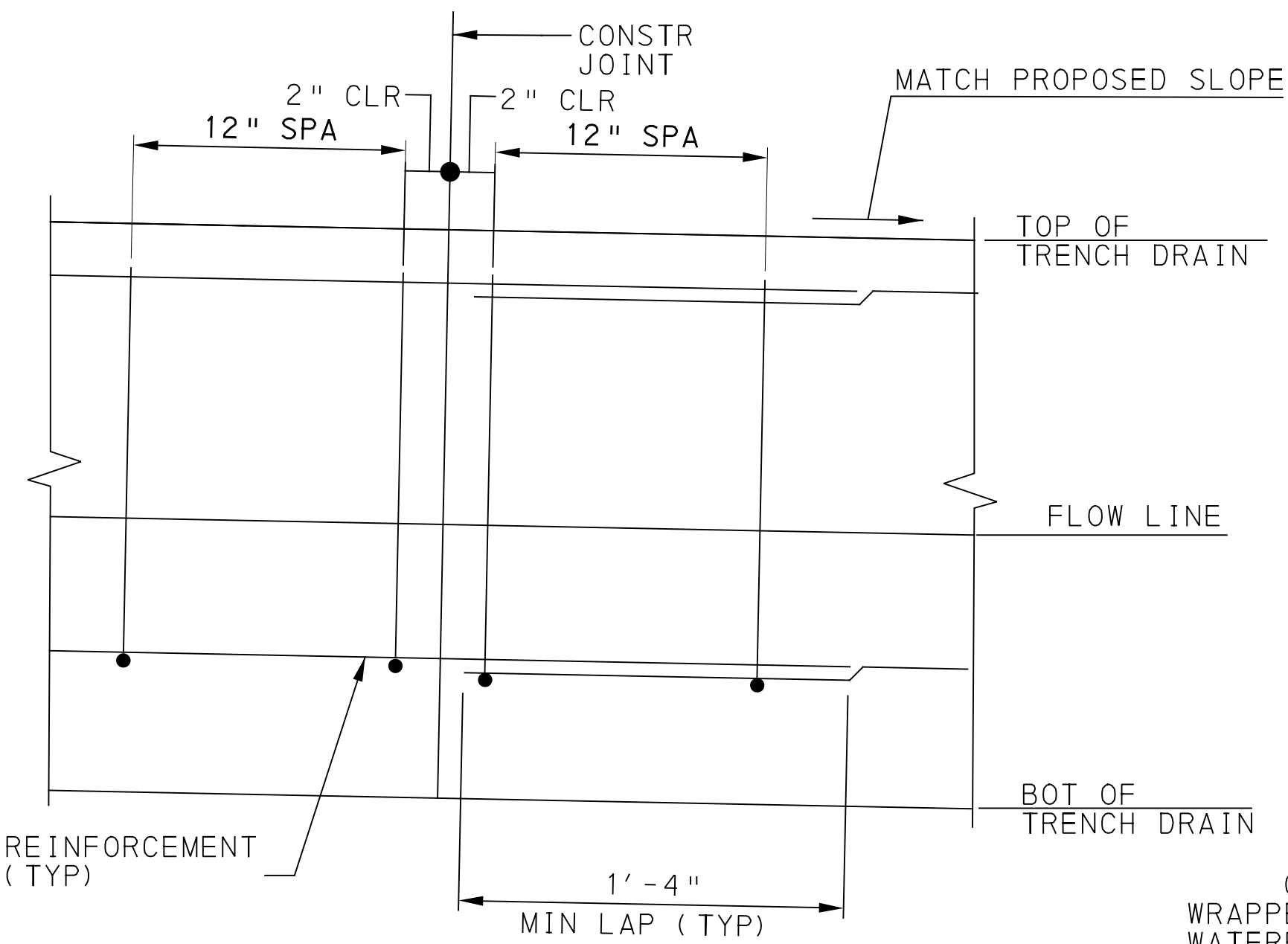
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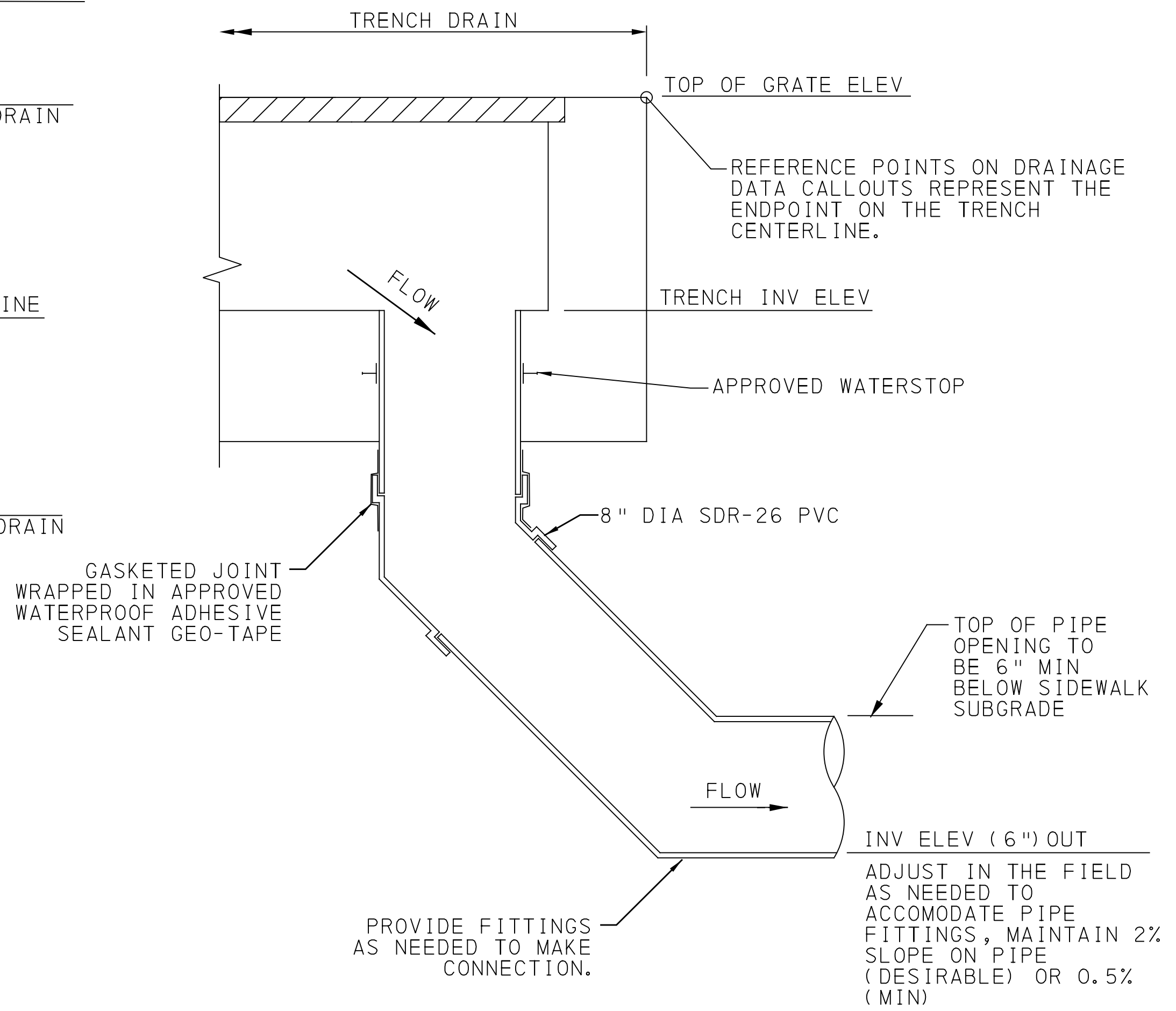
8" DEPTH, PENNDOT #8 AGGREGATE, TAMPED, WRAPPED IN PENNDOT GEOTEXTILE, CLASS 1 (INCIDENTAL TO SIDEWALK TRENCH DRAIN ITEM 02635.001, COMPLIANT W/ ITEM 02353.001)

4" DIA PAVEMENT BASE DRAIN PIPE, SMOOTH. TIE TO TRENCH OUTLET PIPE IF PRESENT, OTHERWISE ROADWAY PAVEMENT BASE DRAIN IF PRESENT, OTHERWISE PLACE 2A AGGREGATE INSTEAD OF BASE DRAIN. (INCIDENTAL TO SIDEWALK TRENCH DRAIN ITEM 02635.001, COMPLIANT W/ ITEM 02627.001)

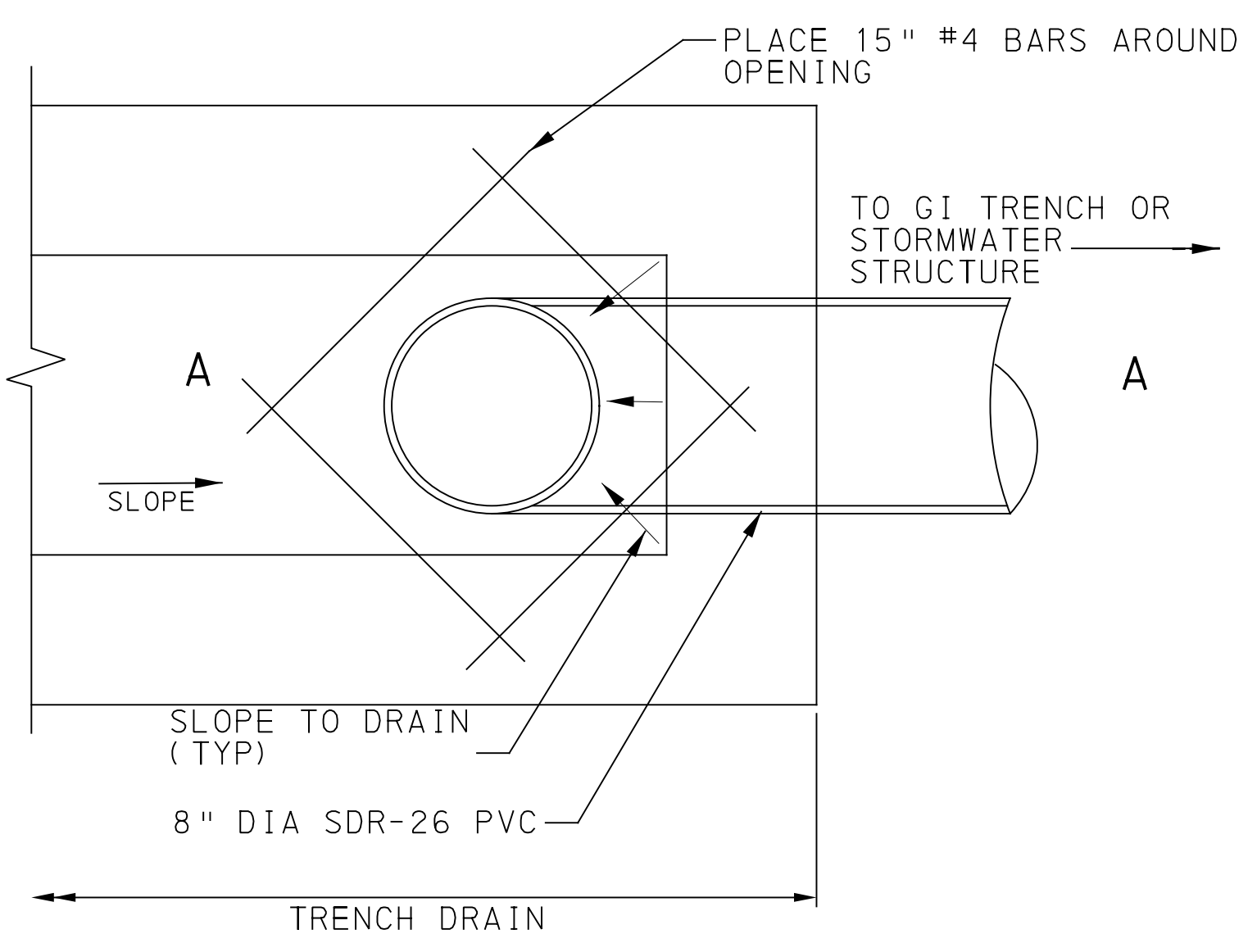
**TRENCH DRAIN TYPICAL SECTION**  
NOT TO SCALE



**TRENCH DRAIN PARTIAL ELEVATION AT CONSTRUCTION JOINT**  
NOT TO SCALE



**SECTION A-A**  
NOT TO SCALE



**PLAN VIEW**  
NOT TO SCALE

**TRENCH DRAIN DETAILS**  
NOT TO SCALE

- NOTES:
1. REINFORCEMENT WILL BE EPOXY COATED.
  2. SCUPPER/DRAIN COMPONENTS WILL BE GALVANIZED.
  3. CAST IN PLACE CONCRETE  $f'c = 4,000$  PSI.
  4. CONSTRUCTION JOINTS ARE TO BE PROVIDED AT INTERVALS NOT EXCEEDING 30 FEET. EXPANSION JOINTS ARE TO BE PROVIDED AT INTERVALS NOT EXCEEDING 90 FEET. WHEN EXPANSION JOINTS ARE USED, WATERSTOPS ARE REQUIRED.
  5. PLACE BEDDING AT 12" MINIMUM DEPTH BELOW BOTTOM OF TRENCH DRAIN.
  6. SOME TRENCHES WILL OUTLET TO CURB GUTTER INSTEAD OF AN OUTLET PIPE. IN THOSE CASES, USE SOLID COVER INSTEAD OF GRATE ON THE PORTION BETWEEN THE VALLEY OF SIDEWALK AND CURB AS DIRECTED. CUT LOWERMOST COVER STRAIGHT AND FLUSH WITH FACE OF CURB. GRIND SMOOTH.
  7. PROVIDE CLOSED, PLAIN TEXTURED SOLID COVER AS DIRECTED WHERE TRENCH TRAVERSES FROM SIDEWALK GUTTER TO CURB.

SEE BRT PLAN SET FOR ROADWAY DRAWINGS

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DATE 05/01/24  
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<b>PORT AUTHORITY OF ALLEGHENY COUNTY</b> PITTSBURGH PENNSYLVANIA	
<b>BUS RAPID TRANSIT UPTOWN TO OAKLAND</b> STORMWATER MANAGEMENT PLANS GI DETAILS	
<b>Port Authority</b> <small>connecting people to life</small>	CONTRACT NO. BRT-001
DWG. NO. <b>SWM12</b>	SHT. <b>12</b>

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GI ID 1	GI ID 2	SWM Sheet	Structure ID	Structure Type	Station - Offset	Top Type	Rim Elevation [ft] **Refer to roadway plans	Invert Elevation out to Sewer [ft] **Refer to roadway plans	Invert Elevation out to GI [ft]	Invert Elevation in from GI [ft]	BR/BS Underdrain Invert Elevation [ft]	Inv Elev IN from Structure [ft]	Structure Bottom Elevation [ft]	Weir Elevation [ft]	Deflection Pan (Covered side of inlet)	Slow release orifice cap (on pipe direction)	Orifice Diameter (in)	Orifice Elevation (ft)
BS-A1	ST-A1	15	A18-1	GI CONTROL STRUCTURE (TYPE 5)	457+22.92 - 9.53' RT	GRATE	**	**	811.48	810.33	812.99	N/A	808.48	813.02	Y (west)	Y (south west)	0.5	810.50
ST-A2	-	16	GI-A1	4' x 2' JUNCTION BOX WITH WEIR	459+31.40 - 24.33' LT	SOLID	821.40	815.17	817.28	815.34	N/A	817.32	813.51	819.32	N	N	0.5	815.51
ST-A2	-	16	A19-1	PWSA MODIFIED TYPE 13 INLET	30+36.33 - 18.21' LT	GRATE	**	**	818.84	N/A	N/A	N/A	815.84	N/A	N	N	N/A	N/A
ST-A7	-	17	GI-A7	PWSA TYPE 13 CATCH BASIN	471+00.00 - 14.21' RT	GRATE	848.00	845.36	846.46	845.36	N/A	N/A	842.36	N/A	N	Y (north west)	0.5	845.53
ST-A7	-	17	GI-A7A	PWSA MODIFIED TYPE 13 INLET	471+00.00 - 11.00' RT	GRATE	848.25	845.36	845.36	845.36	N/A	N/A	842.36	N/A	N	Y (west)	0.5	845.53
BS-A3	ST-A8	18	GI-A8	24" PVC DRAIN BASIN WITH SOLID LID	475+72.12 - 11.94' RT	SOLID	850.58	N/A	847.23	847.75	847.75	N/A	845.73	N/A	N	N	N/A	N/A
BS-A3	ST-A8	18	A22-2	GI CONTROL STRUCTURE (TYPE 13)	477+17.51 - 11.83' RT	GRATE	**	**	843.58	843.58	N/A	N/A	840.58	846.66	Y (east)	Y (south east)	0.5	843.74
BS-A3	ST-A8	18	GI-A9	2' X 2' PRECAST CONCRETE INLET	476+5.87 - 18.79' RT	SOLID	850.45	N/A	843.58	845.38	N/A	N/A	842.08	N/A	N	N	N/A	N/A
BS-A4	ST-A11	19	GI-A13	2' X 2' PRECAST CONCRETE INLET	485+78.38 - 5.93' RT	GRATE	815.40	N/A	811.26	811.26	811.26	N/A	809.76	N/A	N		N/A	N/A
BS-A4	ST-A11	19	A24-2	GI CONTROL STRUCTURE (TYPE 5)	486+04.27 - 6.09' RT	SOLID	**	**	811.26	810.26	811.26	N/A	807.26	812.80	Y (east)	Y (west)	0.5	810.42
BR-A1	-	20	GI-A14	2' X 2' PRECAST CONCRETE INLET	488+82.14 - 4.25' RT	GRATE	809.50	806.53	805.33	805.33	805.33	N/A	803.83	N/A	N	N	N/A	N/A
BR-A1	-	20	GI-A15	2' X 2' PRECAST CONCRETE INLET	489+58.12 - 5.21' RT	SOLID	810.70	N/A	805.33	807.78	807.78	N/A	803.83	N/A	N	N	N/A	N/A
BR-A1	-	20	GI-A16	GI CONTROL STRUCTURE (TYPE 13)	488+82.73 - 18.87 LT	GRATE	809.64	805.65	806.64	806.64	N/A	N/A	803.64	808.14	Y (east)	Y (west)	0.5	805.50
ST-A12	-	21	A25-6	RECESS CATCH BASIN	492+34.12 - 19.22' RT	GRATE	**	**	N/A	819.28	N/A	N/A	816.28	N/A	Y (west)	Y (east)	N/A	N/A
ST-A12	-	21	GI-A17	4' x 2' JUNCTION BOX WITH WEIR	492+41.07 - 20.45 RT	SOLID	823.60	819.31	820.56	819.31	N/A	N/A	817.56	822.60	N	N	0.5	819.48
ST-A12	-	21	GI-A18	24" CONCRETE TRENCH DRAIN	492+41.07 - 16.71 RT	GRATE	TC ELEV	N/A	821.60	N/A	N/A	N/A	VARIABLE	N/A	N	N	N/A	N/A

SEE BRT PLAN SET FOR ROADWAY DRAWINGS



Gulf Tower  
707 Grant Street  
5th Floor  
Pittsburgh, PA 15219



1550 Coraopolis Heights Road,  
Suite 400  
Moon Township, PA 15108

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		REVISIONS

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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT UPTOWN TO OAKLAND**  
STORMWATER MANAGEMENT PLANS  
STRUCTURE TABLES - FIFTH AVENUE

**Port Authority**  
connecting people to life®

CONTRACT NO. BRT-001  
DWG. NO. SWM13 SHT. 13



GI ID 1	SWM Sheet	Structure ID	Structure Type	Station - Offset	Top Type	Rim Elevation [ft] **Refer to roadway plans	Invert Elevation out to Sewer [ft] **Refer to roadway plans	Invert Elevation out to GI [ft]	Invert Elevation in from GI [ft]	BR/BS Underdrain Invert Elevation [ft]	Inv Elev IN from Structure [ft]	Structure Bottom Elevation [ft]	Weir Elevation [ft]	Deflection Pan (Covered side of inlet)	Slow release orifice cap (on pipe direction)	Orifice Diameter (in)	Orifice Elevation (ft)
ST-B2	22	GI-B7A	PWSA TYPE 13 CATCH BASIN	143+66.46 - 19.6' RT	GRATE	801.42	N/A	797.42	N/A	N/A	N/A	794.42	N/A	N	N	N/A	N/A
ST-B2	22	GI-B7	GI CONTROL STRUCTURE (TYPE 13)	142+13.93 - 20.5' RT	GRATE	800.00	796.25	796.57	795.46	N/A	N/A	793.57	798.50	Y [west]	Y [north]	SOLID CAP	N/A
ST-B3	23	G05-7	PWSA TYPE 13 CATCH BASIN	146+39.65 - 10.5' LT	GRATE	**	**	N/A	800.41	N/A	803.53	794.33	N/A	N	Y [north]	0.50	800.58
ST-B3	23	GI-B5	2' X 2' PRECAST CONCRETE INLET	146+05.46 - 20.5' LT	SOLID	805.90	N/A	802.66	N/A	N/A	N/A	801.16	N/A	N	N	N/A	N/A
ST-B3	23	GI-B5A	GI CONTROL STRUCTURE (TYPE 13)	146+43.65 - 10.5' LT	GRATE	806.20	803.53	804.15	N/A	N/A	N/A	801.15	804.70	Y [west]	N	N/A	N/A
ST-B4	24	G05-5	GI CONTROL STRUCTURE (TYPE 13)	146+00.00 - 18.5' RT	GRATE	**	**	801.26	800.26	N/A	N/A	798.26	803.35	Y (west)	Y (north)	Solid cap	N/A
ST-B5	25	G05-12	GI CONTROL STRUCTURE (TYPE 13)	148+60.00 - 18.5' RT	GRATE	**	**	808.17	807.17	N/A	N/A	805.03	810.21	Y (west)	Y (north)	0.50	807.34
ST-B5	25	G06-2	GI CONTROL STRUCTURE (TYPE 13)	149+97.50 - 18.5' RT	GRATE	**	**	809.21	N/A	N/A	N/A	804.16	810.21	Y (east)	N	N/A	N/A
ST-B6	26	GI-B1	PWSA TYPE 13 CATCH BASIN	157+10.34 - 8.2' LT	GRATE	831.81	N/A	829.64	N/A	N/A	N/A	826.64	N/A	N	N	N/A	N/A
ST-B6	26	GI-B2	GI CONTROL STRUCTURE (TYPE 13)	157+10.34 - 15.7' RT	GRATE	831.47	825.93	827.01	825.93	N/A	829.52	824.01	829.97	Y (west)	Y (south)	0.63	826.10
ST-B6	26	G07-4	PWSA TYPE 13 CATCH BASIN	156+42.00 - 18.3' RT	GRATE	**	**	N/A	825.93	N/A	N/A	**	N/A	N	N	N/A	N/A
ST-B7	27	G09-4	GI CONTROL STRUCTURE (TYPE 13)	165+96.50 - 18.0' RT	GRATE	**	**	825.84	822.76	N/A	N/A	821.09	827.50	Y (east)	Y (north)	0.50	822.93
ST-B8	28	G10-3	GI CONTROL STRUCTURE (TYPE 13)	170+95.00 - 17.8' RT	GRATE	**	**	805.61	802.41	N/A	N/A	800.75	807.15	Y (east)	Y (north)	0.50	802.58
BS-B1	29	GI-B4	24" PVC DRAIN BASIN WITH DOMED GRATE	247+66.00 - 25.0' RT	GRATE	894.75	891.74	N/A	891.91	891.91	N/A	890.25	N/A	N	Y (west)	0.50	892.17
BS-B1	29	GI-B6	2' X 2' PRECAST CONCRETE INLET	246+59.04 - 22.3' RT	SOLID	897.25	N/A	894.25	N/A	894.25	N/A	892.45	N/A	N	N	N/A	N/A

