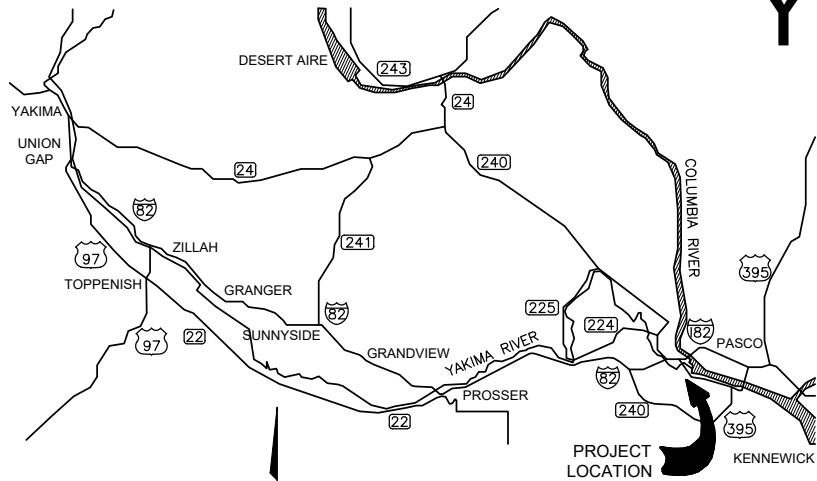


YOUNG ASSET MANAGEMENT

STEPTOE AND TAPTEAL INTERSECTION S.25,T.9N.,R.28 E.



VICINITY MAP



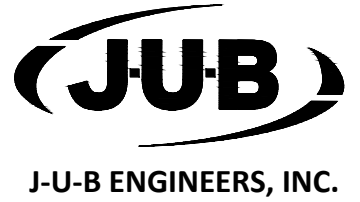
SITE MAP
0 200 400
SCALE IN FEET

SHEET INDEX	
SHEET NUMBER	SHEET TITLE
GENERAL	
G-001	COVER SHEET
G-002	LEGEND
G-003	SURVEY CONTROL
SITE PREPARATION	
SP-1	STA 5+00.00 TO STA 8+00.00
SP-2	STA 8+00.00 TO STA 11+50.00
SP-3	STA 11+50.00 TO STA 15+00.00
SP-4	STA 15+00.00 TO STA 18+00.00
SP-5	STA 41+00.00 TO STA 45+50.00
ROADWAY SECTIONS	
RS-1	ROADWAY SECTIONS
ROADWAY PLAN AND PROFILE	
RP-1	STA 5+00.00 TO STA 8+00.00
RP-2	STA 8+00.00 TO STA 11+50.00
RP-3	STA 11+50.00 TO STA 15+00.00
RP-4	STA 15+00.00 TO STA 18+00.00
RP-5	STA 36+00.00 TO STA 38+50.00
RP-6	STA 38+50.00 TO STA 42+00.00
RP-7	STA 42+00.00 TO STA 45+50.00
RP-8	GRAVITY BLOCK WALL PLAN AND PROFILE
ILLUMINATION	
IL-1	STA 5+00.00 TO STA 8+00.00
IL-2	STA 8+00.00 TO STA 11+50.00
IL-3	STA 11+50.00 TO STA 15+00.00
IL-4	STA 15+00.00 TO STA 18+00.00
IL-5	STA 41+00.00 TO STA 45+00.00
IL-6	STA 35+00.00 TO STA 38+00.00
TRAFFIC SIGNAL PLAN	
TS-1	TRAFFIC SIGNAL NOTES AND LEGEND
TS-2	TRAFFIC SIGNAL PLAN
TS-3	TRAFFIC SIGNAL WIRING DIAGRAM
TS-3A	RAILROAD SIGNAL INTERCONNECT CIRCUITS
TS-4	TRAFFIC SIGNAL POLE CHART
PAVEMENT MARKINGS AND SIGNING PLAN	
PM-1	STA 5+00.00 TO STA 8+00.00
PM-2	STA 8+ 00.00 TO STA 11+50.00
PM-3	STA 11+50.00 TO STA 15+ 00.00
PM-4	STA 15+ 00.00 TO STA 18+ 00.00
PM-5	STA 36+ 00.00 TO STA 38+ 50.00
PM-6	STA 38+ 50.00 TO STA 42+ 00.00
PM-7	STA 42+ 00.00 TO STA 45+ 50.00

PAVING DETAILS	
PD-1	PAVING DETAILS
PD-2	PAVING DETAILS
PD-3	PAVING DETAILS
PD-4	PAVING DETAILS
PD-5	PAVING DETAILS
PD-6	PAVING DETAILS
PD-7	PAVING DETAILS
PD-8	PAVING DETAILS
TRAFFIC CONTROL	
TC-1	DETOUR PLAN
TC-2	PHASE 1 - RAIL ROAD CROSSING WEEKEND CLOSURE
TC-3	PHASE 2 - CONSTRUCT WEST SIDE
TC-4	PHASE 3 - CONSTRUCT EAST SIDE
CONSTRUCTION DETAILS	
D-1	DETAILS