SEE BRT PLAN SET FOR ROADWAY DRAWINGS



Gulf Tower  
707 Grant Street  
5th Floor  
Pittsburgh, PA 15219



1550 Coraopolis Heights Road,  
Suite 400  
Moon Township, PA 15108

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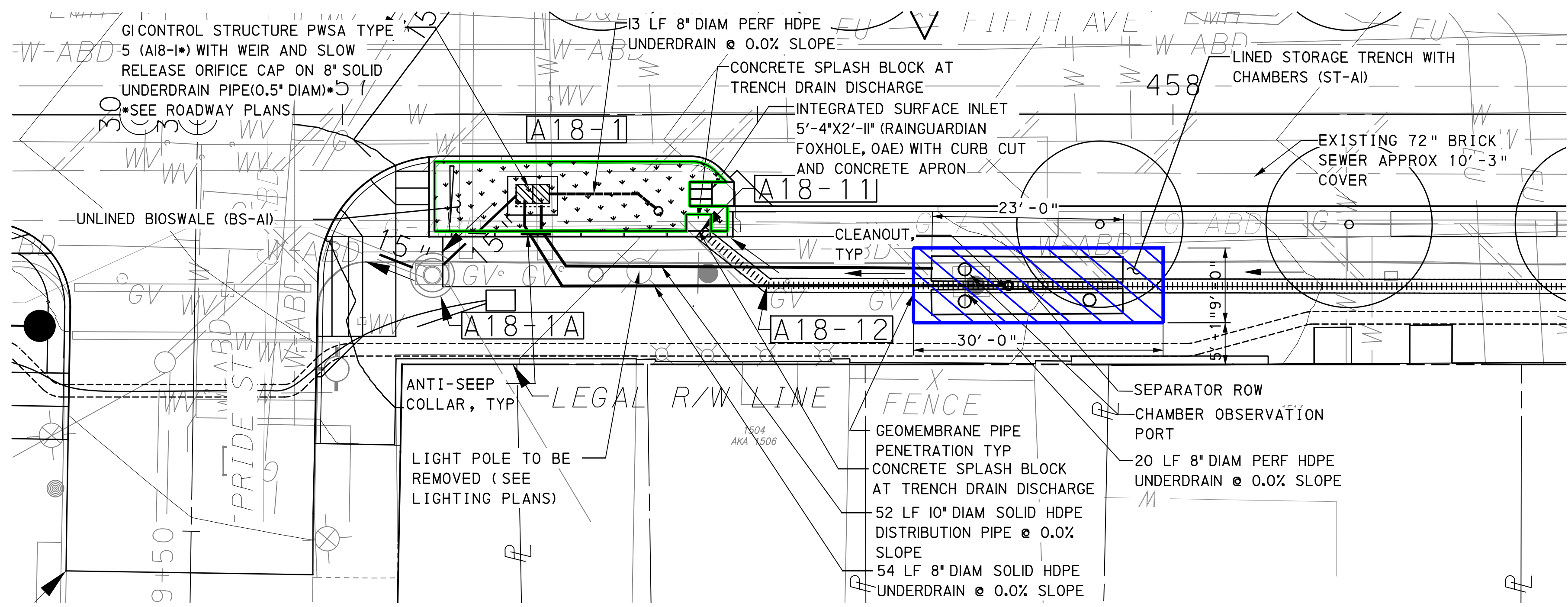
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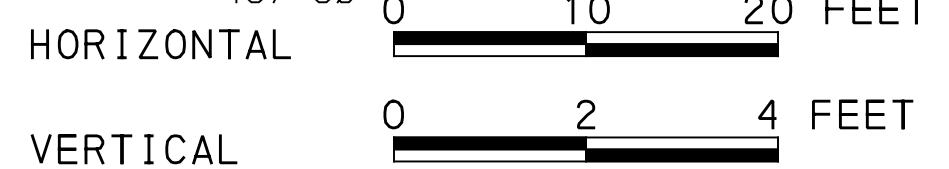
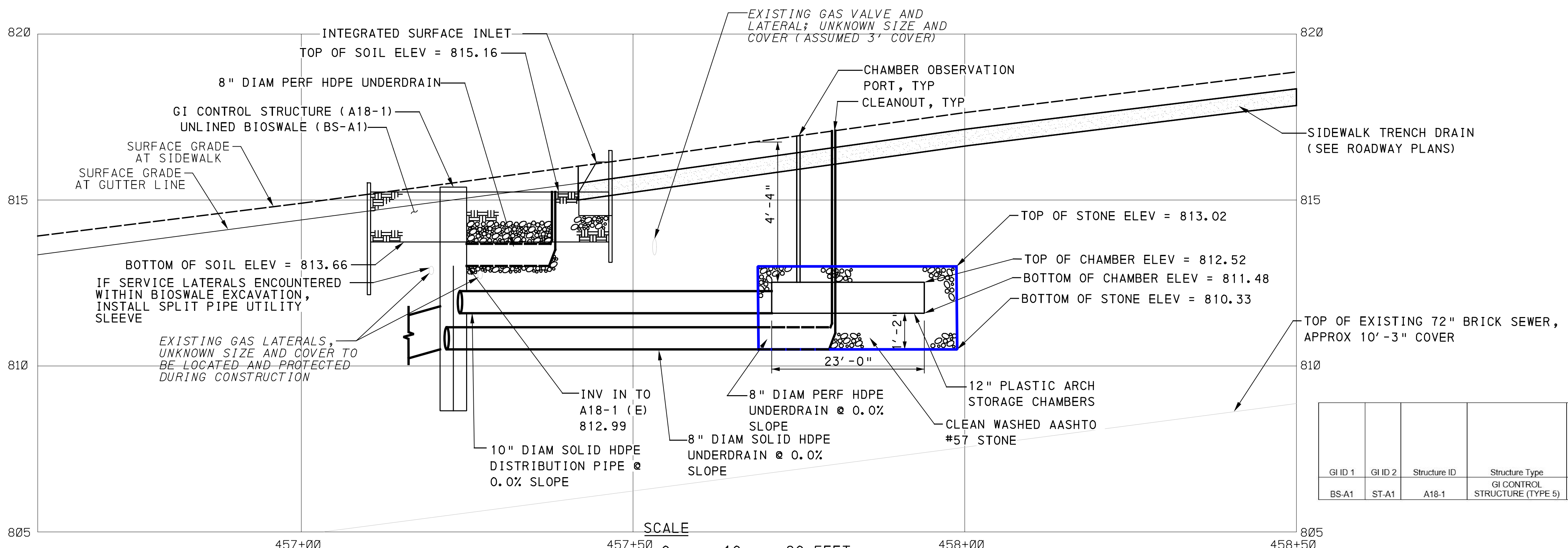
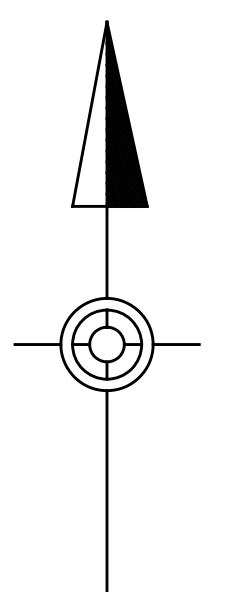
<b>PORT AUTHORITY OF ALLEGHENY COUNTY</b> PITTSBURGH PENNSYLVANIA	
BUS RAPID TRANSIT UPTOWN TO OAKLAND STORMWATER MANAGEMENT PLANS STRUCTURE TABLES - FORBES AVENUE	
<b>Port Authority</b> <small>connecting people to life™</small>	CONTRACT NO. BRT-001 DWG. NO. SWM14 SHT. 14



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LEGEND	
	DRAINAGE STRUCTURE IDENTIFICATION
	DRAINAGE STRUCTURE
	GI CONTROL STRUCTURE WITH WEIR
	GI STORAGE TRENCH (ST)
	GI BIORETENTION (BR) OR BIOSWALE (BS)
	GEOMEMBRANE ROOT INTRUSION BARRIER (SIDE FACING TREE PITS)
	PROPOSED TREE (SEE LANDSCAPE PLANS)
	ROADWAY DRAINAGE PIPE, TYP. REFER TO ROADWAY PLANS FOR MORE INFORMATION
	2' X 2' PRECAST CONCRETE INLET
	SOLID GI PIPE (SIZE PER PLAN)
	PERFORATED GI PIPE (SIZE PER PLAN)
	VERTICAL BEND ON GI DISTRIBUTION / UNDERDRAIN PIPE
	ANTI-SEEP COLLAR ON GI DISTRIBUTION / UNDERDRAIN PIPE
	CHAMBER OBSERVATION PORT
	CLEANOUT



GI ID 1	GI ID 2	Structure ID	Structure Type	Station - Offset	Top Type	Rim Elevation [ft] **Refer to roadway plans	Invert Elevation out to Sewer [ft] **Refer to roadway plans	Invert Elevation out to GI [ft]	Invert Elevation in from GI [ft]	Structure Bottom Elevation [ft]	Weir Elevation [ft]	Orifice Diameter [in]	Orifice Elevation [ft]
BS-A1	ST-A1	A18-1	GI CONTROL STRUCTURE (TYPE 5)	457+22.92 - 9.53' RT	GRATE	**	**	811.48	810.33	808.48	813.02	0.5	810.50

GI SYSTEMS BS-A1 & ST-A1  
FIFTH AVE & PRIDE ST

SEE BRT PLAN SET FOR ROADWAY DRAWINGS

**AECOM**  
Gulf Tower  
707 Grant Street  
5th Floor  
Pittsburgh, PA 15219

**Jacobs**  
1550 Coraopolis Heights Road,  
Suite 400  
Moon Township, PA 15108

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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT UPTOWN TO OAKLAND**  
STORMWATER MANAGEMENT PLANS  
FIFTH AVE - STA 456+50 TO STA 458+50

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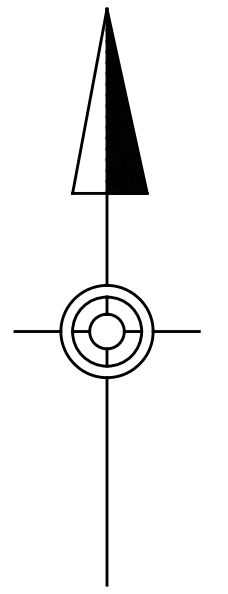
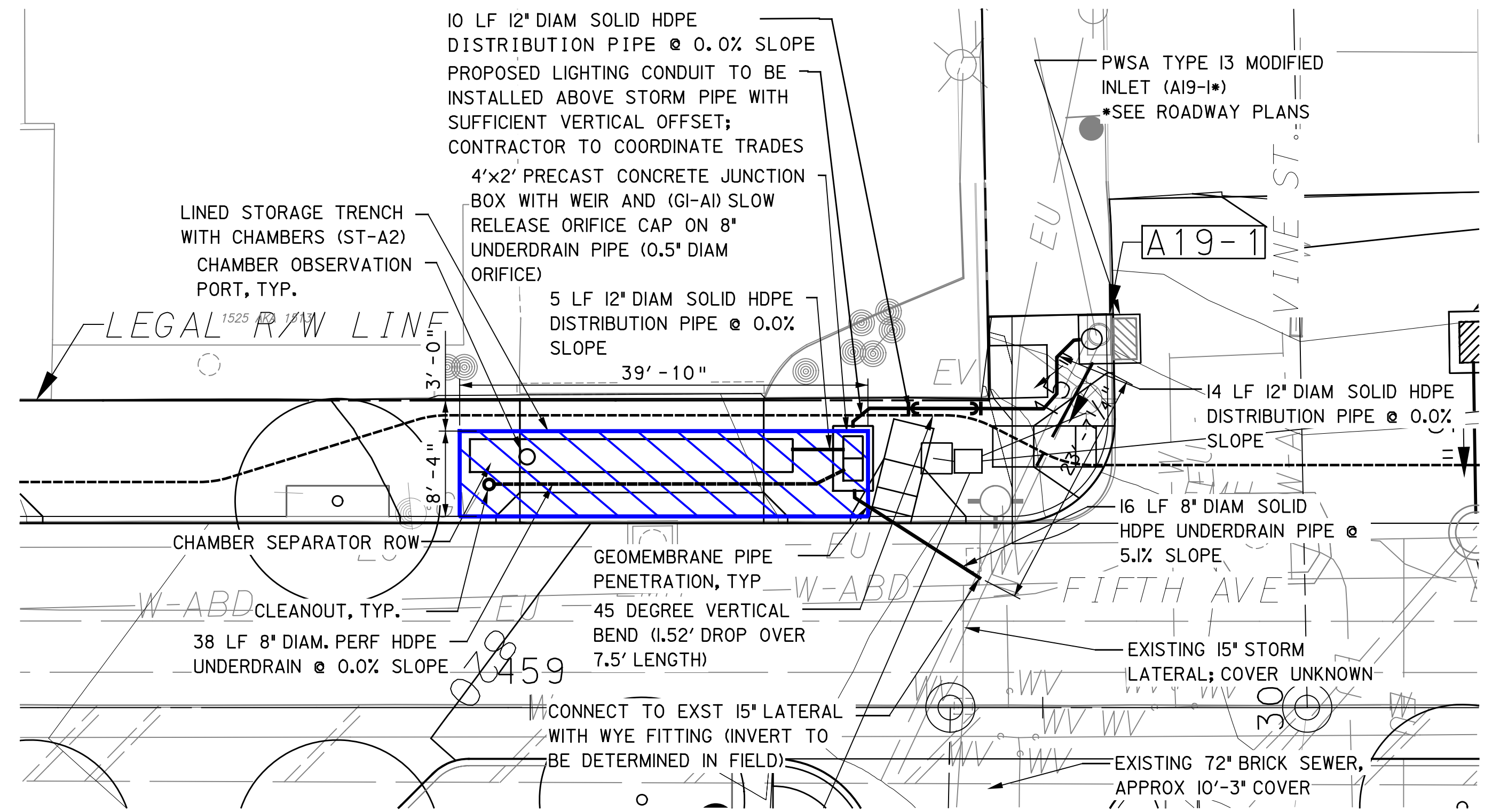
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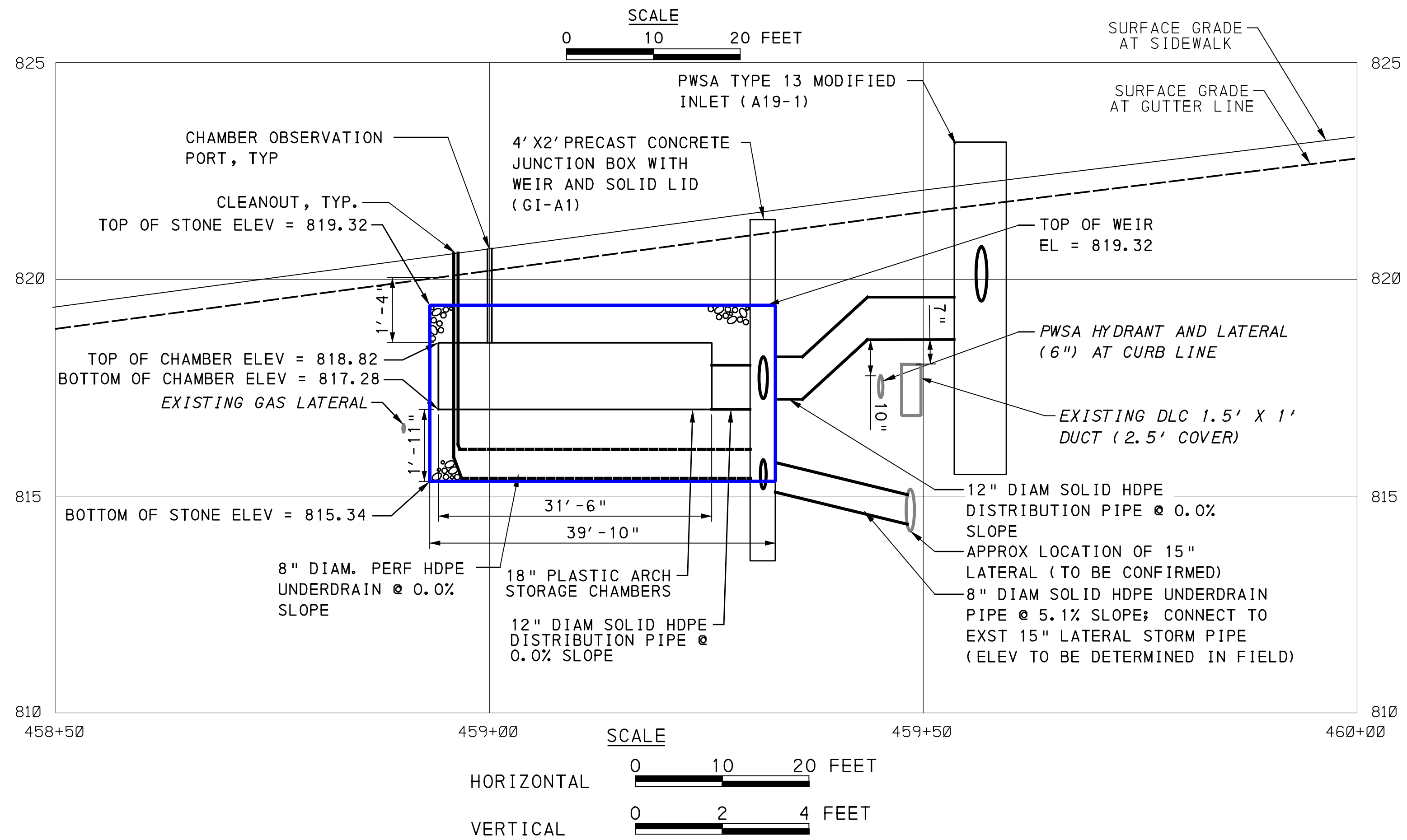
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LEGEND	
	DRAINAGE STRUCTURE IDENTIFICATION
	DRAINAGE STRUCTURE
	GI CONTROL STRUCTURE WITH WEIR
	GI STORAGE TRENCH (ST)
	GI BIORETENTION (BR) OR BIOSWALE (BS)
	GEOMEMBRANE ROOT INTRUSION BARRIER (SIF) (SIDE FACING TREE PITS)
	PROPOSED TREE (SEE LANDSCAPE PLANS)
	ROADWAY DRAINAGE PIPE, TYP. REFER TO ROADWAY PLANS FOR MORE INFORMATION
	2' X 2' PRECAST CONCRETE INLET
	SOLID GI PIPE (SIZE PER PLAN)
	PERFORATED GI PIPE (SIZE PER PLAN)
	VERTICAL BEND ON GI DISTRIBUTION / UNDERDRAIN PIPE
	ANTI-SEEP COLLAR ON GI DISTRIBUTION / UNDERDRAIN PIPE
	CHAMBER OBSERVATION PORT
	CLEANOUT



GI ID 1	GI ID 2	Structure ID	Structure Type	Station - Offset	Top Type	Rim Elevation [ft] **Refer to roadway plans	Invert Elevation out to Sewer [ft] **Refer to roadway plans	Invert Elevation out to GI [ft]	Invert Elevation in from GI [ft]	Invert Elev in from Structure A19-1 [ft]	Structure Bottom Elevation [ft]	Weir Elevation [ft]	Orifice Diameter [in]	Orifice Elevation [ft]
ST-A2	-	GI-A1	4' x 2' JUNCTION BOX WITH WEIR	459+31.40 - 24.33' LT	SOLID	821.40	815.17	817.28	815.34	817.32	813.51	819.32	0.50	815.51
ST-A2	-	A19-1	PWSA MODIFIED TYPE 13 INLET	30+36.33 - 18.21' LT	GRATE	**	**	818.84	N/A		815.84	N/A	N/A	N/A

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GI SYSTEM ST-A2  
FIFTH AVE & VINE ST

SEE BRT PLAN SET FOR ROADWAY DRAWINGS

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT UPTOWN TO OAKLAND**  
STORMWATER MANAGEMENT PLANS  
FIFTH AVE - STA 458+50 TO STA 460+00

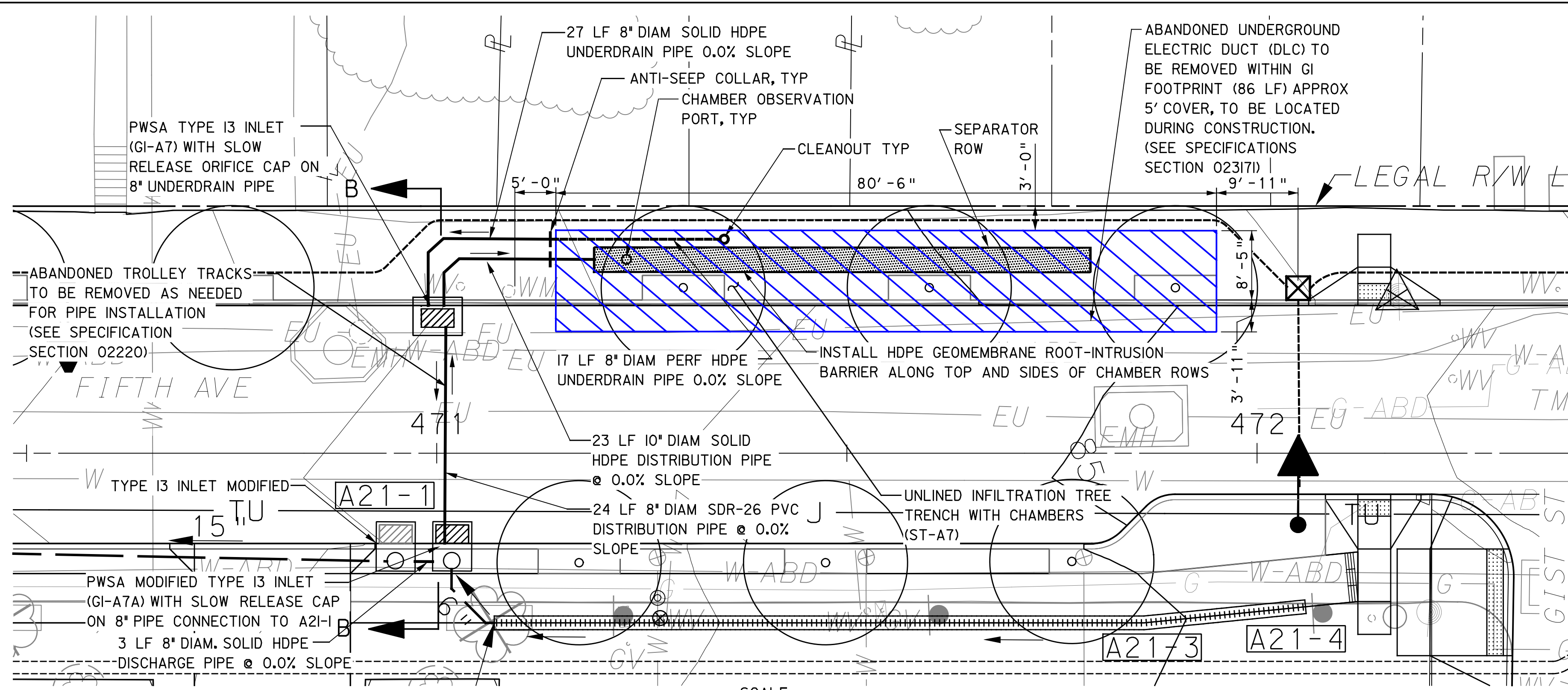
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CONTRACT NO. BRT-001

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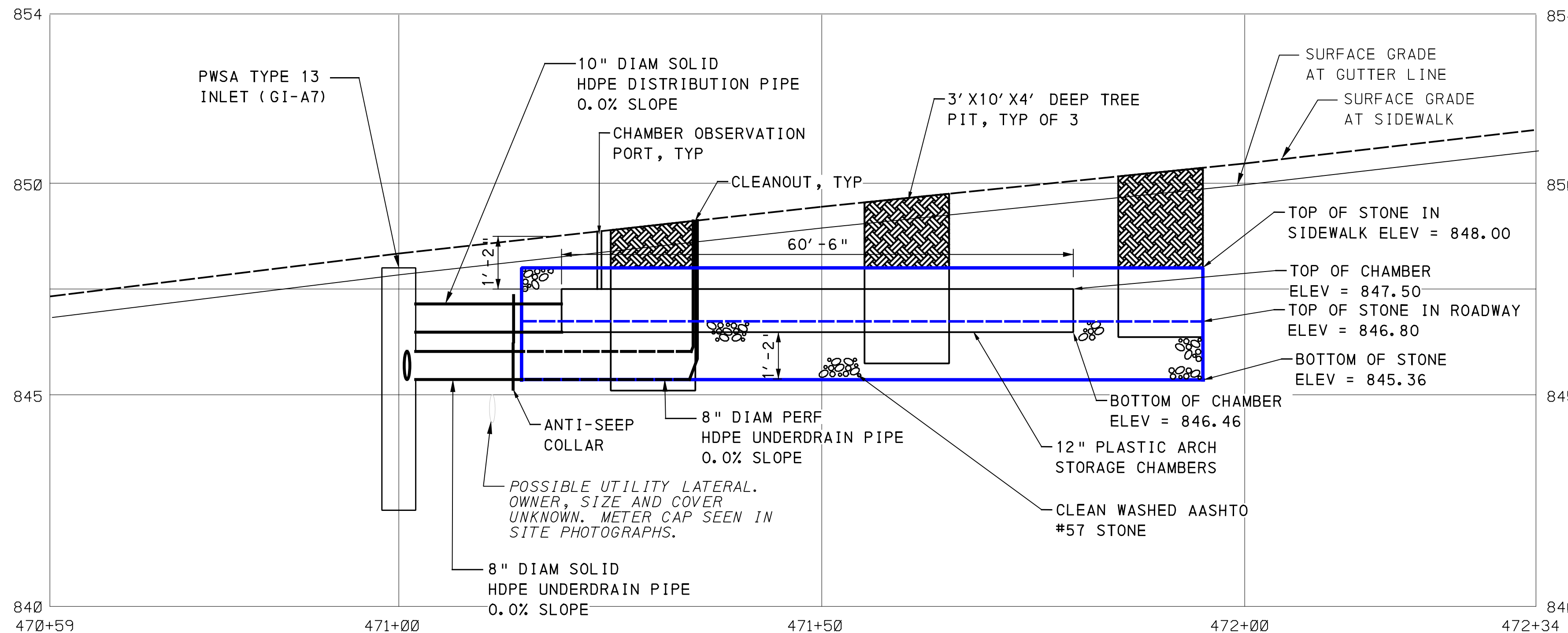
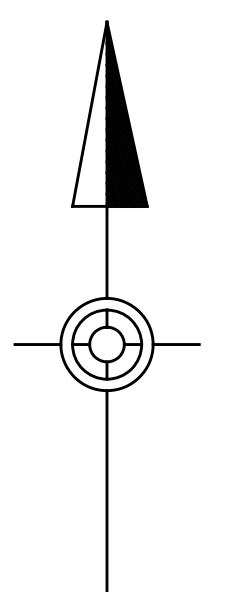
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SCALE  
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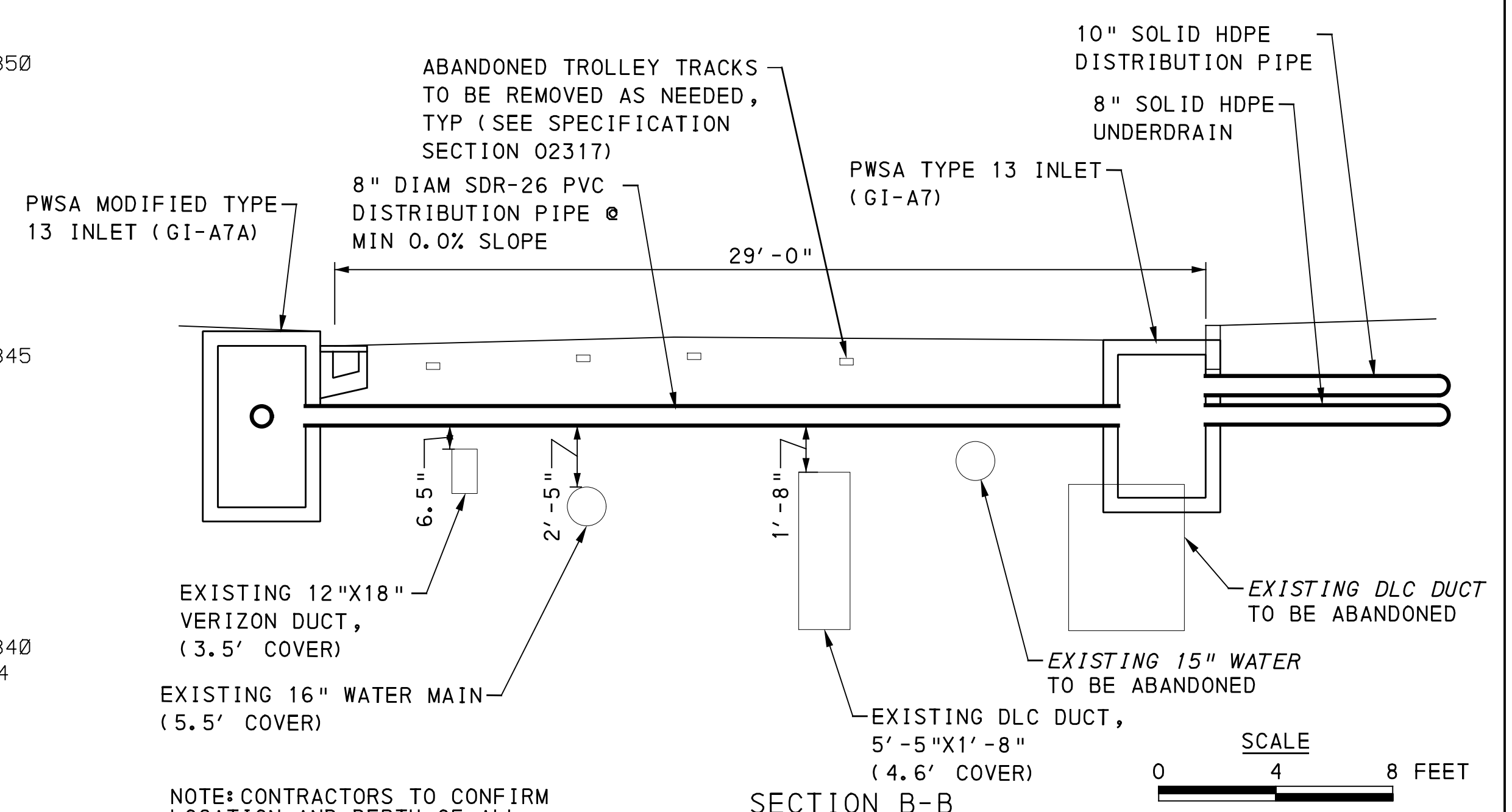
**LEGEND**

- DRAINAGE STRUCTURE IDENTIFICATION
- DRAINAGE STRUCTURE
- GI CONTROL STRUCTURE WITH WEIR
- GI STORAGE TRENCH (ST)
- GI BIORETENTION (BR) OR BIOSWALE (BS)
- GEOMEMBRANE ROOT INTRUSION BARRIER (SIDE FACING TREE PITS)
- PROPOSED TREE (SEE LANDSCAPE PLANS)
- ROADWAY DRAINAGE PIPE, TYP. REFER TO ROADWAY PLANS FOR MORE INFORMATION
- 2' X 2' PRECAST CONCRETE INLET
- SOLID GI PIPE (SIZE PER PLAN)
- PERFORATED GI PIPE (SIZE PER PLAN)
- VERTICAL BEND ON GI DISTRIBUTION / UNDERDRAIN PIPE
- ANTI-SEEP COLLAR ON GI DISTRIBUTION / UNDERDRAIN PIPE
- CHAMBER OBSERVATION PORT
- CLEANOUT



SCALE  
 HORIZONTAL 0 10 20 FEET  
 VERTICAL 0 2 4 FEET

GI ID 1	GI ID 2	Structure ID	Structure Type	Station - Offset	Top Type	Rim Elevation [ft] **Refer to roadway plans	Invert Elevation out to Sewer [ft] **Refer to roadway plans	Invert Elevation out to GI [ft]	Invert Elevation in from GI [ft]	Structure Bottom Elevation [ft]	Weir Elevation [ft]	Orifice Diameter [in]	Orifice Elevation [ft]
ST-A7	-	GI-A7	PWSA TYPE 13 CATCH BASIN	471+00.00 - 14.21' RT	GRATE	848.00	845.36	846.46	845.36	842.36	N/A	0.5	845.53
ST-A7	-	GI-A7A	PWSA MODIFIED TYPE 13 INLET	471+00.00 - 11.00' RT	GRATE	848.25	845.36	845.36	845.36	842.36	N/A	0.5	845.53



NOTE: CONTRACTORS TO CONFIRM LOCATION AND DEPTH OF ALL EXISTING UTILITIES PRIOR TO PIPE INSTALLATION

SECTION B-B  
 GI SYSTEM ST-A7 FIFTH AVE & GIST ST  
 SEE BRT PLAN SET FOR ROADWAY DRAWINGS

**AECOM**  
 Gulf Tower  
 707 Grant Street  
 5th Floor  
 Pittsburgh, PA 15219

**Jacobs**  
 1550 Coraopolis Heights Road,  
 Suite 400  
 Moon Township, PA 15108

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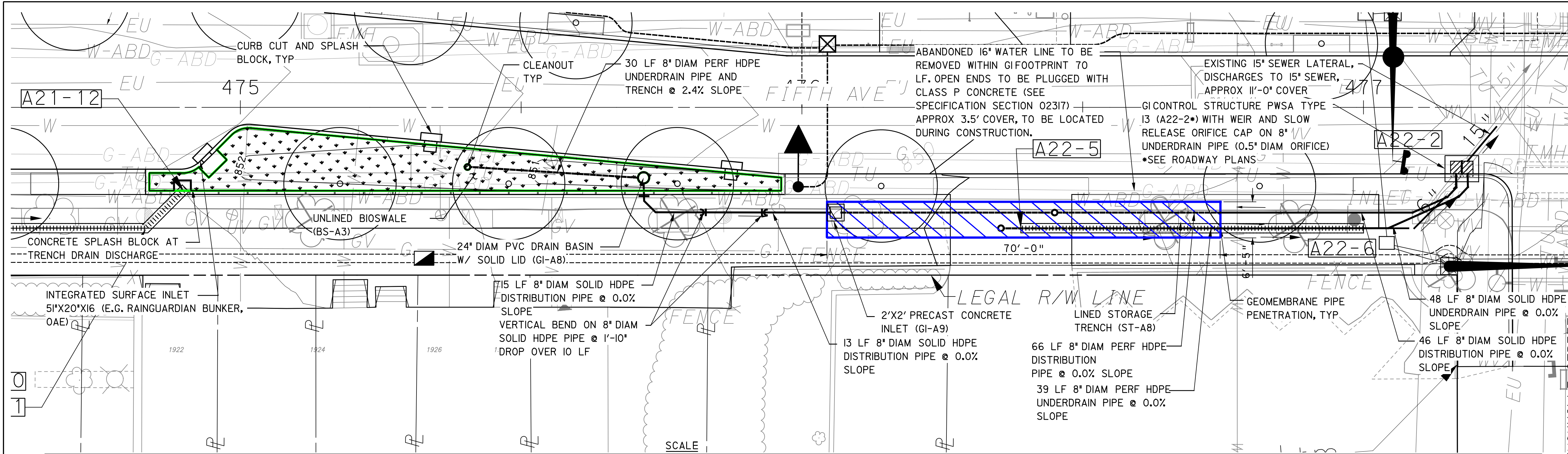
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 PITTSBURGH PENNSYLVANIA  
**BUS RAPID TRANSIT UPTOWN TO OAKLAND**  
 STORMWATER MANAGEMENT PLANS  
 FIFTH AVE - STA 470+50 TO STA 472+50  
**Port Authority** connecting people to life  
 CONTRACT NO. BRT-001  
 DWG. NO. SWM17 SHT. 17

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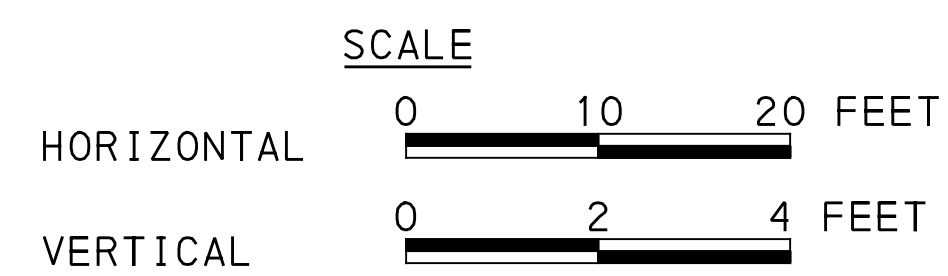
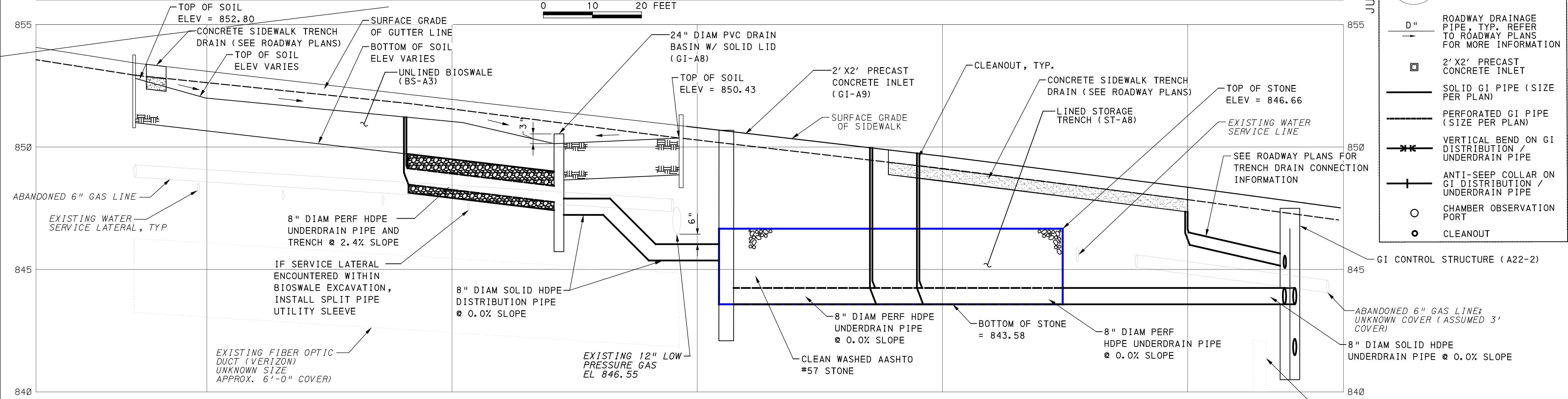
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**LEGEND**

- A01-1 DRAINAGE STRUCTURE IDENTIFICATION
- [Symbol] DRAINAGE STRUCTURE
- [Symbol] GI CONTROL STRUCTURE WITH WEIR
- [Symbol] GI STORAGE TRENCH (ST)
- [Symbol] GI BIORETENTION (BR) OR BIOSWALE (BS)
- [Symbol] GEOMEMBRANE ROOT INTRUSION BARRIER (SIDE FACING TREE PITS)
- [Symbol] PROPOSED TREE (SEE LANDSCAPE PLANS)
- D" ROADWAY DRAINAGE PIPE, TYP. REFER TO ROADWAY PLANS FOR MORE INFORMATION
- [Symbol] 2' X 2' PRECAST CONCRETE INLET
- [Symbol] SOLID GI PIPE (SIZE PER PLAN)
- [Symbol] PERFORATED GI PIPE (SIZE PER PLAN)
- [Symbol] VERTICAL BEND ON GI DISTRIBUTION / UNDERDRAIN PIPE
- [Symbol] ANTI-SEEP COLLAR ON GI DISTRIBUTION / UNDERDRAIN PIPE
- [Symbol] CHAMBER OBSERVATION PORT
- [Symbol] CLEANOUT



GI ID 1	GI ID 2	Structure ID	Structure Type	Station - Offset	Top Type	Rim Elevation [ft] "Riser" to roadway plans	Invert Elevation out to Sewer [ft] "Riser" to roadway plans	Invert Elevation in from GI [ft]	Invert Elevation in from GI [ft]	Structure Bottom Elevation [ft]	Weir Elevation [ft]	Orifice Diameter [ft]	Orifice Elevation [ft]
BS-A3	ST-A8	GI-A8	24" PVC DRAIN BASIN WITH SOLID LID	475+72.12 - 11.94' RT	SOLID	850.58	N/A	847.23	847.75	845.73	N/A	N/A	N/A
BS-A3	ST-A8	A22-2	GI CONTROL STRUCTURE (TYPE 13)	477+17.51 - 11.83' RT	GRATE	--	--	843.58	843.58	840.58	846.66	0.50	843.74
BS-A3	ST-A8	GI-A9	2' X 2' PRECAST CONCRETE INLET	476+58.87 - 18.79' RT	SOLID	850.45	N/A	843.58	845.38	842.08	N/A	N/A	N/A

GI SYSTEM BS-A3 & ST-A8  
FIFTH AVE & JUMONVILLE ST  
SEE BRT PLAN SET FOR ROADWAY DRAWINGS

**AECOM**  
Gulf Tower  
707 Grant Street  
5th Floor  
Pittsburgh, PA 15219

**Jacobs**  
1550 Coraopolis Heights Road,  
Suite 400  
Moon Township, PA 15108

NO.	DATE	DESCRIPTION
REVISIONS		

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SIGNATURE \_\_\_\_\_ APPROVED \_\_\_\_\_ DATE \_\_\_\_\_

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CHECKED DPW  
IN CHARGE ALP  
DATE 05/01/24  
SCALE AS SHOWN

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

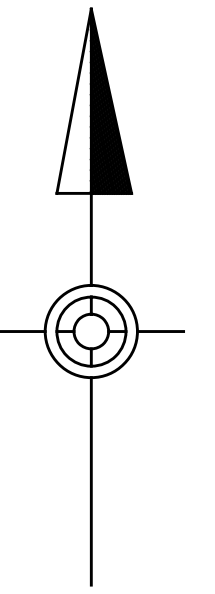
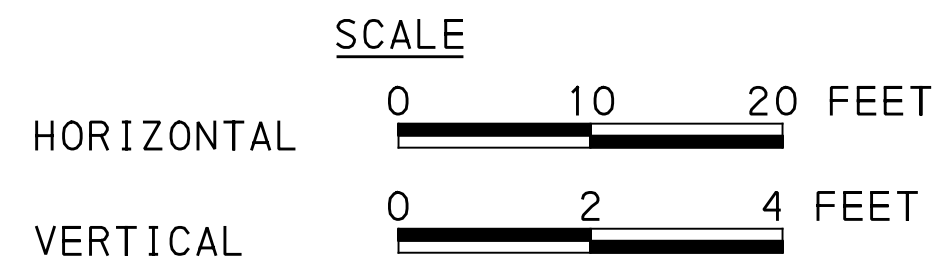
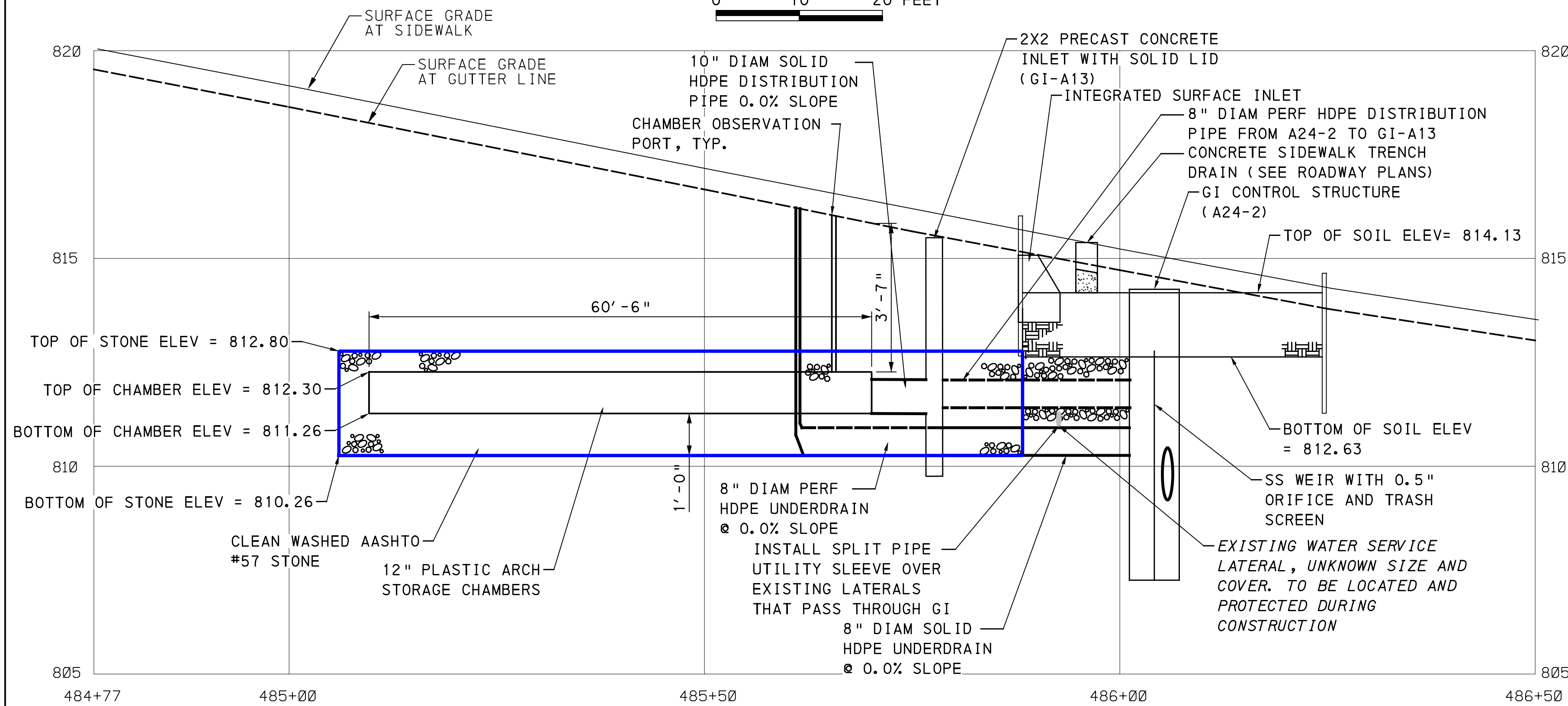
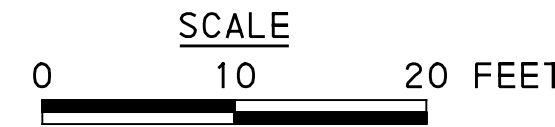
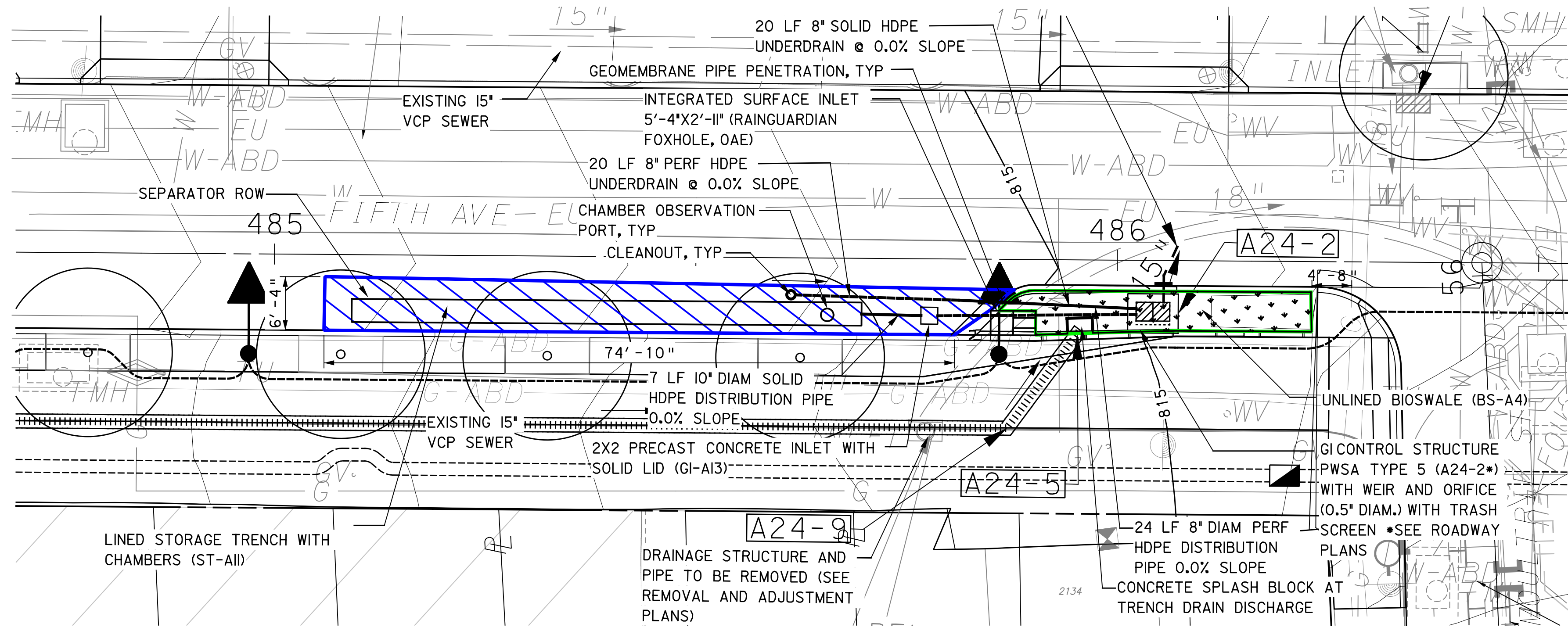
**BUS RAPID TRANSIT UPTOWN TO OAKLAND**  
STORMWATER MANAGEMENT PLANS  
FIFTH AVE - STA 474+50 TO 477+50

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CONTRACT NO. BRT-001  
DWG. NO. SWM18 SHT. 18



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**LEGEND**

- DRAINAGE STRUCTURE IDENTIFICATION
- DRAINAGE STRUCTURE
- GI CONTROL STRUCTURE WITH WEIR
- GI STORAGE TRENCH (ST)
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- CHAMBER OBSERVATION PORT
- CLEANOUT

GI ID 1	GI ID 2	Structure ID	Structure Type	Station - Offset	Top Type	Rim Elevation [ft] **Refer to roadway plans	Invert Elevation out to Sewer [ft] **Refer to roadway plans	Invert Elevation out to GI [ft]	Invert Elevation in from GI [ft]	Structure Bottom Elevation [ft]	Weir Elevation [ft]	Orifice Diameter [in]	Orifice Elevation [ft]
BS-A4	ST-A11	GI-A13	2' X 2' PRECAST CONCRETE INLET	485+78.38 - 5.93' RT	SOLID	815.40	N/A	811.26	811.26	809.76	N/A	N/A	N/A
BS-A4	ST-A11	A24-2	GI CONTROL STRUCTURE (TYPE 5)	486+04.27 - 6.09' RT	GRATE	**	**	811.26	810.26	807.26	812.80	0.50	810.42

GI SYSTEM BS-A4 & ST-A11  
FIFTH AVE & MOULTRIE ST

SEE BRT PLAN SET FOR ROADWAY DRAWINGS

**AECOM**

Gulf Tower  
707 Grant Street  
5th Floor  
Pittsburgh, PA 15219

**Jacobs**

1550 Coraopolis Heights Road,  
Suite 400  
Moon Township, PA 15108

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IN CHARGE	ALP
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SCALE	AS SHOWN

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT UPTOWN TO OAKLAND**  
STORMWATER MANAGEMENT PLANS  
FIFTH AVE - STA 484+50 TO 486+50

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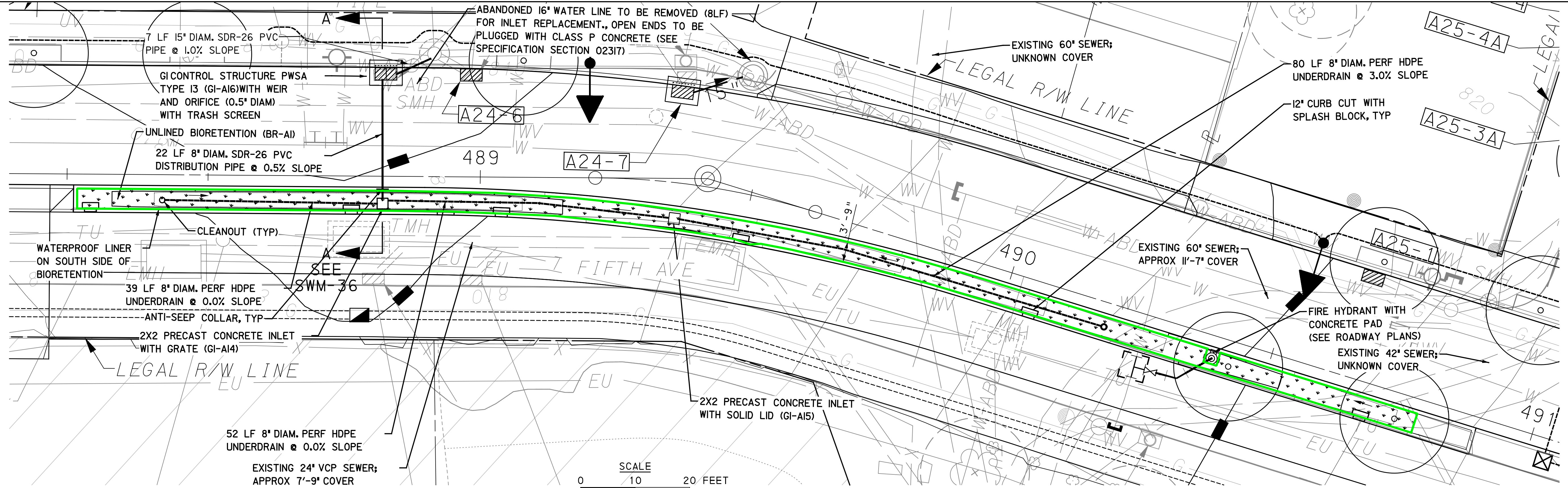
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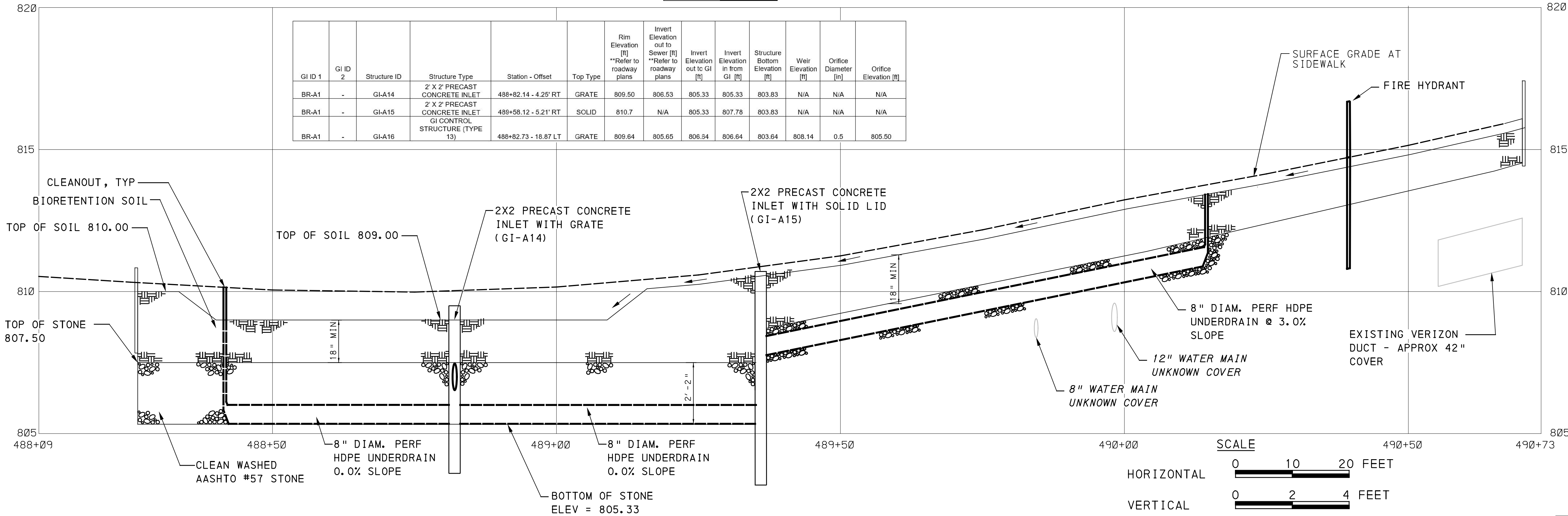