CONTACTS:

POWER ENERGY SERVICES 625 SWIFT BOULEVARD, MS-23 RICHLAND, WA 99352 JOE BIRCHER 509-942-7415	COMMUNICATIONS ZIPLY FIBER 752 MANSFIELD ST, RICHLAND, WA 99352 CHRISTY ROSS 509-736-3723
SEWER/STORM CITY OF RICHLAND 625 SWIFT BOULEVARD, MS-27 RICHLAND, WA 99352 HECTOR MORENO 509-942-7483	GAS CASCADE NATURAL GAS CORP. 8113 W. GRANDRIDGE BLVD ARNIE GARZA 509-619-5282
WATER CITY OF RICHLAND 625 SWIFT BOULEVARD, MS-15 RICHLAND, WA 99352 MIKE ENNIS 509-534-7915	CITY OF RICHLAND PUBLIC WORKS 625 SWIFT BLVD, MS-16 RICHLAND, WA 99352 CARLO D'ALESSANDRO, PE 509-942-7461 OFFICE 509-539-0171 CELL
CITY FIBEROPTIC CITY OF RICHLAND 625 SWIFT BOULEVARD, MS-32 RICHLAND, WA 99352 KEVIN GRUMBLING 509-942-7499	PORT OF BENTON ROGER WRIGHT 509-366-7455
CALL BEFORE YOU DIG 811	



**FINAL SUBMITTAL
DECEMBER 2023**

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NOTE: FUTURE WATERLINE EXTENSION BY THE CITY OF RICHLAND IS SHOWN FOR INFORMATION PROVIDED BY THE CITY. WATER AND SEWER SERVICE TO THE DEVELOPMENT WEST OF STEPTOE IS NOT PART OF THIS SUBMITTAL AND IS SHOWN CONCEPTUALLY FOR INFORMATION ONLY.

APPROVED FOR CONSTRUCTION BY:

_____ CITY OF RICHLAND	_____ DATE
_____ PORT OF BENTON - TRACK OWNER	_____ DATE

Plot Date: 12/6/2023 \\JUB\COM\CENTRAL\CLIENTS\WA\YOUNG\ASSET\MGMT\PROJECTS\07-21-030_STEPTOE\TAPTEAL\DESIGN\CAD\SHEET\07-21-030_G-1.DWG

Plot Date: 12/20/2023 11:50 AM Plotted By: Mary H. Wilkins
 Date Created: 12/14/2021 10:05 AM Client: JUB CONCRETE/PAV/CL/ENR/SEWA/Young & Rubicam/PROJECTS/07-21-030 - STEPTOE/TAPTEAL/DESIGN/ASUS/SHEET/07-21-030-G-2.DWG

SYMBOL DESCRIPTION	EXISTING SYMBOL	PROPOSED SYMBOL
SURVEY		
CAP (ALUMINUM)	⊕	
CAP (BRASS)	⊗	
CHISELED X	⊠	
CTRL PT GENERIC	△	
CTRL PT 1/2" REBAR	△ 1/2" PIN CONTROL PT	
CTRL PT 5/8" REBAR	△ 5/8" PIN CONTROL PT	
CTRL PT 60D NAIL	△ 60D	
CTRL PT HUB & TACK	△ HT	
CTRL PT PK NAIL	△ PK	
CTRL PT TEMP BENCH MARK	△ TBM	
NAIL	⊙	⊙
NAIL AND TAG	⊙ N/T	
NAIL (PK)	⊙ PK	
BOLT	●	
DRILL STEEL	○	
REBAR (1/2")	⊙	●
REBAR (5/8")	⊙	●
STAINLESS STEEL ROD	⊙	●
IRON PIPE	⊙	
RAILROAD SPIKE	◇	
R/W MONUMENT	⊠	
STONE	⊕	
SECTION CORNER. MON.	22 15 21 16	
SECTION QUARTER MON.	15 22	
SITE		
BOLLARD	⊠	⊠
BOULDER	⊙	⊙
DRINKING FOUNTAIN	⊠	⊠
FLAGPOLE	⊙	⊙
GATE	⊠	⊠
MAIL BOX	⊠	⊠
PARKING METER	⊠	⊠
POST	○	●
SIGN	+	+
SPOT ELEVATION		⊗
TREE (SHRUB)	⊙	
TREE (STUMP)	⊙	
TREE (CONIFEROUS)	⊙	
TREE (DECIDUOUS)	⊙	
TEST HOLE	⊙	
WELL	⊙	
WELL (MONITORING)	⊙	⊙