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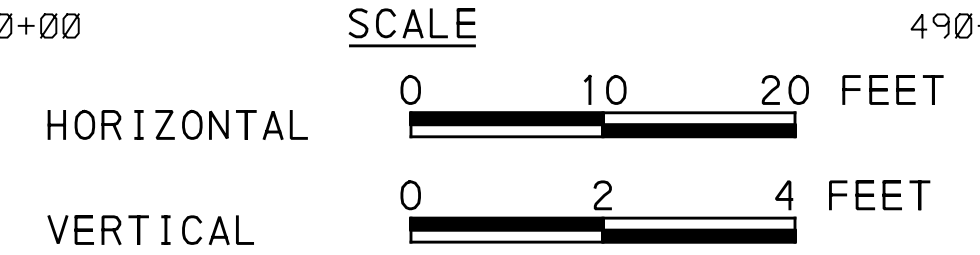


GI ID 1	GI ID 2	Structure ID	Structure Type	Station - Offset	Top Type	Rim Elevation (ft)	Invert Elevation out to Sewer (ft)	Invert Elevation out to GI (ft)	Invert Elevation in from GI (ft)	Structure Bottom Elevation (ft)	Weir Elevation (ft)	Orifice Diameter (in)	Orifice Elevation (ft)
BR-A1	-	GI-A14	2' X 2' PRECAST CONCRETE INLET	488+82.14 - 4.25' RT	GRATE	809.50	806.53	805.33	805.33	803.83	N/A	N/A	N/A
BR-A1	-	GI-A15	2' X 2' PRECAST CONCRETE INLET	488+58.12 - 5.21' RT	SOLID	810.7	N/A	805.33	807.78	803.83	N/A	N/A	N/A
BR-A1	-	GI-A16	GI CONTROL STRUCTURE (TYPE 13)	488+82.73 - 18.87' LT	GRATE	809.64	805.65	806.54	806.64	803.64	808.14	0.5	805.50



**LEGEND**

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- CLEANOUT



GI SYSTEM BR-A1  
FIFTH AVE & KIRKPATRICK ST  
SEE BRT PLAN SET FOR ROADWAY DRAWINGS

**AECOM**  
Gulf Tower  
707 Grant Street  
5th Floor  
Pittsburgh, PA 15219

**Jacobs**  
1550 Coraopolis Heights Road,  
Suite 400  
Moon Township, PA 15108

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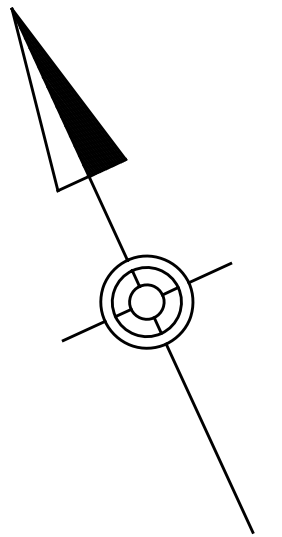
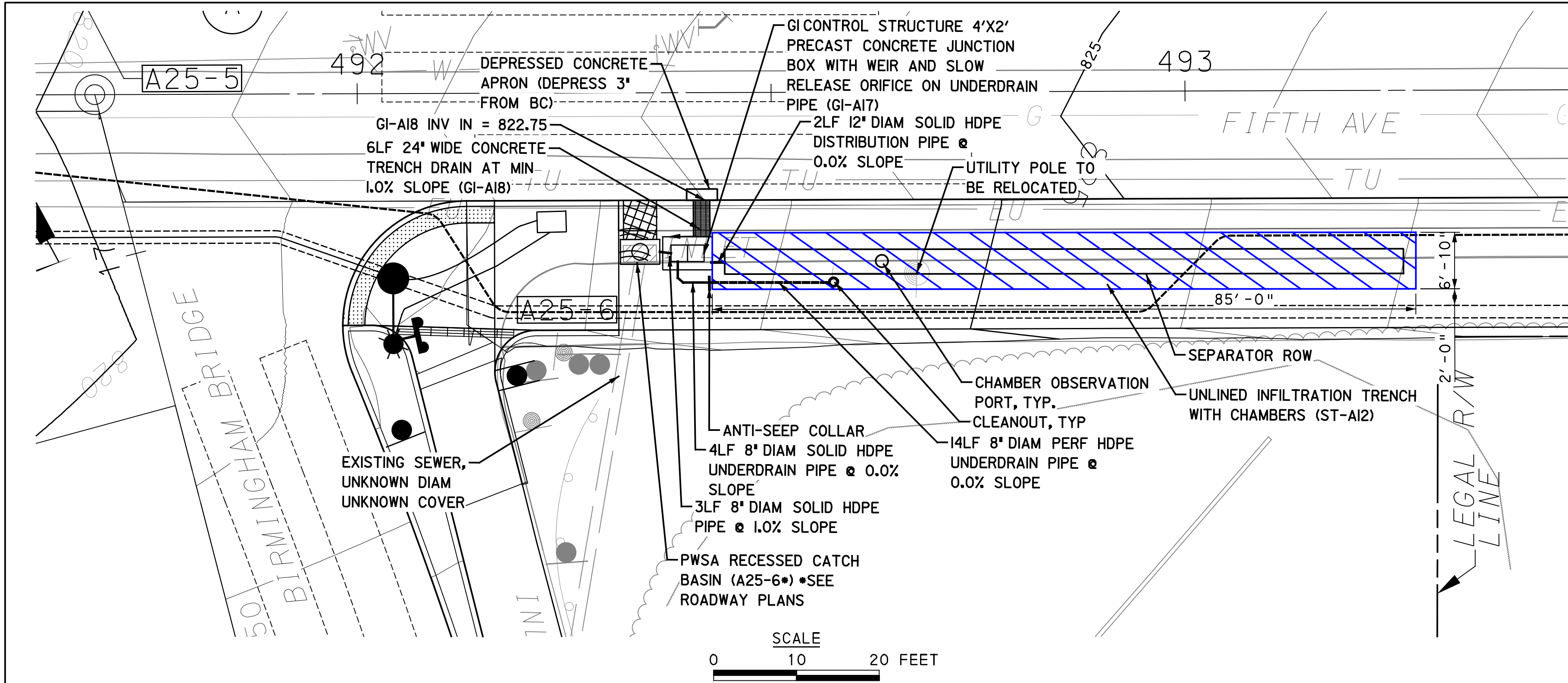
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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA  
**BUS RAPID TRANSIT UPTOWN TO OAKLAND**  
STORMWATER MANAGEMENT PLANS  
FIFTH AVE - STA 488+00 TO 491+00  
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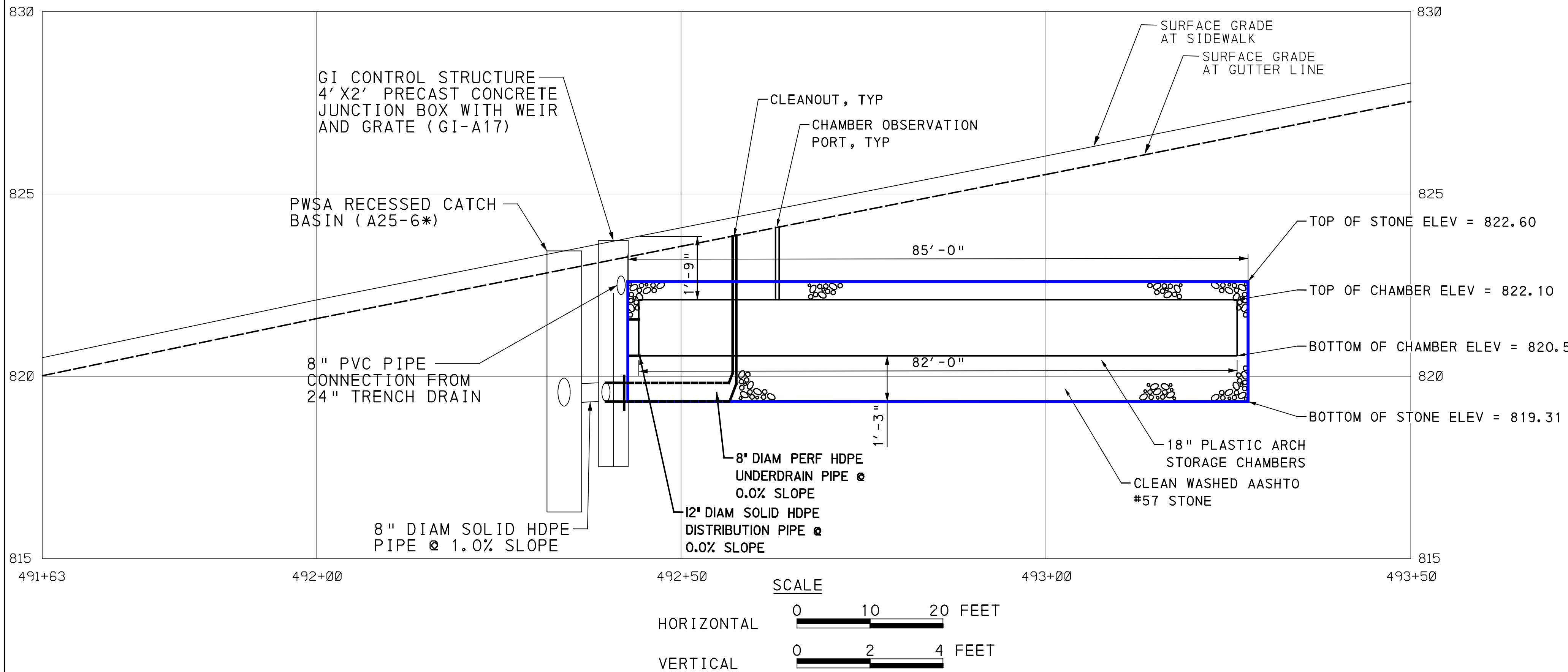
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**LEGEND**

- A01-1 DRAINAGE STRUCTURE IDENTIFICATION
- DRAINAGE STRUCTURE
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- GI STORAGE TRENCH (ST)
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GI ID 1	GI ID 2	Structure ID	Structure Type	Station - Offset	Top Type	Rim Elevation [ft] **Refer to roadway plans	Invert Elevation out to Sewer [ft] **Refer to roadway plans	Invert Elevation out to GI [ft]	Invert Elevation in from GI [ft]	Structure Bottom Elevation [ft]	Weir Elevation [ft]	Orifice Diameter [ft]	Orifice Elevation [ft]
ST-A12	-	A25-6	RECESS CATCH BASIN	492+34.12 - 19.22' RT	GRATE	**	**	N/A	819.28	816.28	N/A	N/A	N/A
ST-A12	-	GI-A17	4' x 2' JUNCTION BOX WITH WEIR	492+41.07 - 20.45' RT	GRATE	823.60	819.31	820.56	819.31	817.56	822.60	0.50	819.48
ST-A12	-	GI-A18	24" CONCRETE TRENCH DRAIN	492+41.07 - 16.71' RT	SOLID	TC ELEV	N/A	821.60	N/A	VARIES	N/A	N/A	N/A

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GI SYSTEM ST-A12  
FIFTH AVE & BIRMINGHAM BRIDGE  
SEE BRT PLAN SET FOR ROADWAY DRAWINGS

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT UPTOWN TO OAKLAND**  
STORMWATER MANAGEMENT PLANS  
FIFTH AVE - STA 491+50 TO 493+50

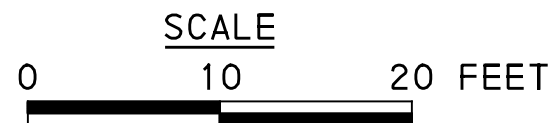
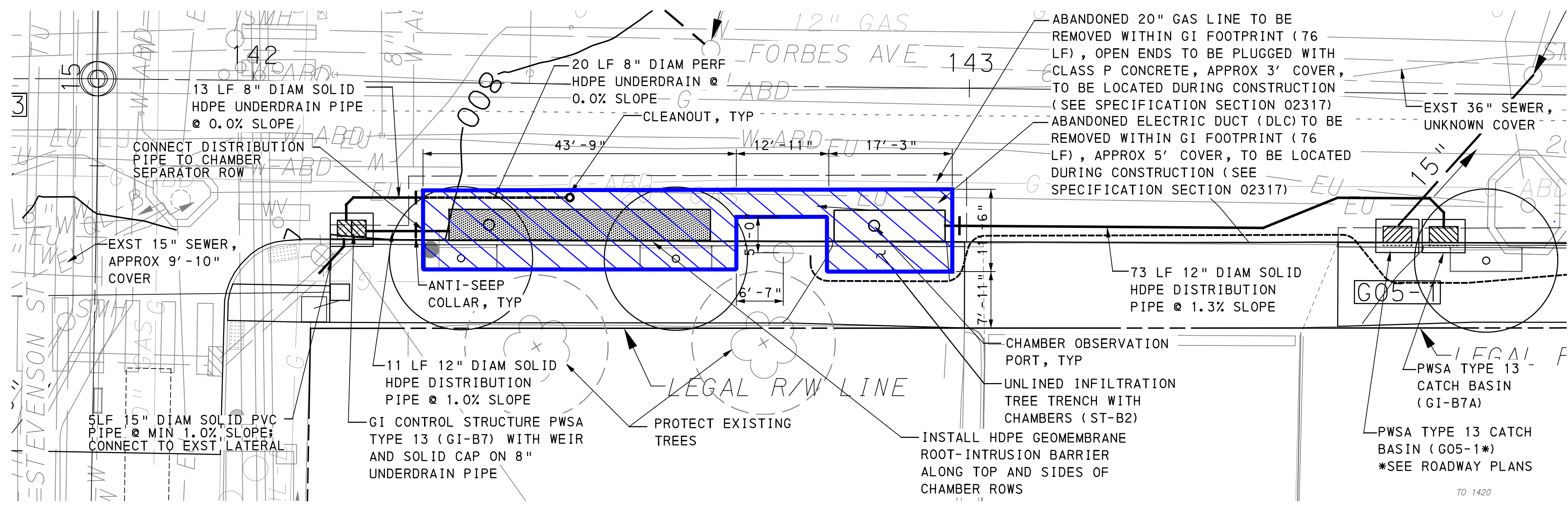
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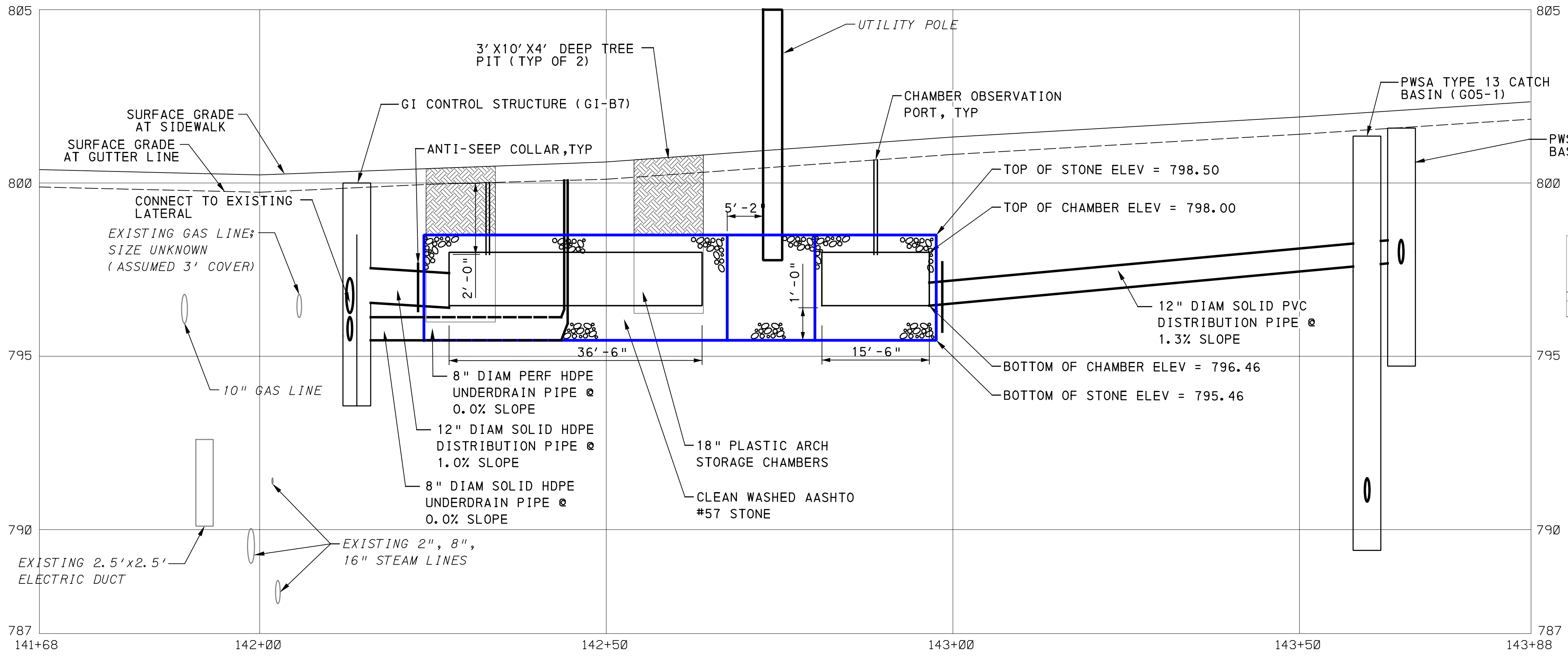
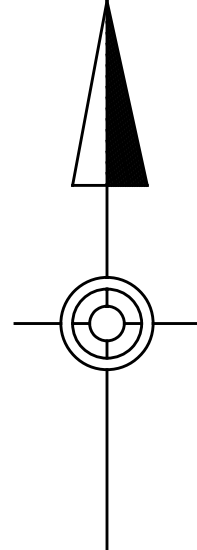
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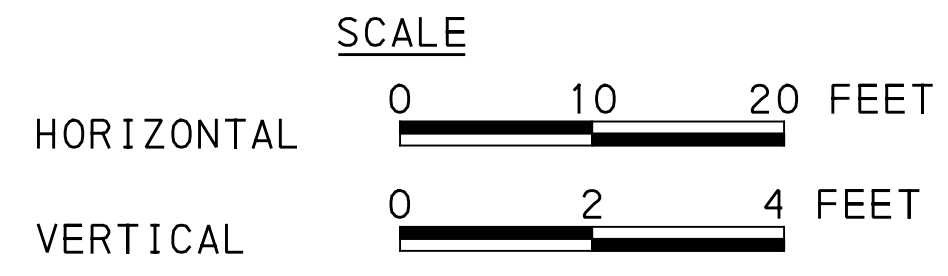


**LEGEND**

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- DRAINAGE STRUCTURE
- GI CONTROL STRUCTURE WITH WEIR
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GI ID	Structure ID	Structure Type	Station - Offset	Top Type	Rim Elevation [ft] ** Refer to Roadway Plans**	Invert Elevation out to Sewer [ft] **Refer to Roadway Plans**	Invert Elevation in from GI [ft]	Invert Elevation Structure Bottom [ft]	Weir Elevation [ft]	Orifice Diameter [in]	Orifice Elevation [ft]
ST-B2	GI-B7A	PWSA TYPE 13 CATCH BASIN	143+66.46 - 19.6' RT	GRATE	801.42	N/A	797.42	N/A	794.42	N/A	N/A
ST-B2	GI-B7	GI CONTROL STRUCTURE (TYPE 13)	142+13.93 - 20.5' RT	GRATE	800.00	796.25	796.57	795.46	793.57	798.50	N/A



GI SYSTEM ST-B2  
FORBES AVE & STEVENSON ST  
SEE BRT PLAN SET FOR ROADWAY DRAWINGS

**AECOM**  
Gulf Tower  
707 Grant Street  
5th Floor  
Pittsburgh, PA 15219

**Jacobs**  
1550 Coraopolis Heights Road,  
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Moon Township, PA 15108

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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

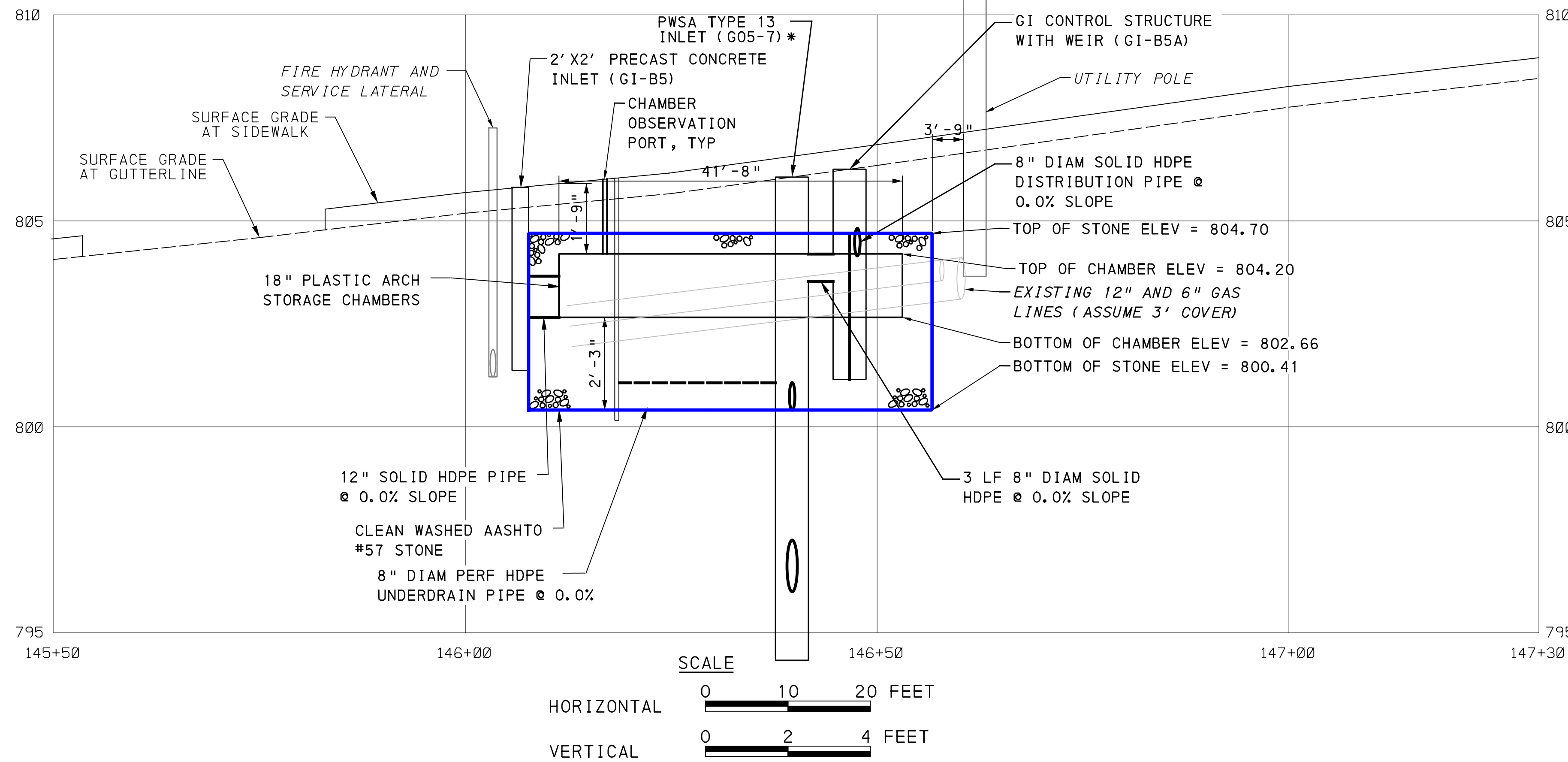
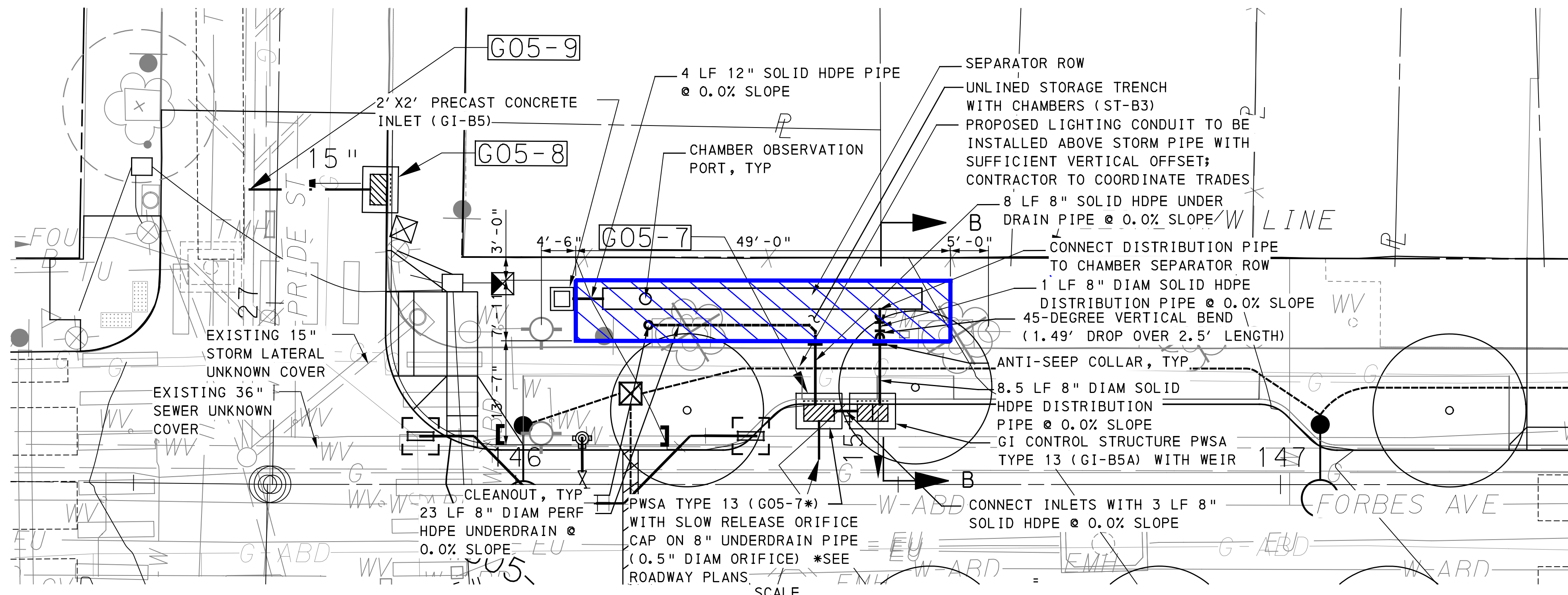
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FORBES AVE - STA 142+00 TO STA 144+00

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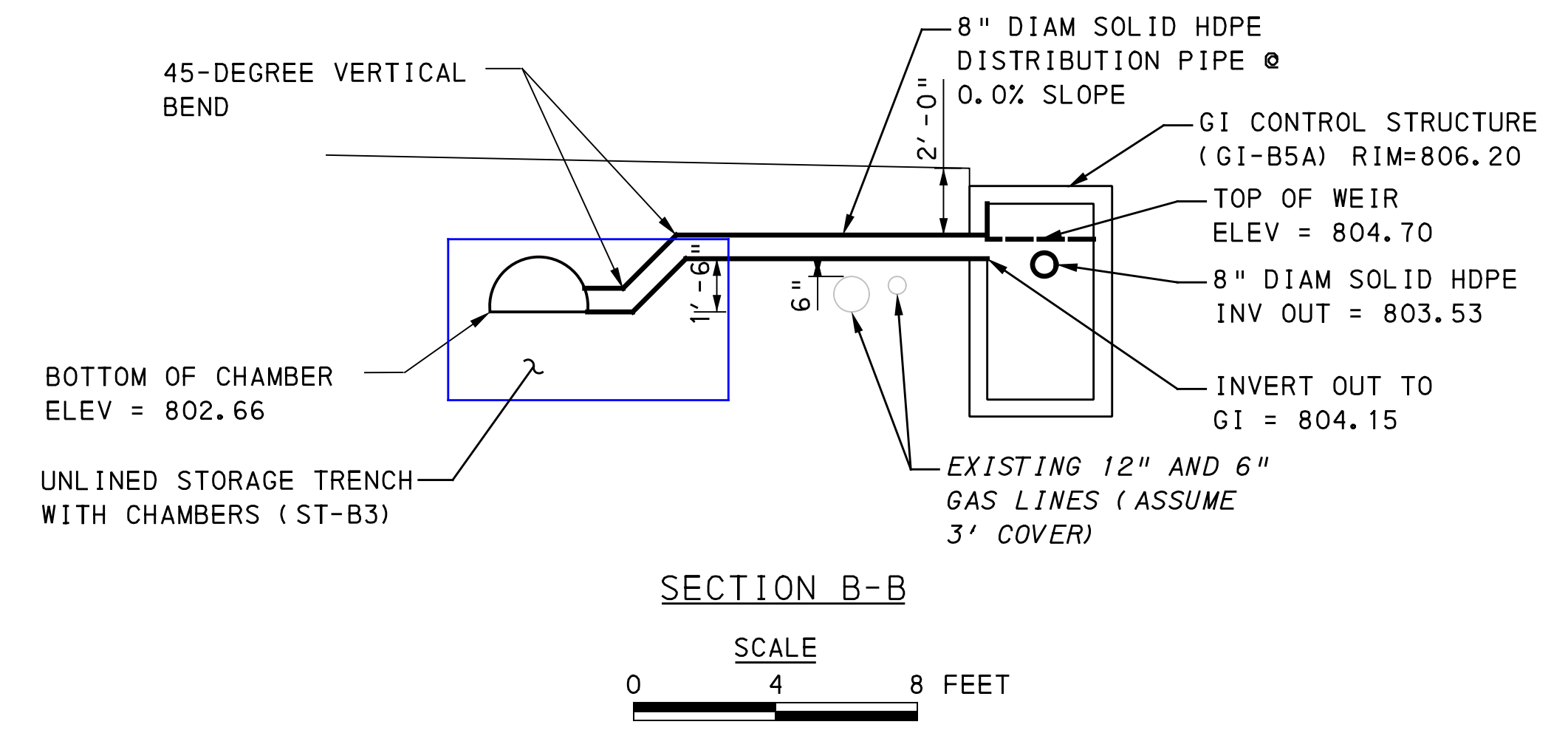
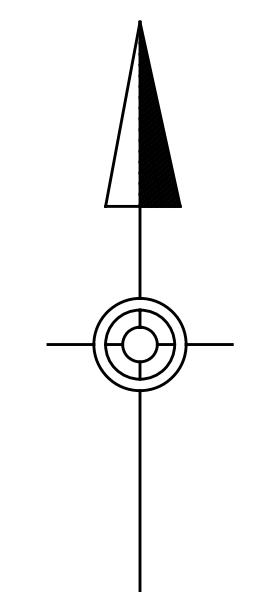


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- DRAINAGE STRUCTURE IDENTIFICATION
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- GI CONTROL STRUCTURE WITH WEIR
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GI ID	Structure ID	Structure Type	Station - Offset	Top Type	Rim Elevation [ft]** Refer to Roadway Plans**	Invert Elevation out to Sewer [ft] **Refer to Roadway Plans**	Invert Elevation out to GI [ft]	Invert Elevation in from GI [ft]	Structure Bottom Elevation [ft]	Weir Elevation [ft]	Orifice Diameter [in]	Orifice Elevation [ft]
ST-B3	G05-7	PWSA TYPE 13 CATCH BASIN	146+39.65 - 10.5' LT	GRATE	N/A	N/A	800.41	794.33	N/A	N/A	0.5	800.58
ST-B3	GI-B5	2' X 2' PRECAST CONCRETE INLET GI CONTROL STRUCTURE (TYPE 13)	146+05.46 - 20.5' LT	SOLID	805.90	N/A	802.66	N/A	801.15	N/A	N/A	N/A
ST-B3	GI-B5A	PWSA TYPE 13	146+43.65 - 10.5' LT	GRATE	806.20	803.53	804.15	N/A	801.15	804.70	N/A	N/A

GI SYSTEM ST-B3 FORBES AVE & PRIDE ST

SEE BRT PLAN SET FOR ROADWAY DRAWINGS

**AECOM**  
Gulf Tower  
707 Grant Street  
5th Floor  
Pittsburgh, PA 15219

**Jacobs**  
1550 Coraopolis Heights Road,  
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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT UPTOWN TO OAKLAND**  
STORMWATER MANAGEMENT PLANS  
FORBES AVE - STA 145+50 TO STA 147+50

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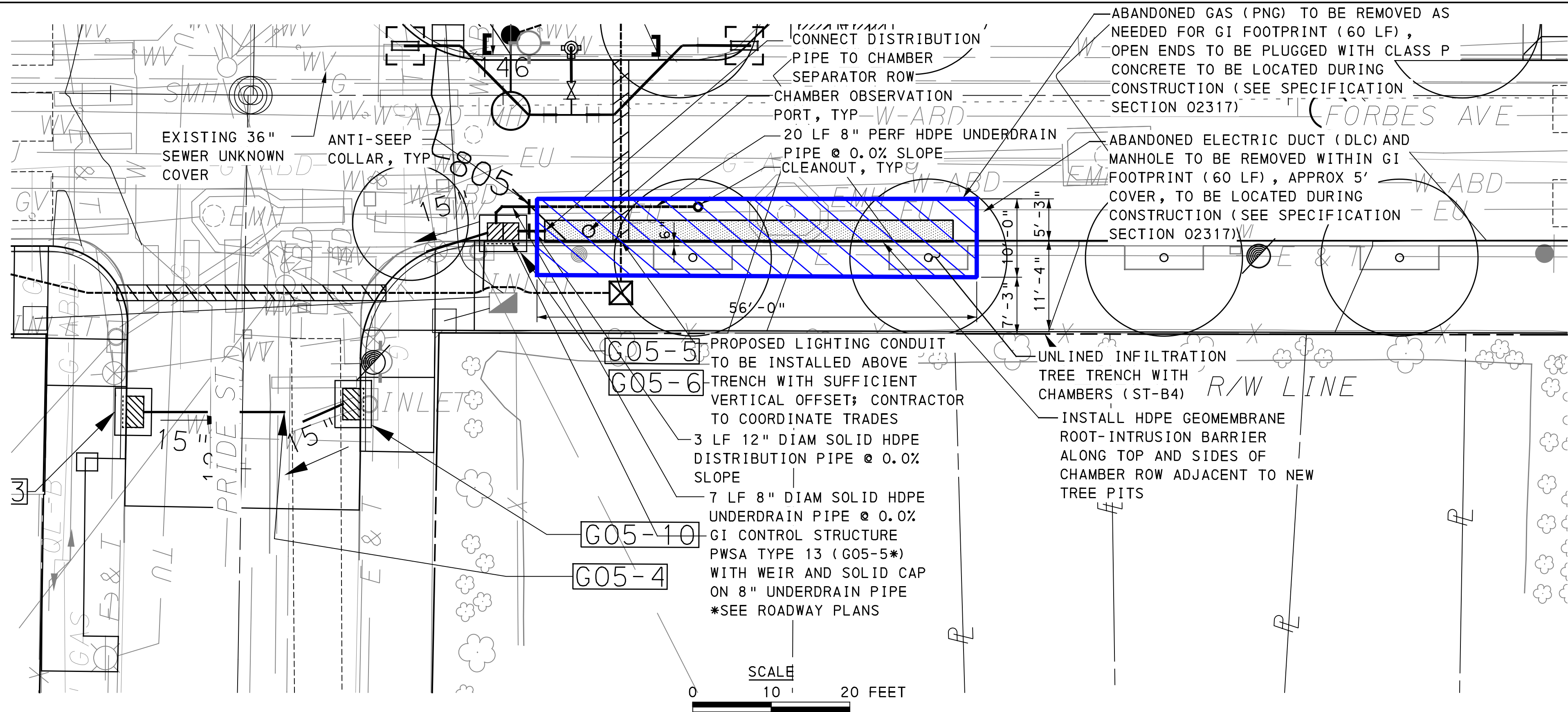
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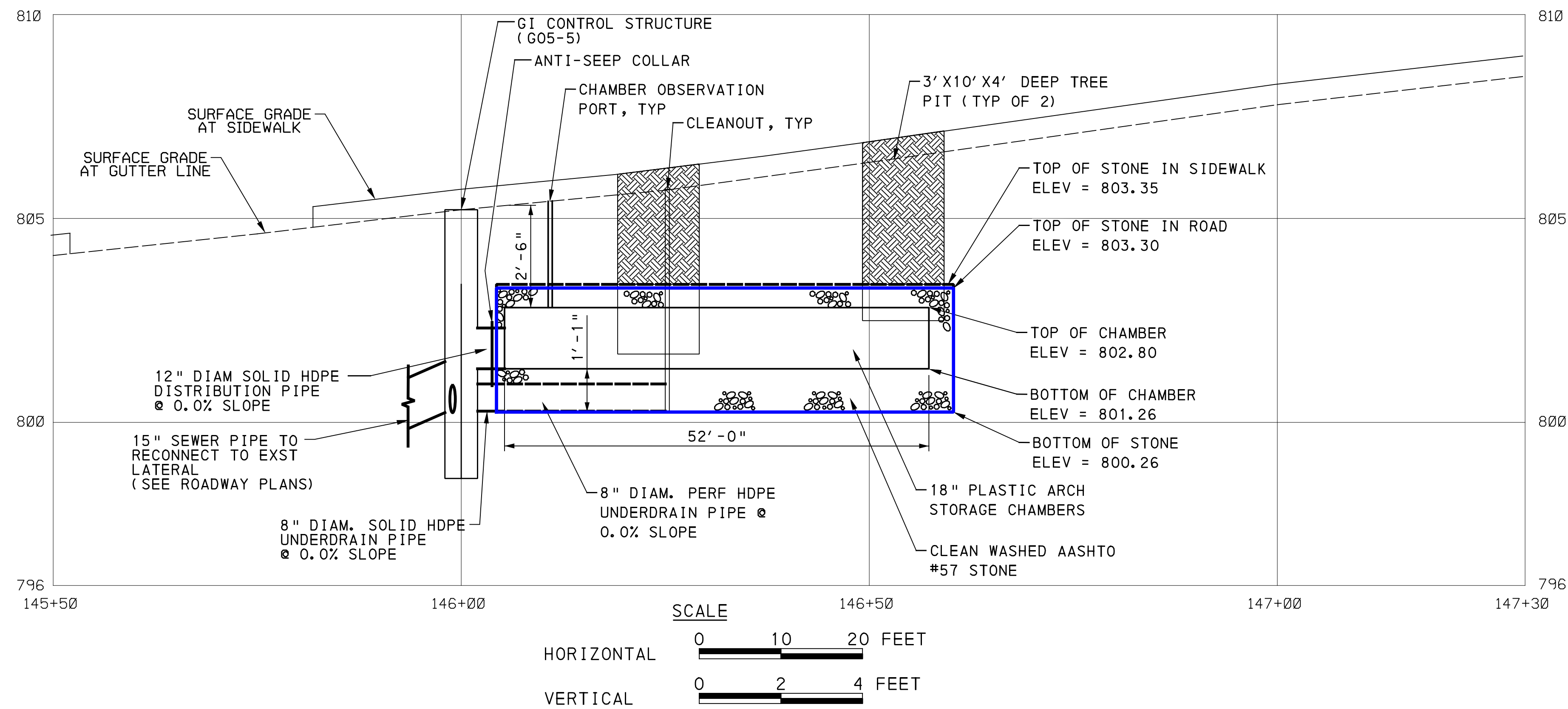
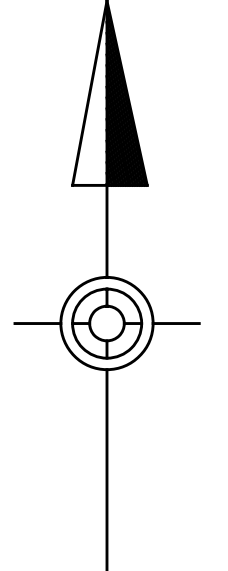
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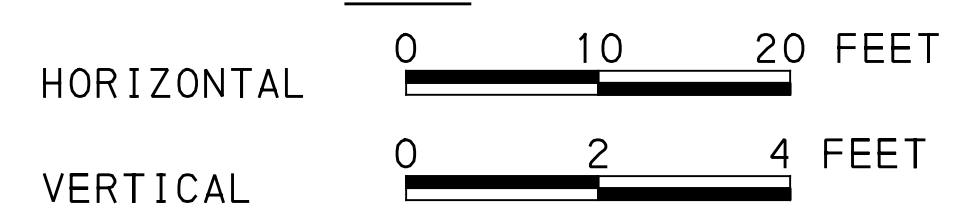
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LEGEND	
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	GI BIORETENTION (BR) OR BIOSWALE (BS)
	GEOMEMBRANE ROOT INTRUSION BARRIER (SIDE FACING TREE PITS)
	PROPOSED TREE (SEE LANDSCAPE PLANS)
	ROADWAY DRAINAGE PIPE, TYP. REFER TO ROADWAY PLANS FOR MORE INFORMATION
	2' X 2' PRECAST CONCRETE INLET
	SOLID GI PIPE (SIZE PER PLAN)
	PERFORATED GI PIPE (SIZE PER PLAN)
	VERTICAL BEND ON GI DISTRIBUTION / UNDERDRAIN PIPE
	ANTI-SEEP COLLAR ON GI DISTRIBUTION / UNDERDRAIN PIPE
	CHAMBER OBSERVATION PORT
	CLEANOUT



GI ID	Structure ID	Structure Type	Station - Offset	Top Type	Rim Elevation [ft] **	Invert Elevation out to Sewer [ft] **	Invert Elevation out to GI [ft]	Invert Elevation in from GI [ft]	Structure Bottom Elevation [ft]	Weir Elevation [ft]	Orifice Diameter [ft]	Orifice Elevation [ft]
ST-B4	G05-5	GI CONTROL STRUCTURE (TYPE 13)	146+00.00 - 18.5' RT	GRATE	**	**	801.26	800.26	798.26	803.35	SOLID CAP	N/A



GI SYSTEM ST-B4  
FORBES AND PRIDE

SEE BRT PLAN SET FOR ROADWAY DRAWINGS

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**Jacobs**  
1550 Coraopolis Heights Road,  
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Moon Township, PA 15108

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REVISIONS		

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IN CHARGE ALP  
DATE 05/01/24  
SCALE AS SHOWN

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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT UPTOWN TO OAKLAND**  
STORMWATER MANAGEMENT PLANS  
FORBES AVE - STA 145+50 TO STA 147+50

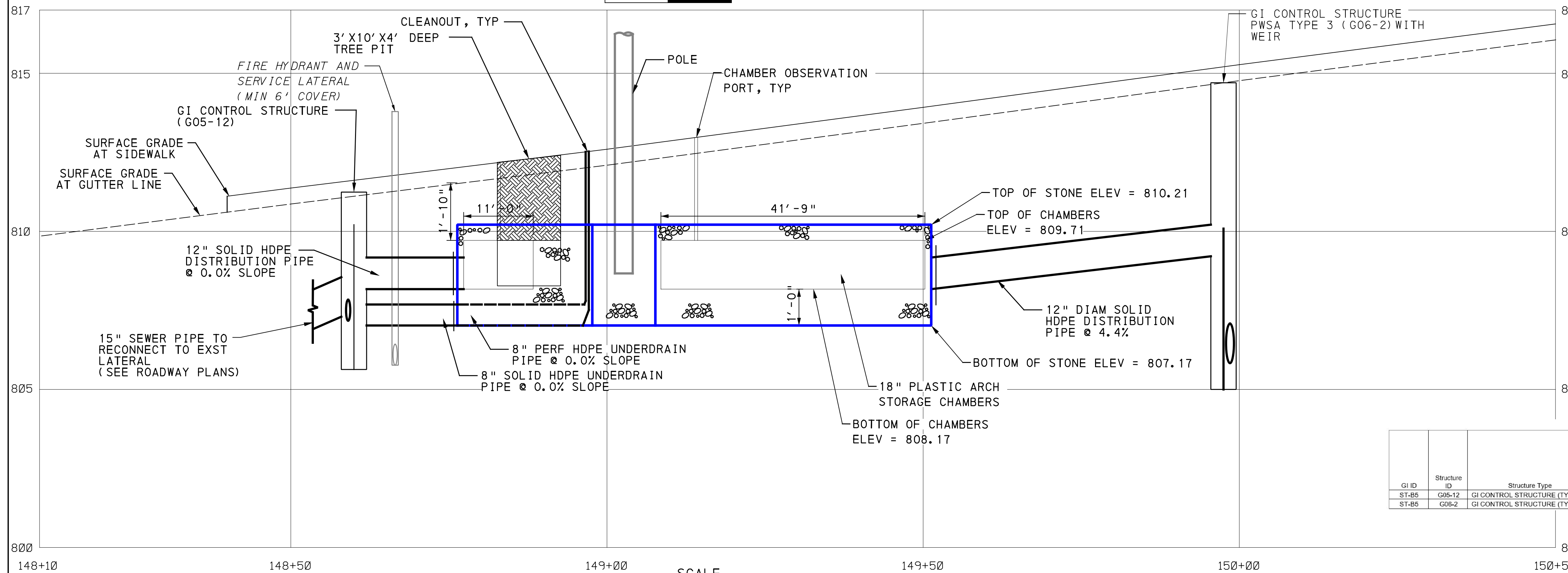
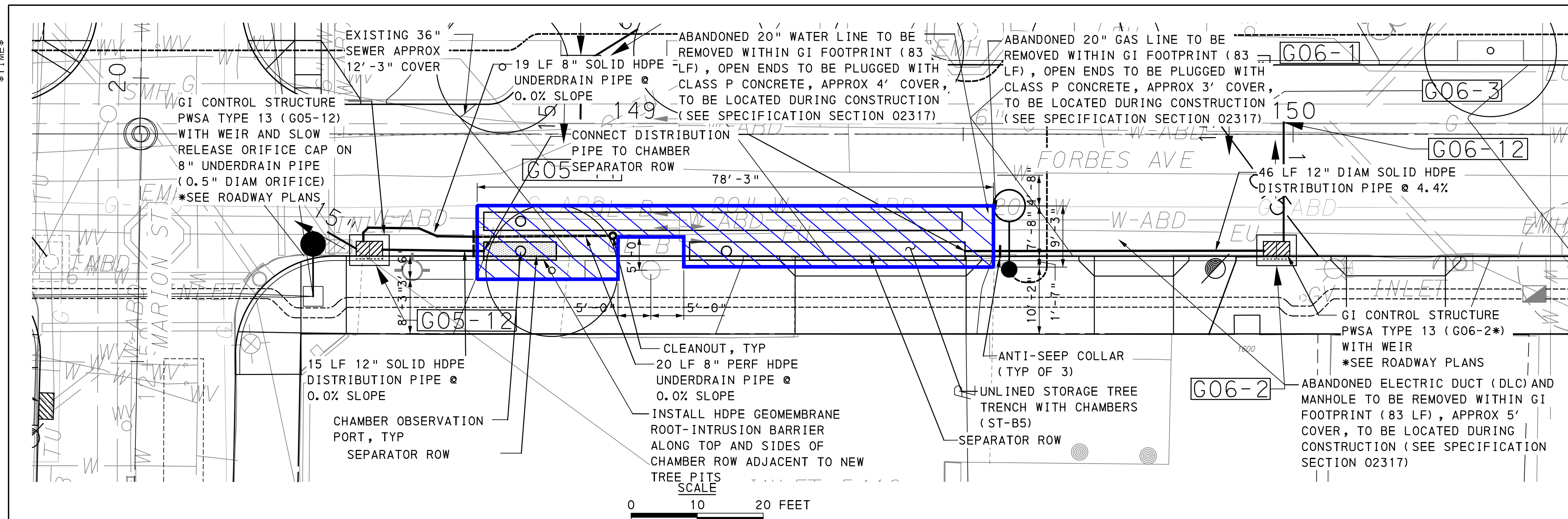
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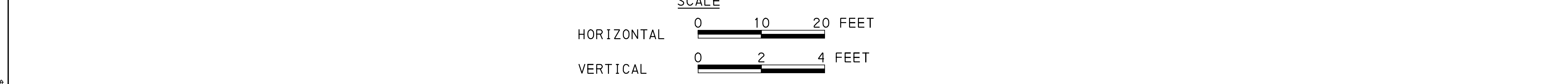
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**LEGEND**

- DRAINAGE STRUCTURE IDENTIFICATION
- DRAINAGE STRUCTURE
- GI CONTROL STRUCTURE WITH WEIR
- GI STORAGE TRENCH (ST)
- GI BIORETENTION (BR) OR BIOSWALE (BS)
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- ANTI-SEEP COLLAR ON GI DISTRIBUTION / UNDERDRAIN PIPE
- CHAMBER OBSERVATION PORT
- CLEANOUT

GI ID	Structure ID	Structure Type	Station - Offset	Top Type	Rim Elevation [ft] ** Refer to Roadway Plans**	Invert Elevation out to Sewer [ft] ** Refer to Roadway Plans**	Invert Elevation in from GI [ft]	Structure Bottom Elevation [ft]	Weir Elevation [ft]	Orifice Diameter [ft]	Orifice Elevation [ft]
ST-B5	G05-12	GI CONTROL STRUCTURE (TYPE 13)	148+60.00 - 18.5' RT	GRATE	**	808.17	807.17	805.03	810.21	0.5	807.34
ST-B5	G06-2	GI CONTROL STRUCTURE (TYPE 13)	149+97.50 - 18.5' RT	GRATE	**	809.21	N/A	804.16	810.21	N/A	N/A



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	DATE

GI SYSTEM ST-B5  
FORBES AVE & MARION ST  
SEE BRT PLAN SET FOR ROADWAY DRAWINGS

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT UPTOWN TO OAKLAND**  
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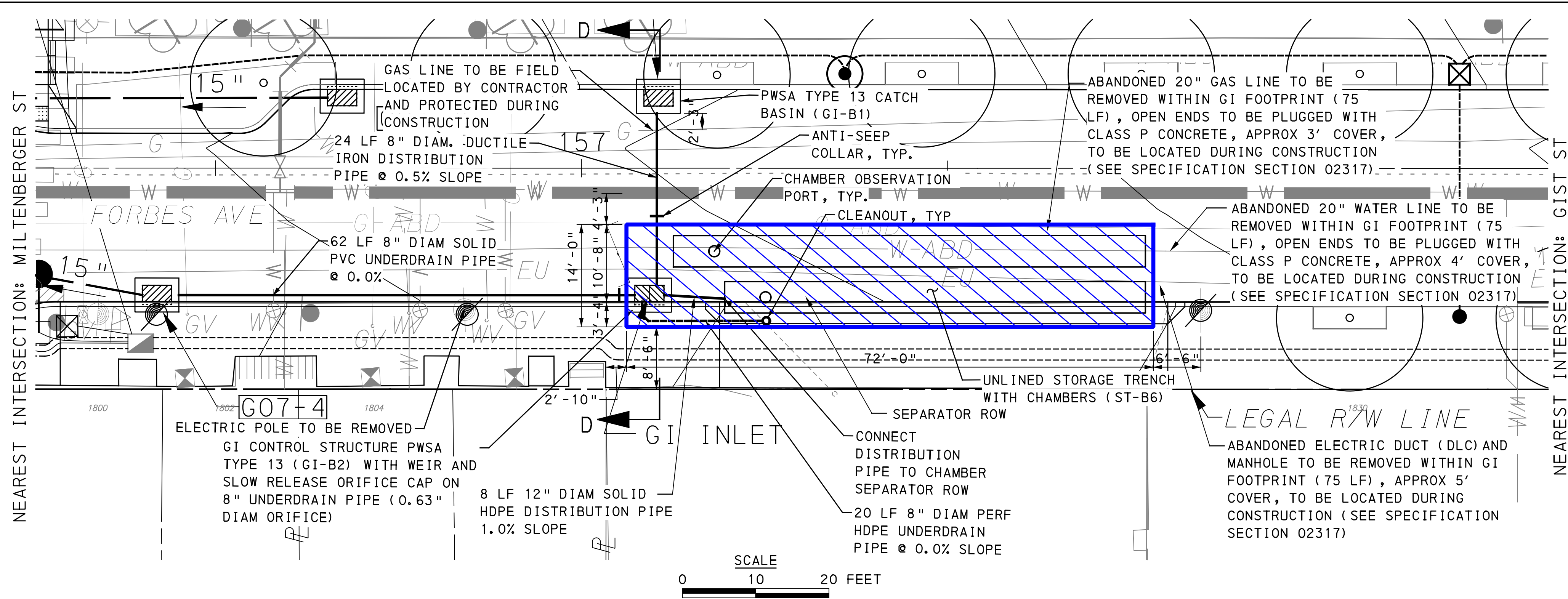
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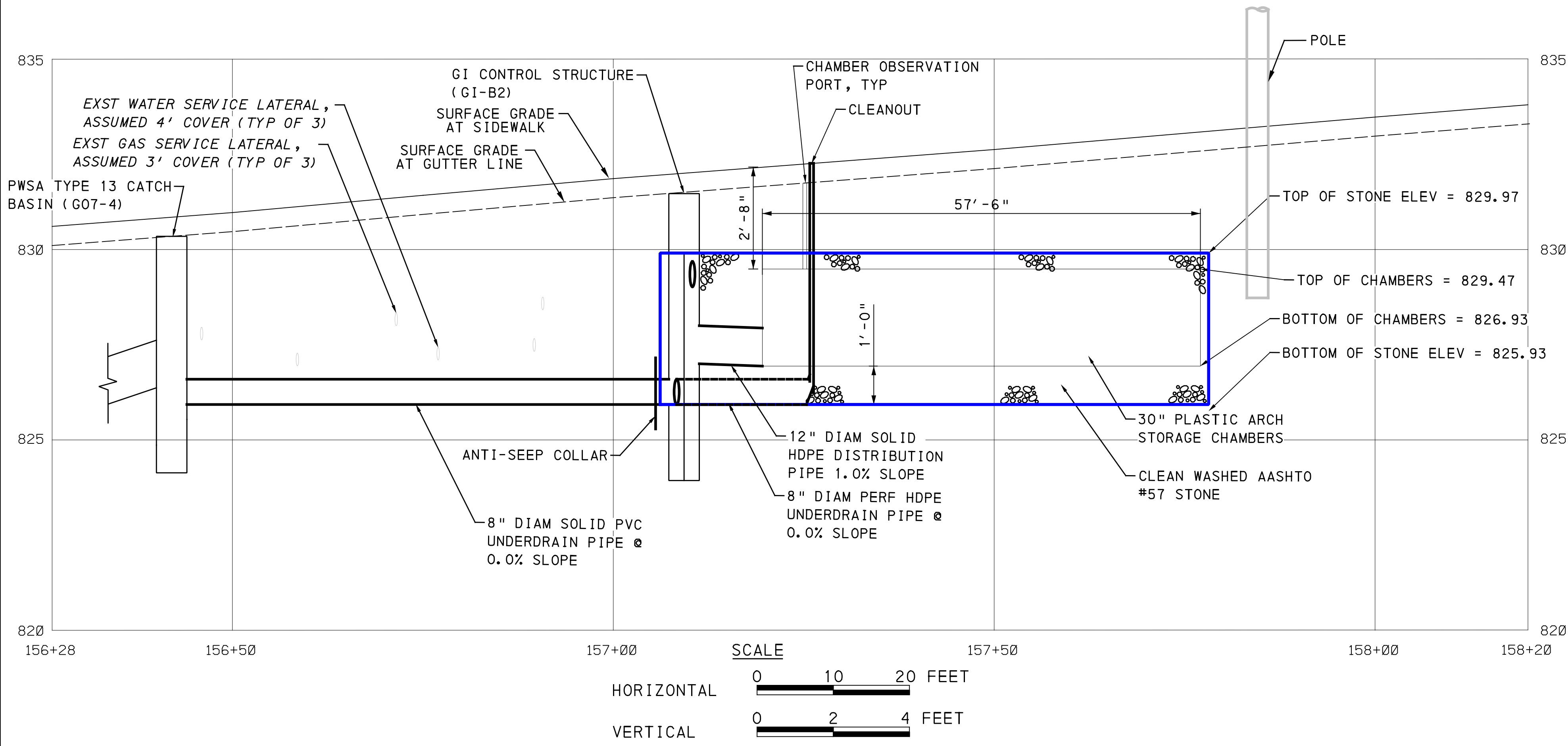
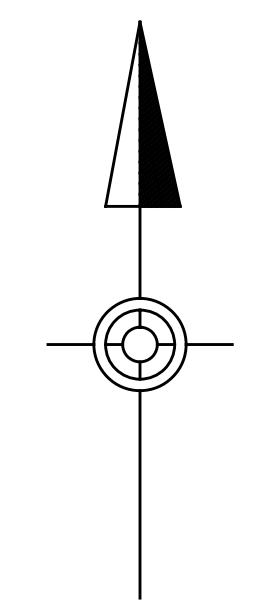
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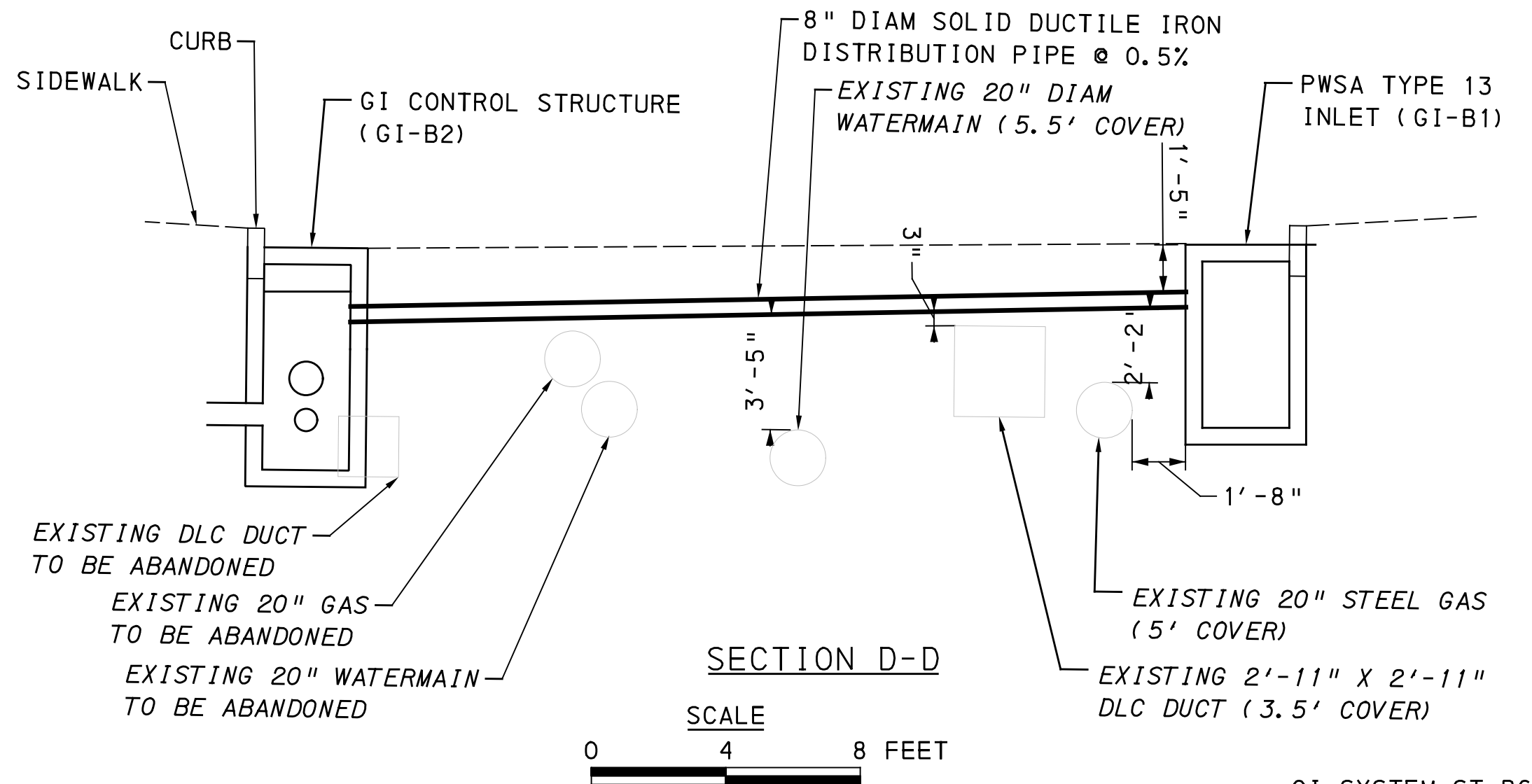


**LEGEND**

- DRAINAGE STRUCTURE IDENTIFICATION
- DRAINAGE STRUCTURE
- GI CONTROL STRUCTURE WITH WEIR
- GI STORAGE TRENCH (ST)
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- CHAMBER OBSERVATION PORT
- CLEANOUT



GI ID	Structure ID	Structure Type	Station - Offset	Top Type	Rim Elevation [ft] ** Refer to Roadway Plans**	Invert Elevation out to Sewer [ft] ** Refer to Roadway Plans**	Invert Elevation out to GI [ft]	Invert Elevation in from GI [ft]	Structure Bottom Elevation [ft]	Weir Elevation [ft]	Orifice Diameter [in]	Orifice Elevation [ft]
ST-B6	GI-B1	PWSA TYPE 13 CATCH BASIN	157+10.34 - 8.2' LT	GRATE	831.81	N/A	829.64	N/A	826.64	N/A	N/A	N/A
ST-B6	GI-B2	GI CONTROL STRUCTURE (TYPE 13)	157+10.34 - 15.7' RT	GRATE	831.47	825.93	827.01	825.93	824.01	829.97	0.63	826.10
ST-B6	G07-4	PWSA TYPE 13 CATCH BASIN	156+42.00 - 18.3' RT	GRATE	**	**	N/A	N/A	**	N/A	N/A	N/A



**AECOM**  
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GI SYSTEM ST-B6  
 FORBES AVE & MILTENBERGER ST  
 SEE BRT PLAN SET FOR ROADWAY DRAWINGS

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
 PITTSBURGH PENNSYLVANIA

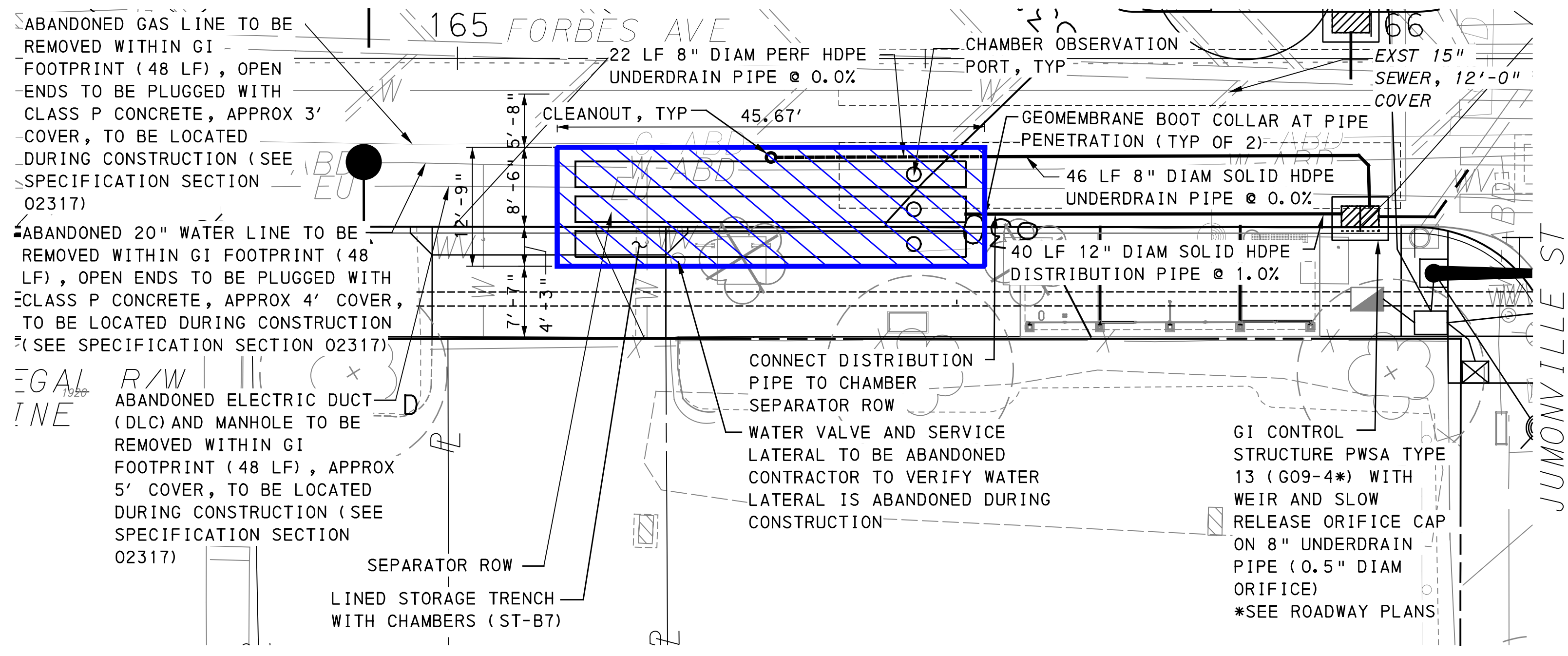
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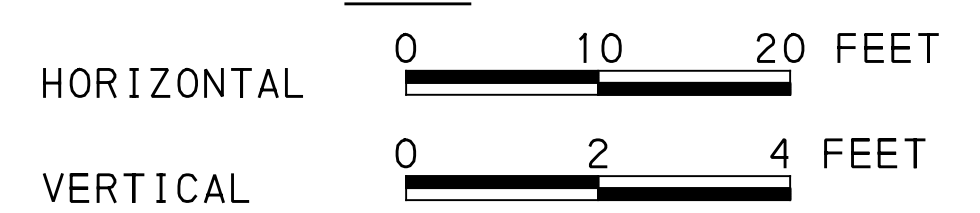
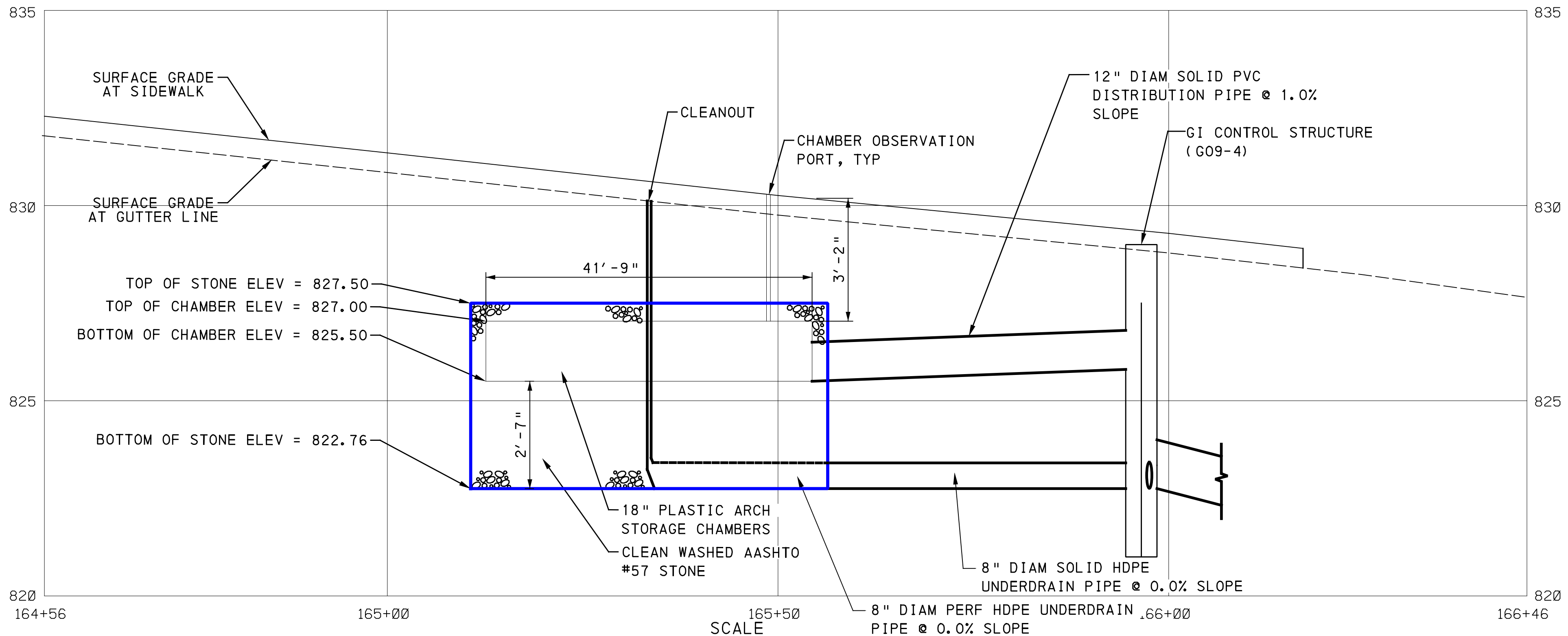
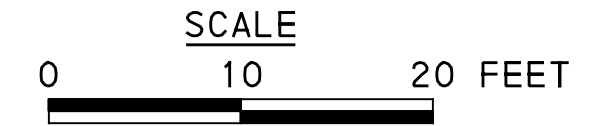
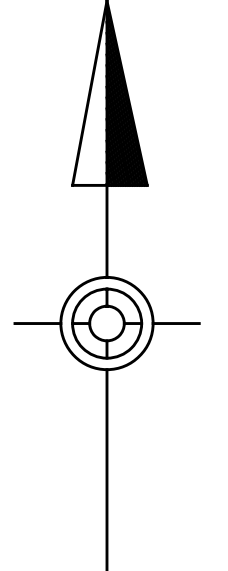


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**LEGEND**

- DRAINAGE STRUCTURE IDENTIFICATION
- DRAINAGE STRUCTURE
- GI CONTROL STRUCTURE WITH WEIR
- GI STORAGE TRENCH (ST)
- GI BIORETENTION (BR) OR BIOSWALE (BS)
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- CLEANOUT



GI ID	Structure ID	Structure Type	Station - Offset	Top Type	Rim Elevation [ft]**	Invert Elevation out to Sewer [ft]**	Invert Elevation out to GI [ft]	Invert Elevation in from GI [ft]	Structure Bottom Elevation [ft]	Weir Elevation [ft]	Orifice Diameter [in]	Orifice Elevation [ft]
ST-B7	G09-4	GI CONTROL STRUCTURE (TYPE 13)	165+06.50 - 18.0' RT	GRATE	**	**	825.84	822.76	821.09	827.50	0.5	822.93

GI SYSTEM ST-B7  
FORBES AVE & JUMONVILLE ST  
SEE BRT PLAN SET FOR ROADWAY DRAWINGS

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Gulf Tower  
707 Grant Street  
5th Floor  
Pittsburgh, PA 15219

**Jacobs**  
1550 Coraopolis Heights Road,  
Suite 400  
Moon Township, PA 15108

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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

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FORBES AVE - STA 164+50 TO STA 166+00

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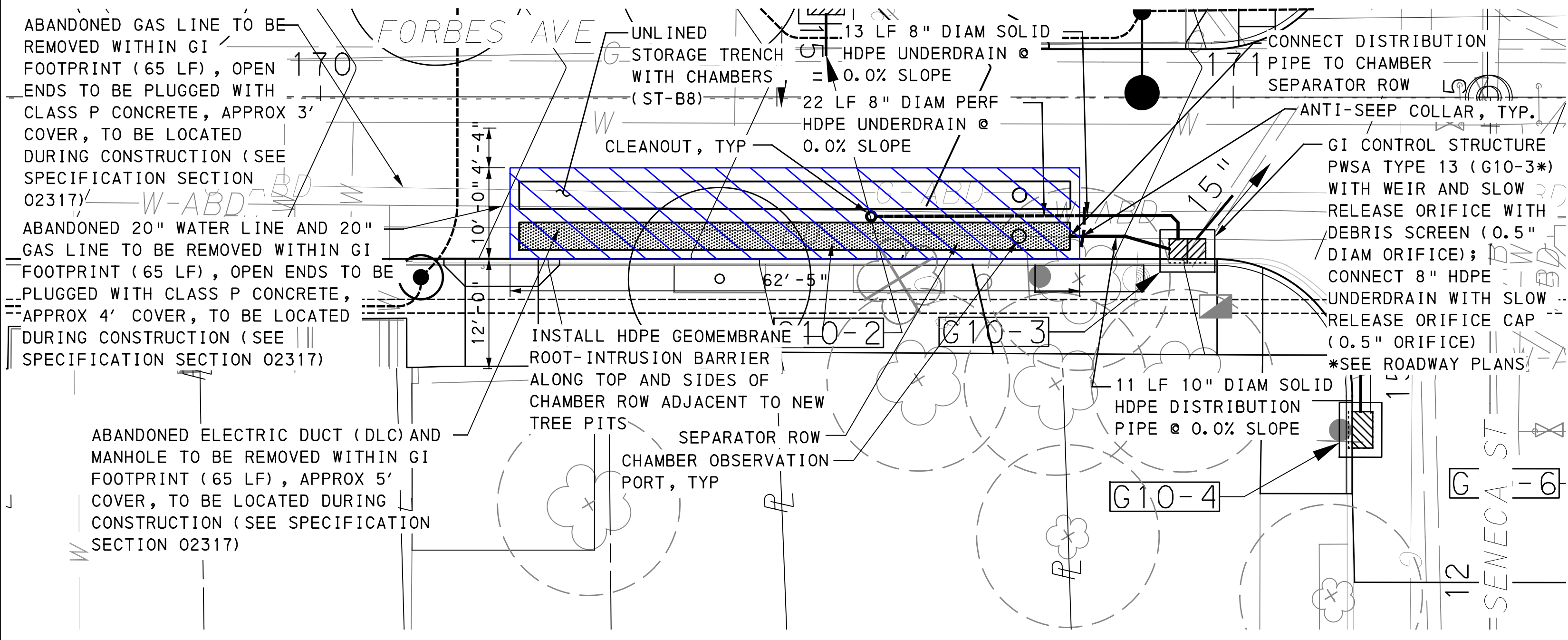
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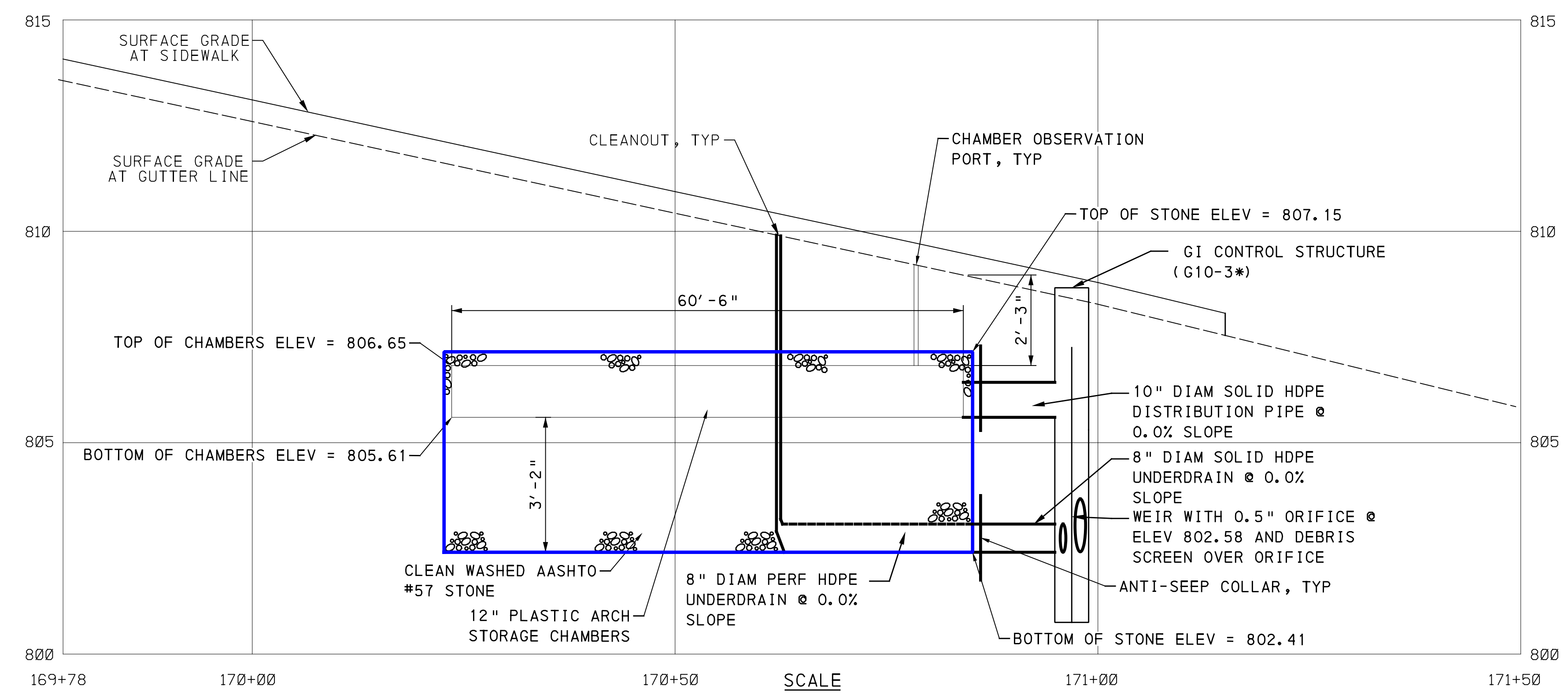
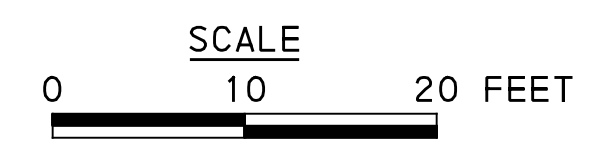
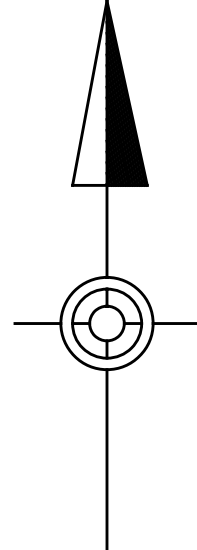


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**LEGEND**

- DRAINAGE STRUCTURE IDENTIFICATION
- DRAINAGE STRUCTURE
- GI CONTROL STRUCTURE WITH WEIR
- GI STORAGE TRENCH (ST)
- GI BIORETENTION (BR) OR BIOSWALE (BS)
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- CLEANOUT



GI ID	Structure ID	Structure Type	Station - Offset	Top Type	Rim Elevation [ft]** Refer to Roadway Plans**	Invert Elevation out to Sewer [ft] **Refer to Roadway Plans**	Invert Elevation out to GI [ft]	Invert Elevation in from GI [ft]	Structure Bottom Elevation [ft]	Weir Elevation [ft]	Orifice Diameter [in]	Orifice Elevation [ft]
ST-B8	G10-3	GI CONTROL STRUCTURE (TYPE 13)	170+95.00 - 17.8' RT	GRATE	**	**	805.61	802.41	800.75	807.15	0.5	802.58

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GI SYSTEM ST-B8  
FORBES AVE & SENECA ST

SEE BRT PLAN SET FOR ROADWAY DRAWINGS

**PORT AUTHORITY OF ALLEGHENY COUNTY**  
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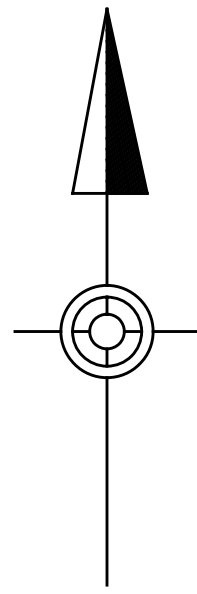
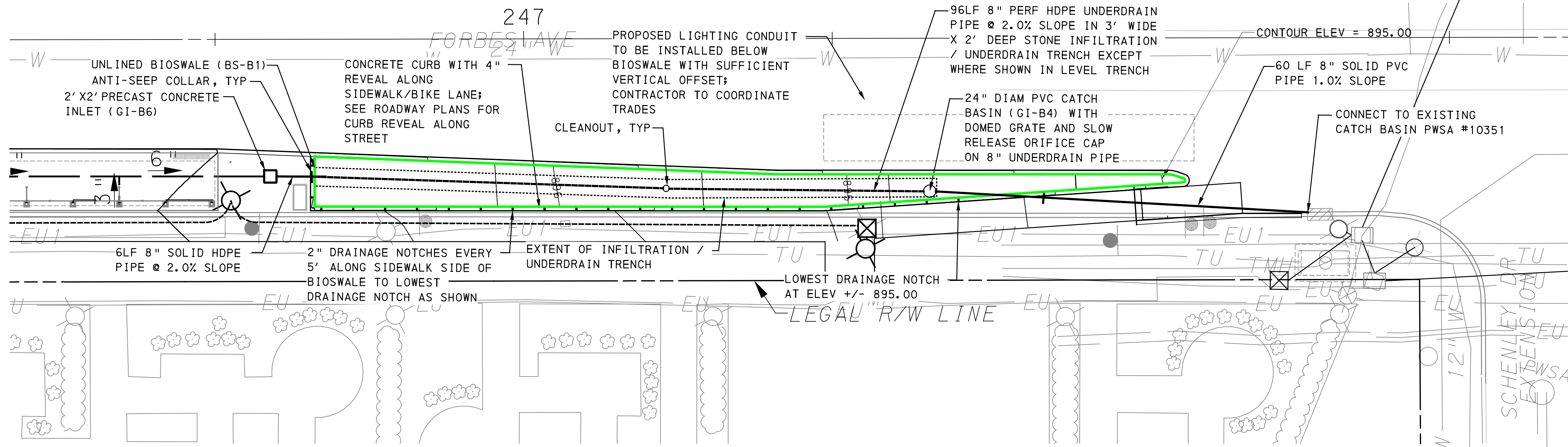
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FORBES AVE - STA 169+50 TO STA 171+50

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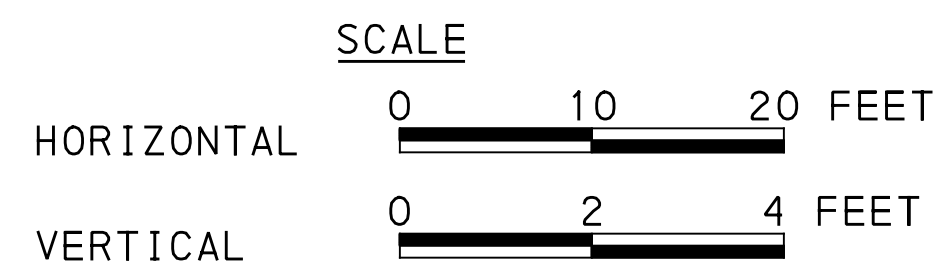
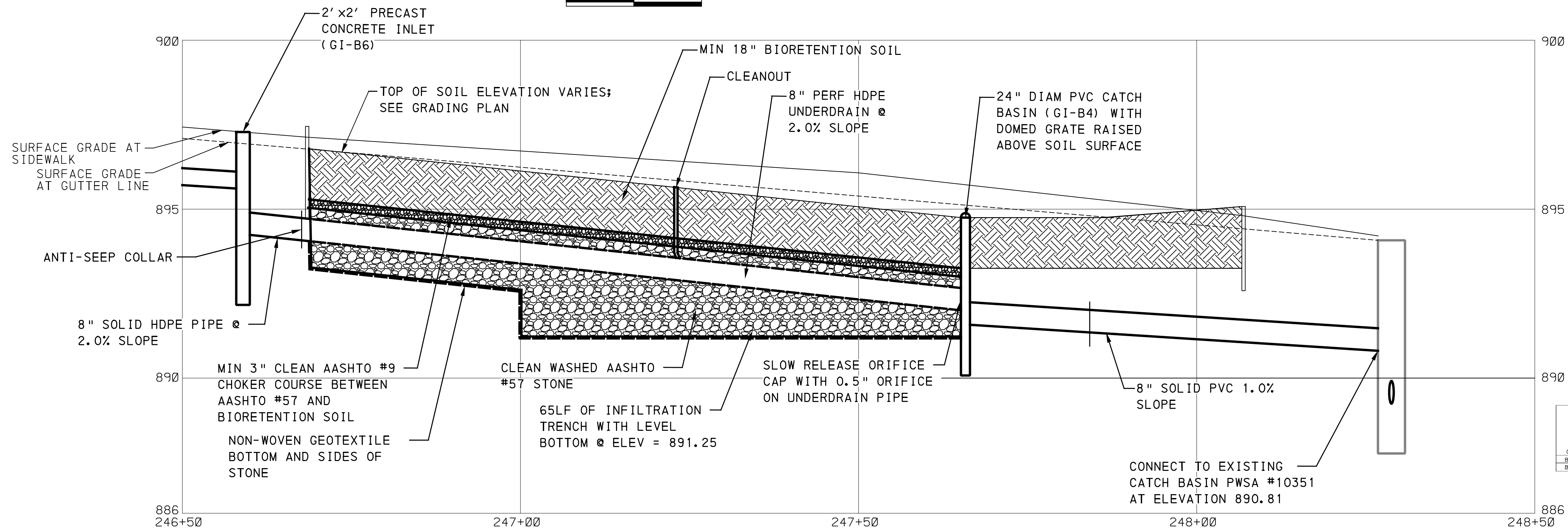
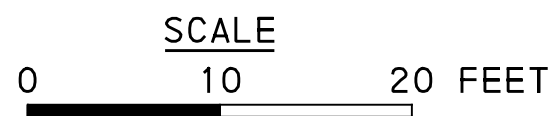


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**LEGEND**

- A01-1 DRAINAGE STRUCTURE IDENTIFICATION
- DRAINAGE STRUCTURE
- GI CONTROL STRUCTURE WITH WEIR
- GI STORAGE TRENCH (ST)
- GI BIORETENTION (BR) OR BIOSWALE (BS)
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- CLEANOUT



GI ID	Structure ID	Structure Type	Station - Offset	Top Type	Rise Elevation [ft] Refer to Roadway Plans	Invert Elevation out to Sewer [ft] Refer to Roadway Plans	Invert Elevation out to GI [ft]	Invert Elevation in from GI [ft]	Structure Bottom Elevation [ft]	Weir Elevation [ft]	Orifice Diameter [ft]	Orifice Elevation [ft]
BS-B1	GI-B4	PVC CATCH BASIN WITH GRATE	247+88.00 - 25.0' RT	GRATE	894.75	891.74	N/A	891.91	890.25	N/A	0.5	892.17
BS-B1	GI-B6	2' X 2' PRECAST CONCRETE INLET	246+59.04 - 22.3' RT	SOLID	897.25	N/A	894.25	N/A	892.45	N/A	N/A	N/A

GI SYSTEM BS-B1  
FORBES AVE & SCHENLEY DRIVE EXTENSION  
SEE BRT PLAN SET FOR ROADWAY DRAWINGS

**AECOM**

Gulf Tower  
707 Grant Street  
5th Floor  
Pittsburgh, PA 15219

**Jacobs**

1550 Coraopolis Heights Road,  
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Moon Township, PA 15108

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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH, PENNSYLVANIA

**BUS RAPID TRANSIT UPTOWN TO OAKLAND**  
STORMWATER MANAGEMENT PLANS  
FORBES AVE - STA 246+00 TO STA 248+50

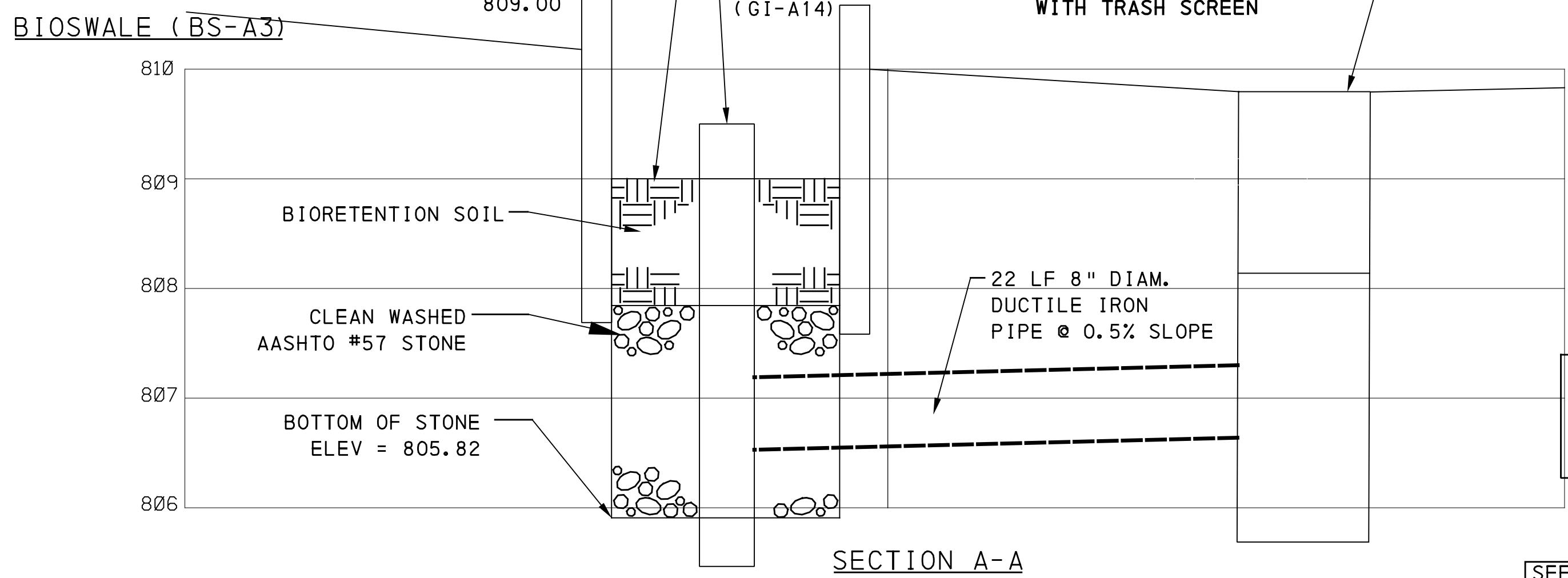
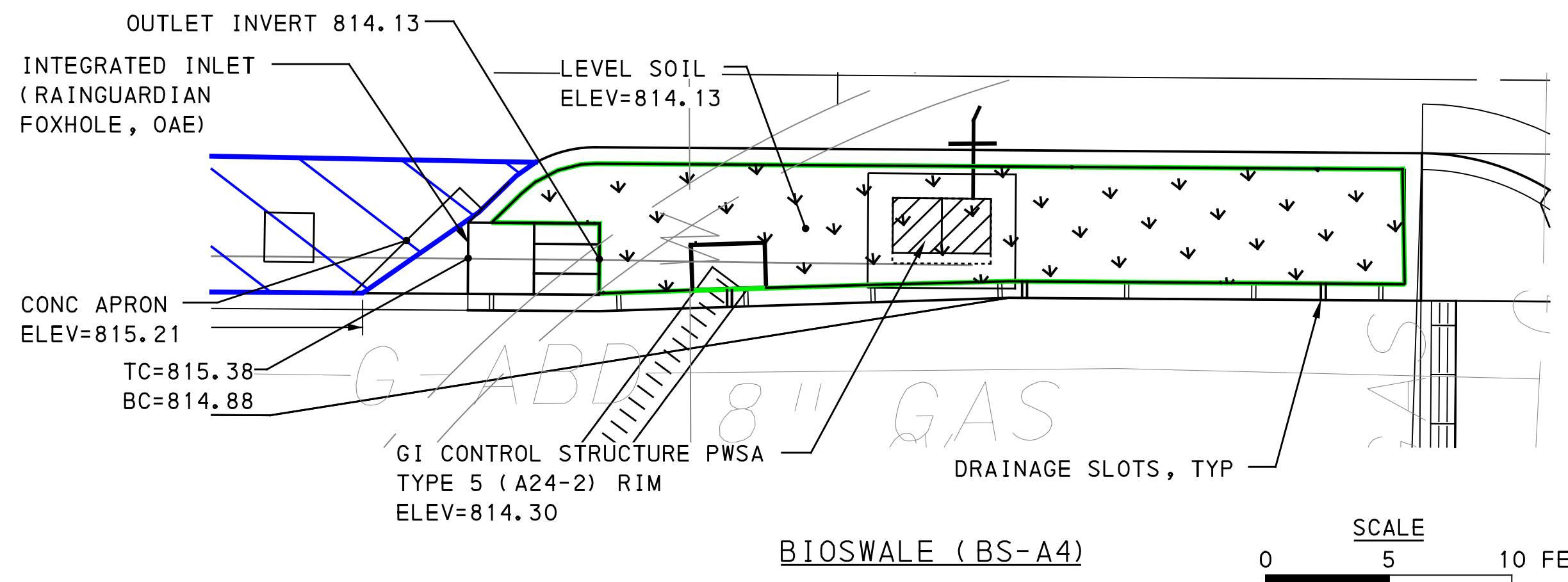
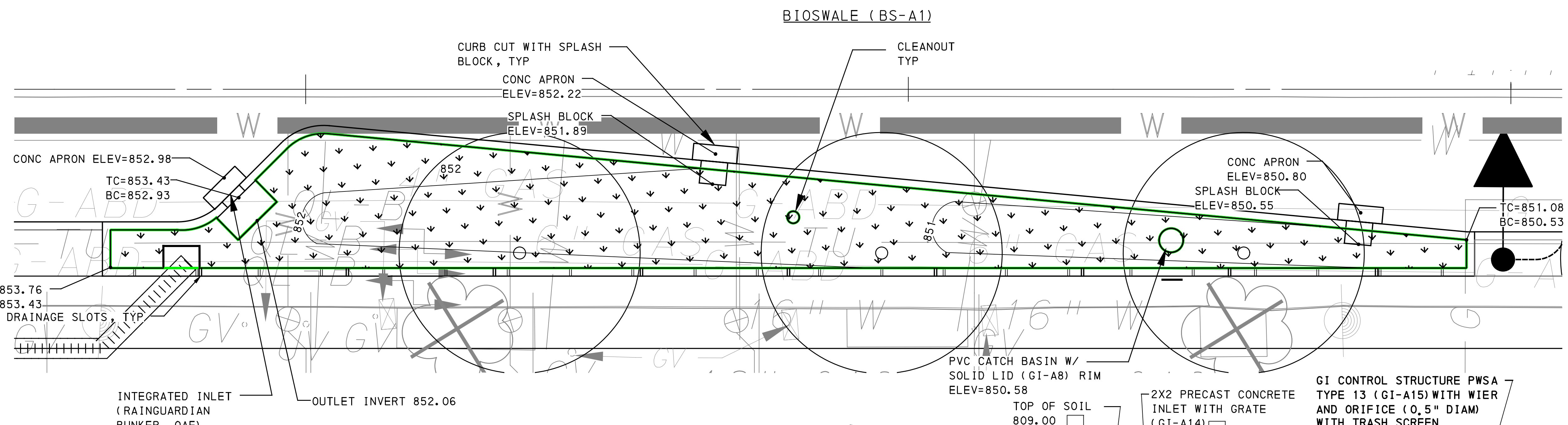
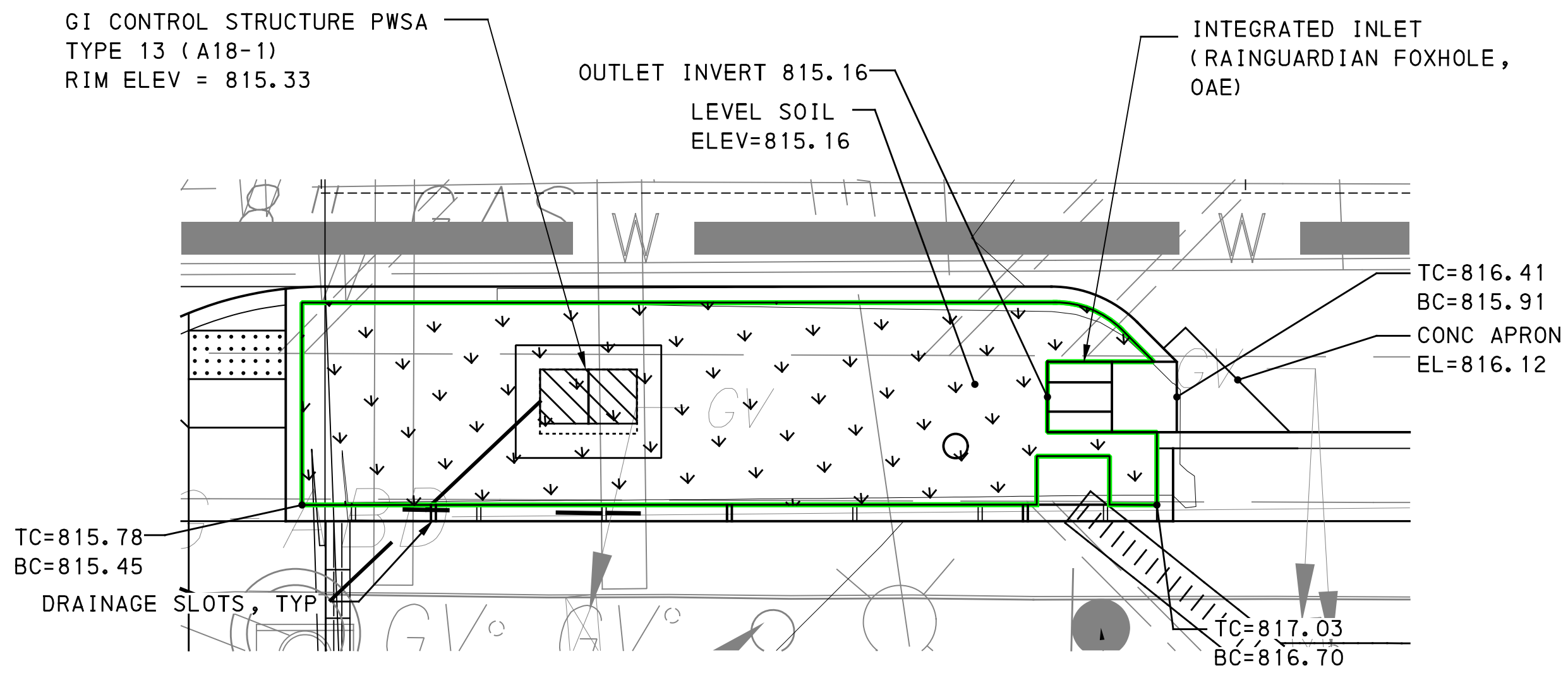
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**LEGEND**

- DRAINAGE STRUCTURE IDENTIFICATION
- DRAINAGE STRUCTURE
- GI CONTROL STRUCTURE WITH WEIR
- GI STORAGE TRENCH (ST)
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- ANTI-SEEP COLLAR ON GI DISTRIBUTION / UNDERDRAIN PIPE
- CHAMBER OBSERVATION PORT
- CLEANOUT

NOTE:  
1. CURB BETWEEN BIOSWALE / BIORETENTION AND SIDEWALK OR BIKE LANE TO HAVE 4 INCH REVEAL.

SEE BRT PLAN SET FOR ROADWAY DRAWINGS

**AECOM**  
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5th Floor  
Pittsburgh, PA 15219

**Jacobs**  
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**PORT AUTHORITY OF ALLEGHENY COUNTY**  
PITTSBURGH PENNSYLVANIA

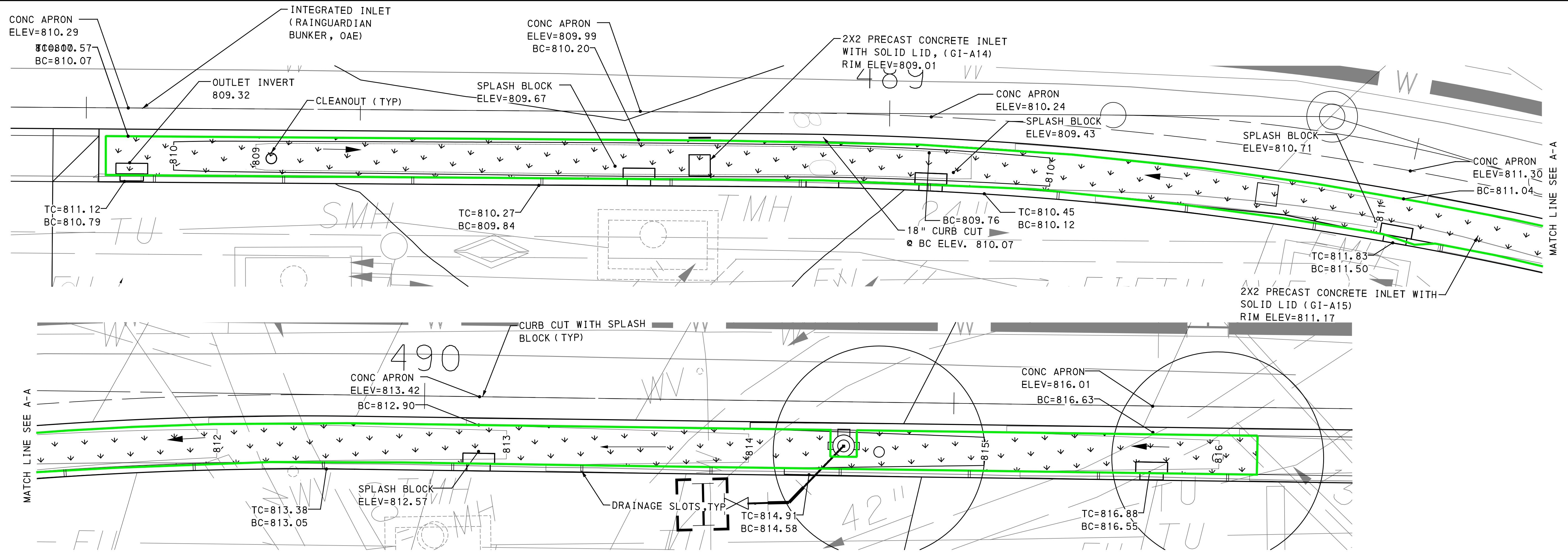
**BUS RAPID TRANSIT UPTOWN TO OAKLAND**  
STORMWATER MANAGEMENT PLANS  
BIOSWALE GRADING PLANS

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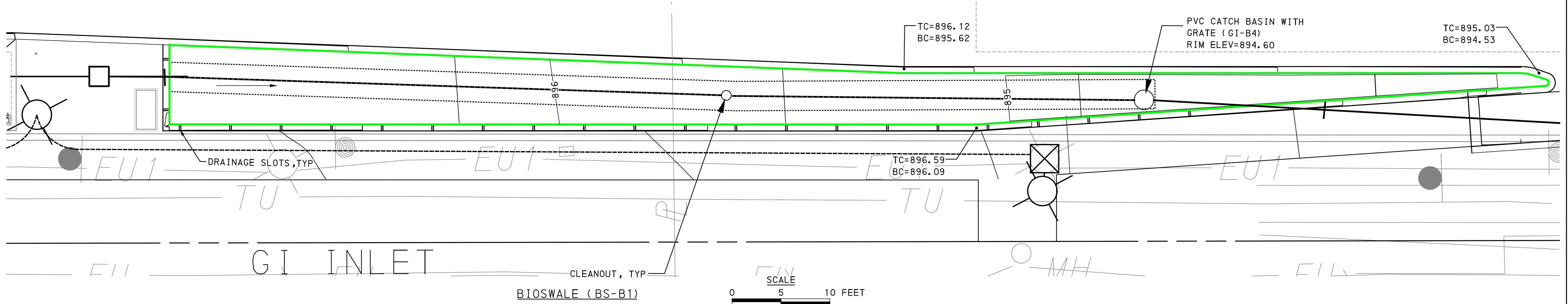
CONTRACT NO. BRT-001  
DWG. NO. SWM30 SHT. 30



PLOTTED: \$DATE\$ \$TIME\$



BIORETENTION (BR-A1)



BIOSWALE (BS-B1)

SEE BRT PLAN SET FOR ROADWAY DRAWINGS

**AECOM**

Gulf Tower  
707 Grant Street  
5th Floor  
Pittsburgh, PA 15219

**Jacobs**

1550 Coraopolis Heights Road,  
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Moon Township, PA 15108

NO.	DATE	DESCRIPTION
REVISIONS		

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SIGNATURE

APPROVED

DATE

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DRAWN	TDL
CHECKED	DPW
IN CHARGE	ALP
DATE	05/01/24
SCALE	AS SHOWN

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PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT UPTOWN TO OAKLAND**  
STORMWATER MANAGEMENT PLANS  
BIOSWALE GRADING PLANS

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CONTRACT NO. BRT-001

DWG. NO. SWM31

SHT. 31

OPERATOR: \$USER\$  
FILE PATH: \$FILEL\$



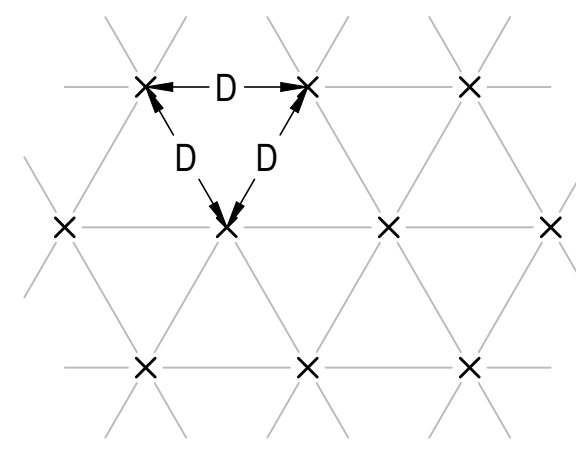
**PLANT LIST**

KEY	BOTANICAL NAME	COMMON NAME	QUANTITY	SIZE	NOTES/ SPACING (REFER TO DETAIL 3/SWM32)
<b>ORNAMENTAL GRASSES</b>					
CA	CALMAGROSTIS X ACUTIFLORA 'KARL FORESTER'	KARL FOERSTER FEATHER REED GRASS	322	#3 CONT.; FULL	18" OC
PV	PANICUM VIRGATUM 'SHENANDOAH'	SHENANDOAH SWITCHGRASS	893	#3 CONT.; FULL	24" OC
<b>MULCH</b>					
	DOUBLE SHREDDED NATURAL WOOD BARK MULCH (SY)		307		

**1 QUANTITIES**

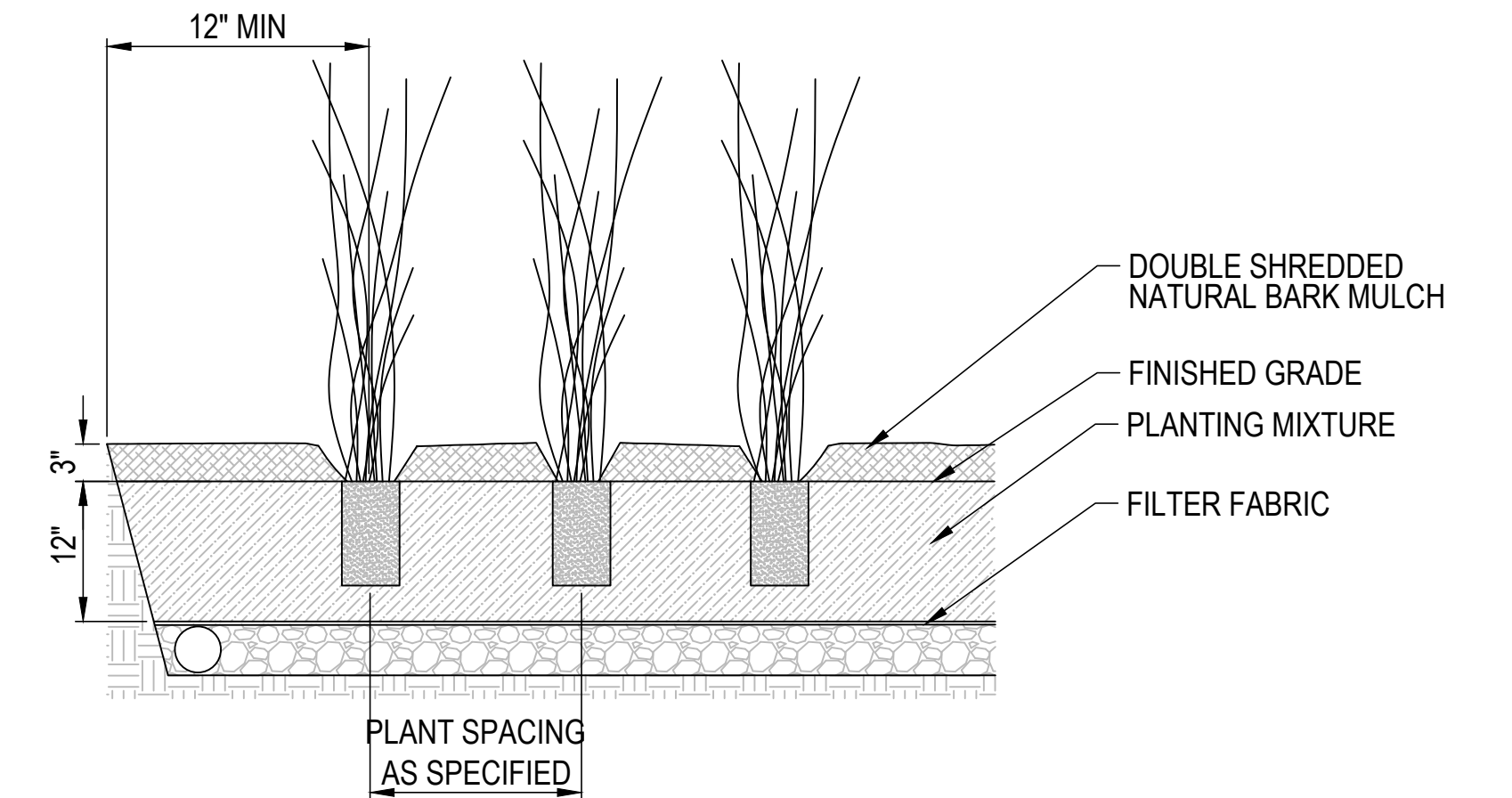
- ALL PLANT MATERIAL SHALL BE OF NURSERY STOCK QUALITY AS DEFINED BY THE AMERICAN NURSERY AND LANDSCAPE ASSOCIATION AND GUARANTEED PER THE SPECIFICATIONS.
- ALL DISTURBED AREAS SHALL BE SEEDED AND PLANTED WITHIN 30 DAYS OF CONSTRUCTION COMPLETION.
- REFER TO EROSION AND SEDIMENTATION CONTROL PLANS FOR TEMPORARY SCHEDULES.
- NO UNDERGROUND UTILITIES HAVE BEEN SHOWN ON THESE PLANS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO USE CARE AND NOT DISRUPT ANY EXISTING UTILITY, ABOVE OR BELOW GROUND.
- SHOULD DISCREPANCY ARISE BETWEEN THE LANDSCAPE PLAN AND PLANT SCHEDULE, THE PLAN SHALL GOVERN AS TO THE QUANTITY OF PLANT MATERIAL.
- HAND WATER TO ESTABLISH PLANTINGS. NO PERMANENT IRRIGATION IS REQUIRED. WATER WELL AFTER PLANTING. SOAKING THE ENTIRE AREA. NEW PLANTS WILL REQUIRE AN INCH OF WATER PER WEEK. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THE HEALTH OF THE PLANTS.
- DO NOT PLANT OVER CLEANOUTS, INLETS, OR OTHER SURFACE FEATURES.

**2 LANDSCAPE NOTES**



- NOTES:**
- "D" = PLANT SPACING CENTER LINE TO CENTER LINE. REFER TO PLANT SCHEDULE FOR ON CENTER (OC) SPACING.

**3 TYPICAL TRIANGULAR PLANT SPACING DIAGRAM  
NOT TO SCALE**



**4 TYPICAL PLANTING - ORNAMENTAL GRASSES  
NOT TO SCALE**

SHENANDOAH SWITCHGRASS



KARL FOERSTER FEATHER REED GRASS



**5 PLANT IMAGES**



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SCALE	AS SHOWN

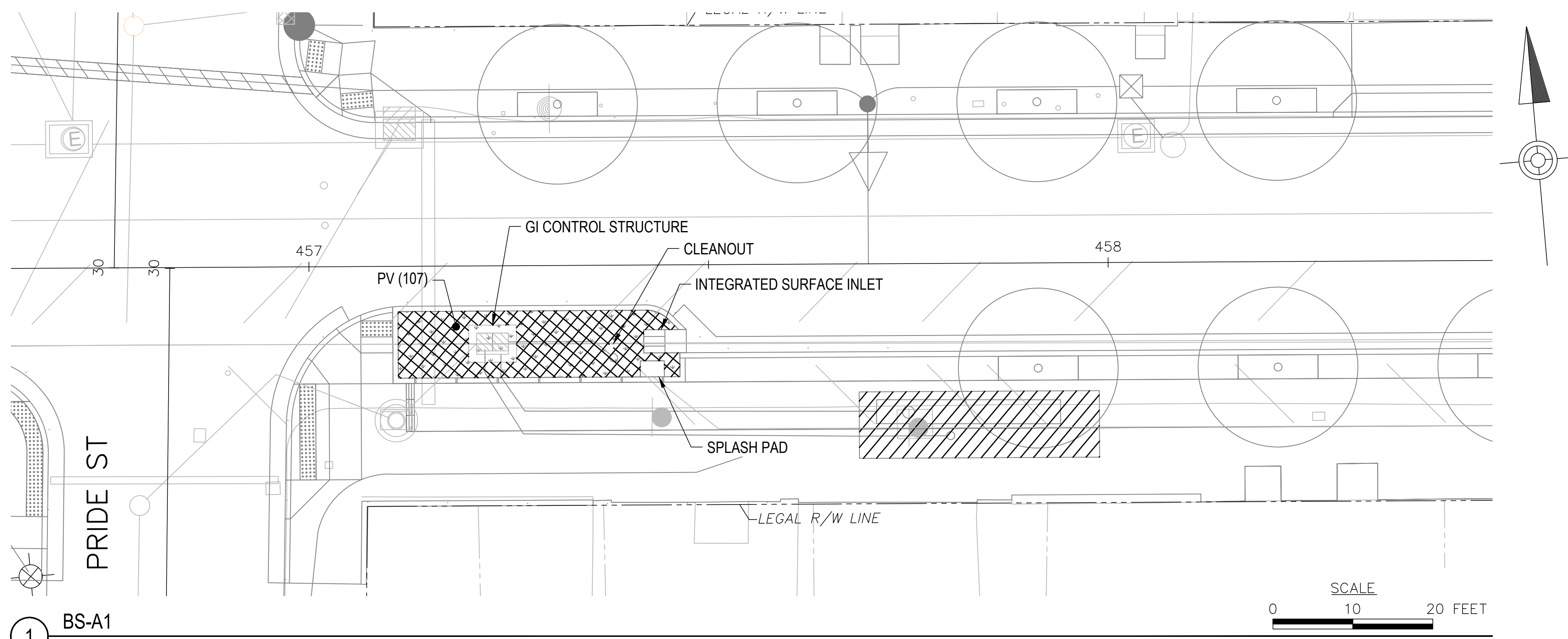
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DWG. NO. **SWM32** SHT. **32**

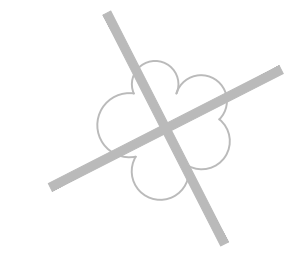




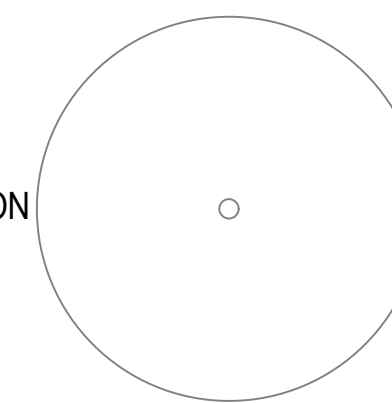
**LEGEND**

SEE AECOM / KLAVON LANDSCAPE SHEETS FOR TREE TYPES, SIZES AND QUANTITIES.

EXISTING TREE TO BE REMOVED (REFER TO AECOM/KLAVON DRAWINGS)

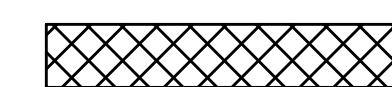


PROPOSED TREE (REFER TO AECOM/KLAVON DRAWINGS)



**PROPOSED GI LEGEND**

GI BIORETENTION (BR) OR BIOSWALE (BS)



GI STORAGE TRENCH (ST)



1 BS-A1  
1" = 10'

FILE: C:\Users\hmc\OneDrive\Documents\Projects\Documents\PA\SA\Jacobs\BRT\CAD\01\_Pittsburgh\_BRT.dwg DATE: 3/27/2024 11:53 AM

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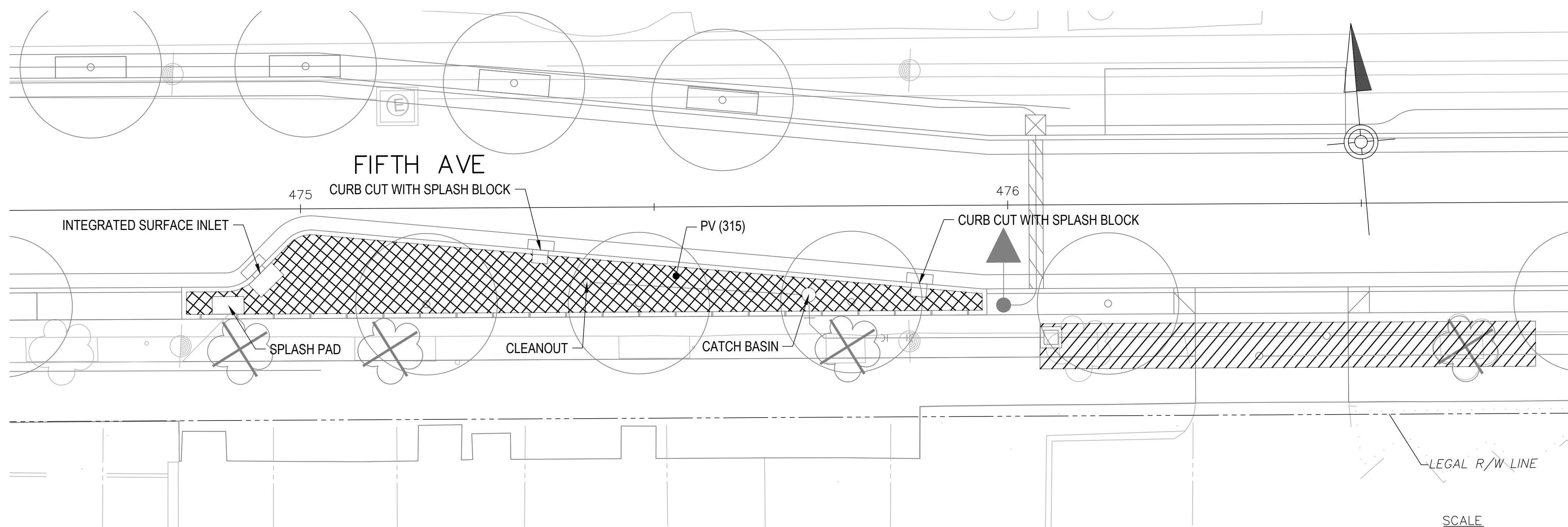
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SCALE	AS SHOWN

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PITTSBURGH PENNSYLVANIA

**BUS RAPID TRANSIT GREEN INFRASTRUCTURE LANDSCAPE PLANS**

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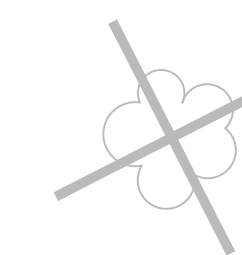
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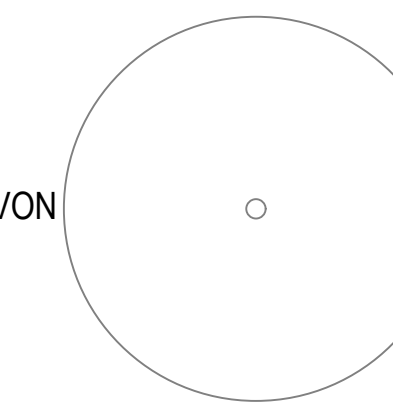
**LEGEND**

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EXISTING TREE TO BE REMOVED (REFER TO AECOM/KLAVON DRAWINGS)

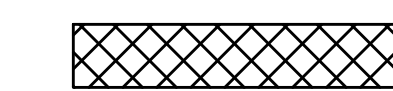


PROPOSED TREE (REFER TO AECOM/KLAVON DRAWINGS)

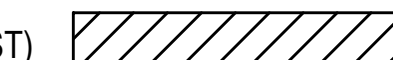


**PROPOSED GI LEGEND**

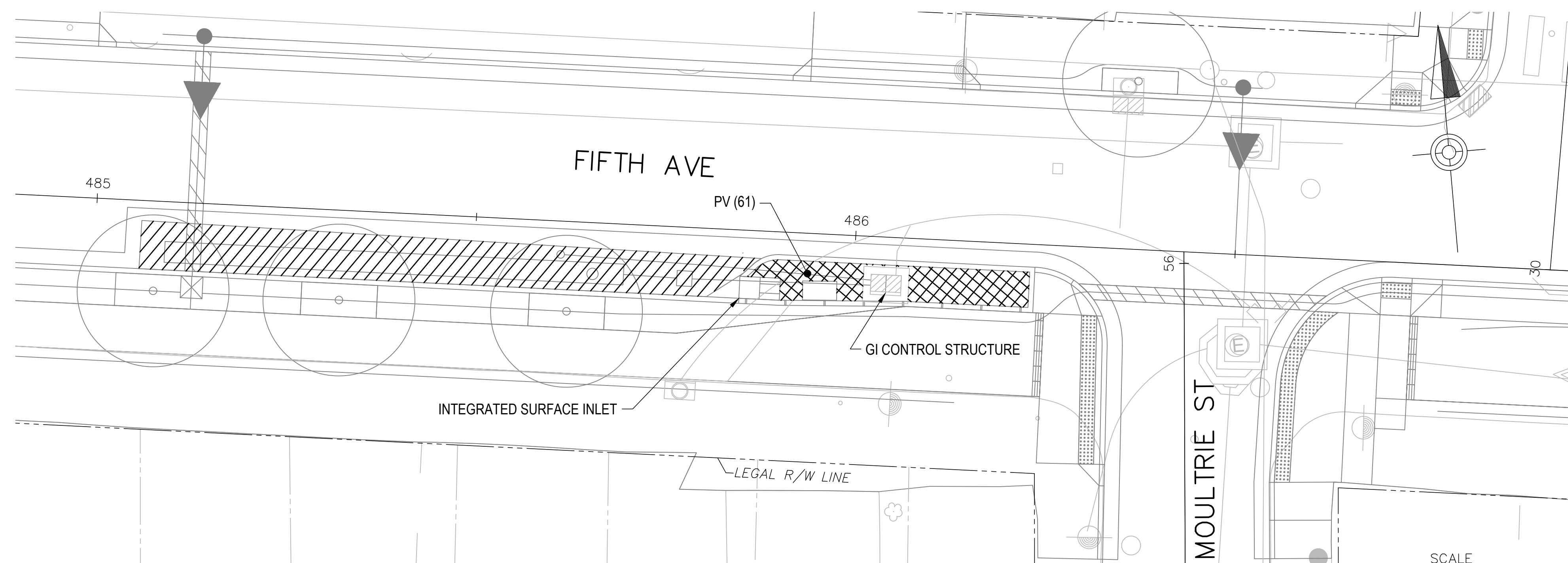
GI BIORETENTION (BR) OR BIOSWALE (BS)



GI STORAGE TRENCH (ST)



1 BS-A3  
1" = 10'



2 BS-A4  
1" = 10'

**AECOM**

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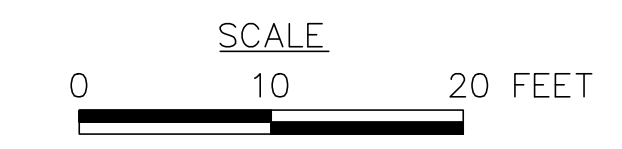
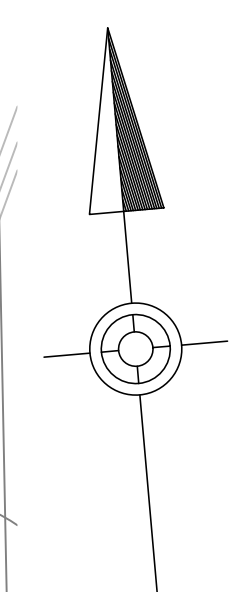
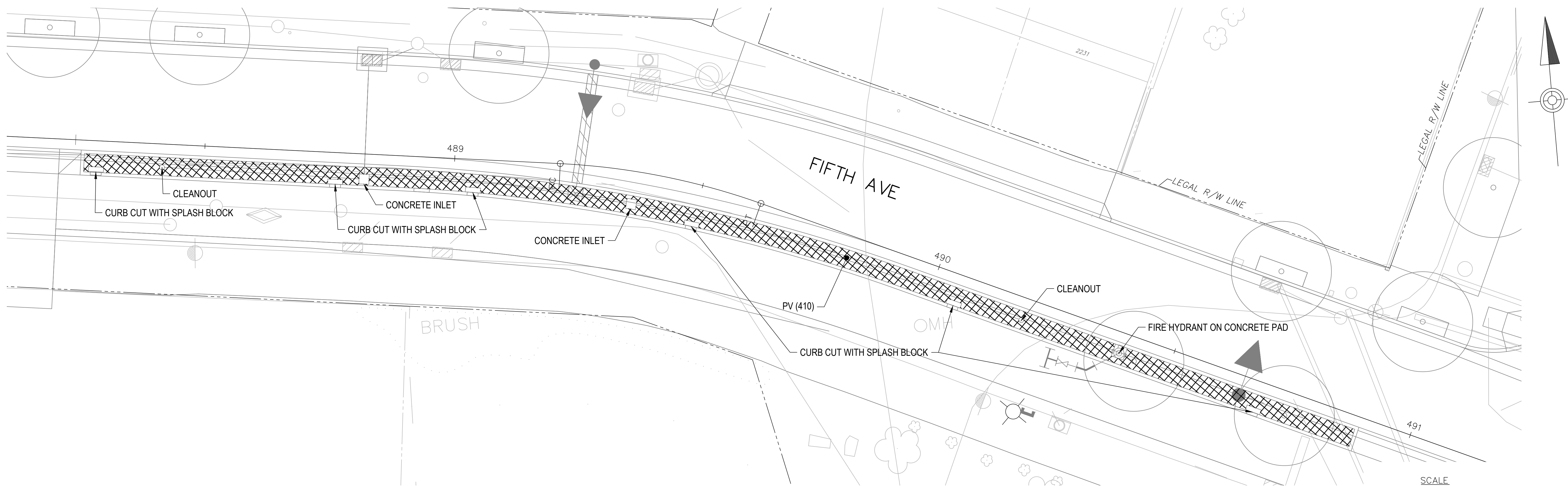
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DWG. NO. SWM34

SHT. 34



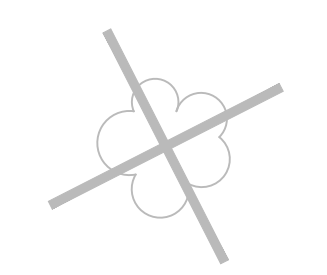


1 BR-A1  
1" = 10'

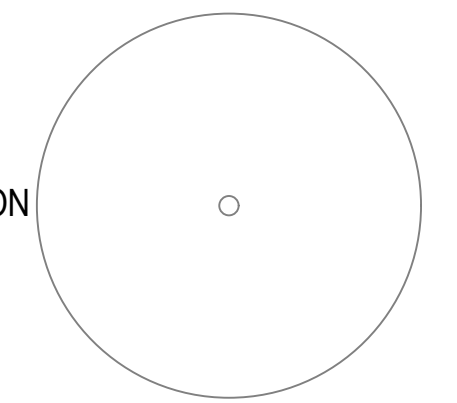
**LEGEND**

SEE AECOM / KLAVON LANDSCAPE SHEETS FOR TREE TYPES, SIZES AND QUANTITIES.

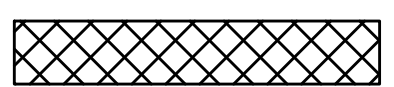
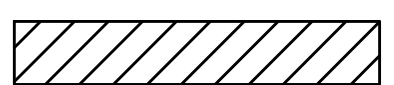
EXISTING TREE TO BE REMOVED  
(REFER TO AECOM/KLAVON DRAWINGS)



PROPOSED TREE  
(REFER TO AECOM/KLAVON DRAWINGS)



**PROPOSED GI LEGEND**

GI BIORETENTION (BR) OR BIOSWALE (BS)   
GI STORAGE TRENCH (ST) 

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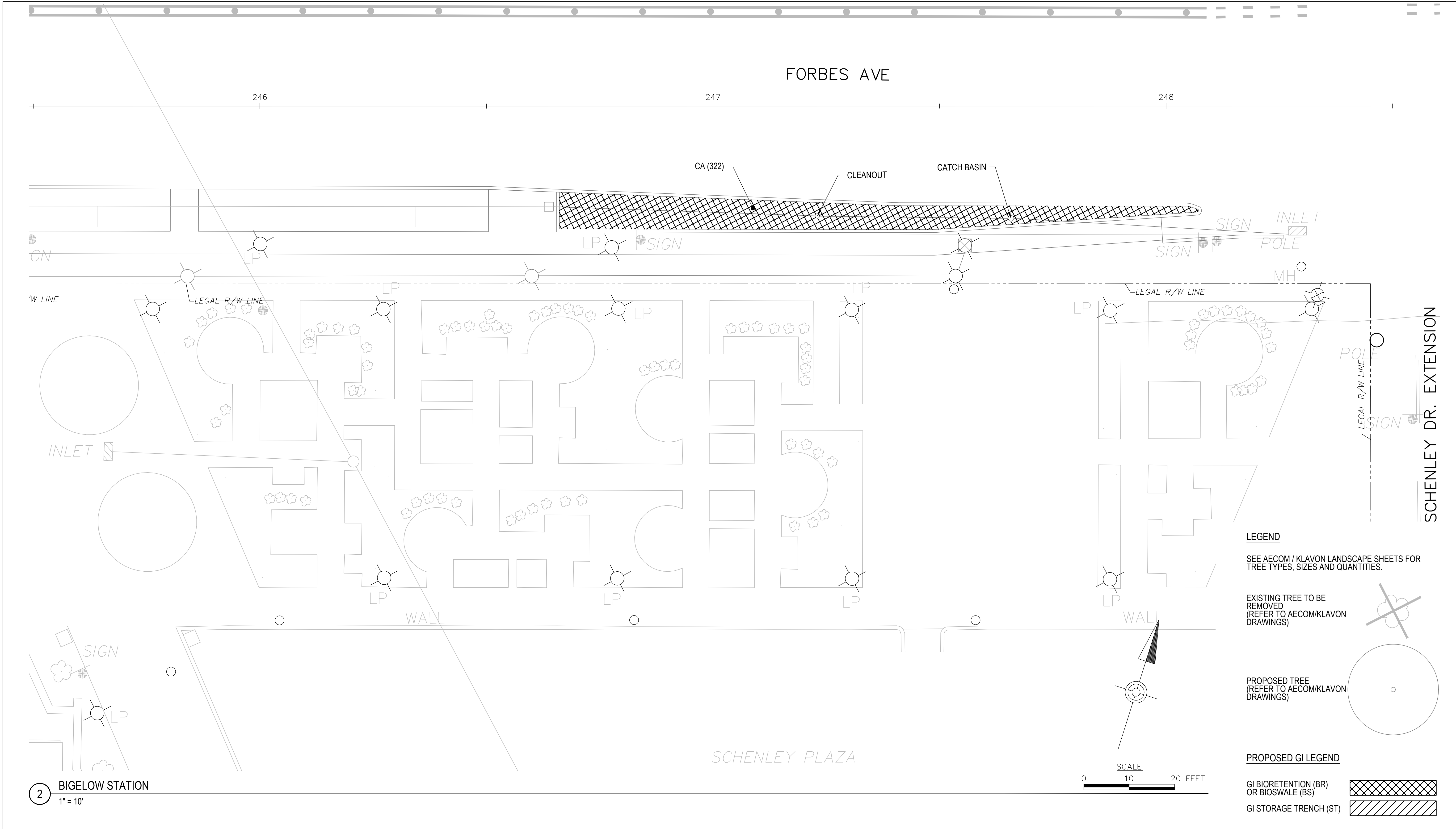
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**BUS RAPID TRANSIT GREEN INFRASTRUCTURE LANDSCAPE PLANS**

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DWG. NO. **SWM35** SHT. **35**

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2 BIGELOW STATION  
1" = 10'

- LEGEND**
- SEE AECOM / KLAVON LANDSCAPE SHEETS FOR TREE TYPES, SIZES AND QUANTITIES.
  - EXISTING TREE TO BE REMOVED (REFER TO AECOM/KLAVON DRAWINGS)
  - PROPOSED TREE (REFER TO AECOM/KLAVON DRAWINGS)
  - PROPOSED GI LEGEND**
  - GI BIORETENTION (BR) OR BIOSWALE (BS)
  - GI STORAGE TRENCH (ST)

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