SYMBOL DESCRIPTION	EXISTING SYMBOL	PROPOSED SYMBOL
COMMUNICATION		
TELE. MANHOLE	⊙	●
TELE. PEDESTAL	⊙	⊙
TELE. POLE	⊙	⊙
TV PEDESTAL	⊙	⊙
GUY WIRE	⊙	⊙
DOMESTIC WATER		
FIRE HYDRANT	⊙	⊙
SPIGOT	⊙	⊙
YARD HYDRANT	⊙	⊙
WATER MANHOLE	⊙	●
WATER METER	⊙	⊙
WATER VALVE	⊙	⊙
ELECTRIC		
ELEC. MANHOLE	⊙	●
ELEC. METER	⊙	⊙
ELEC. TRANS.	⊙	⊙
JUNCTION BOX	⊙	⊙
POWER POLE	⊙	⊙
POWER STUB	⊙	⊙
STREET LIGHT	⊙	⊙
TRAFFIC SIGNAL POLE	⊙	⊙
IRRIGATION		
IRRIGATION VALVE	⊙	⊙
IRRIGATION VALVE BOX	⊙	⊙
SPRINKLER	⊙	⊙
SANITARY SEWER		
CLEANOUT	⊙	⊙
SEWER STUB	⊙	⊙
SS MANHOLE	⊙	●
STORM DRAIN		
CATCH BASIN	⊙	⊙
DRY WELL	⊙	⊙
FLARE END	⊙	⊙
GREASE TRAP	⊙	⊙
SD MANHOLE	⊙	●

LINE LEGEND

LINE DESCRIPTION	PROPOSED LINE	EXISTING LINE
POWER / COMMUNICATIONS		
OVERHEAD POWER	—OHP—	--- OHP ---
UNDERGROUND POWER	—UP—	--- UP ---
OVERHEAD TELEPHONE	—OHT—	--- OHT ---
UNDERGROUND TELEPHONE	—UT—	--- UT ---
FIBER OPTIC	—F/O—	--- F/O ---
CABLE TELEVISION	—CTV—	--- CTV ---
UNDERGROUND POWER, TEL, CABLE TV		--- P,T,CTV ---
UNDERGROUND POWER, TEL, CABLE TV, GAS		--- P,T,CTV,G ---
ILLUMINATION	—ILL—	--- ILL ---
STORM DRAIN		
STORM DRAIN (GENERAL)	—SD—	--- SD ---
STORM DRAIN	—X*SD—	--- X*SD ---
ROOF DRAIN	—RD—	--- RD ---
LAND DRAIN	—LD—	--- LD ---
SANITARY SEWER		
SANITARY SEWER (GENERAL)	—SS—	--- SS ---
SANITARY SEWER	—X*SS—	--- X*SS ---
SANITARY SEWER SERVICE	—SS—SS—	--- SS --- SS ---
SEWER FORCE MAIN	—FM—	--- FM ---
WATER		
WATER (GENERAL)	—W—	--- W ---
WATER (SPECIFIED SIZE)	—X*W—	--- X*W ---
WATER SERVICE	—WS—WS—	--- WS --- WS ---
IRRIGATION		
IRRIGATION	—IRR—	--- IRR ---
GRAVITY IRRIGATION	—GIRR—	--- GIRR ---
PRESSURE IRRIGATION	—PIRR—	--- PIRR ---
POTABLE WATER	—PW—	--- PW ---
NON-POTABLE WATER	—NPW—	--- NPW ---
GAS		
NATURAL GAS	—G—	--- G ---
NATURAL GAS SERVICE	—G—G—	--- G --- G ---
HIGH PRESSURE GAS	—HPG—	--- HPG ---
LIQUID GAS	—LG—	--- LG ---
UTILITY		
CHLORINE LINE	—CHL—	--- CHL ---
INDUSTRIAL WASTE WATER	—IWW—	--- IWW ---
DRAIN LINE	—DL—	--- DL ---

LINE DESCRIPTION	PROPOSED LINE	EXISTING LINE
BOUNDARY		
PROPERTY LINE	—P/L—	--- P/L ---
PROPERTY LINE	—R/W—	--- R/W ---
RIGHT OF WAY	—R/W—	--- R/W ---
TEMPORARY EASEMENT	—T/E—	--- T/E ---
PERMANENT EASEMENT	—P/E—	--- P/E ---
TOWNSHIP AND RANGE		---
SECTION LINE		---
QUARTER SECTION LINE		---
1/16 SECTION LINE		---
STATE LINE		---
COUNTY LINE		---
SITE		
FENCE	—X—	--- X ---
MAJOR CONTOUR	—2521—	---
MINOR CONTOUR		---
GRADE BREAK		--- GB ---
TOP OF BANK		--- TOB ---
TOE OF SLOPE		--- TOE ---
CUT LIMITS	—CUT—	---
FILL LIMITS	—FILL—	---
DITCH	—DITCH—	---
STORM SWALE	—SWALE—	---
EDGE OF WATER		---
HIGH WATER		---
WETLAND		--- WET ---
WETLAND BOG		--- BOG ---
WETLAND MARSH		--- MRSH ---
WETLAND SWAMP		--- SWMP ---
ROADWAY		
ROAD SHOULDER	—RS—	---
ROAD CENTERLINE	—RC—	---
ROAD ASPHALT	—RA—	--- EP ---
ROAD GRAVEL	—EG—	--- EG ---
TOP BACK OF CURB	—TBC—	---
LIP OF GUTTER	—LIP—	---
LANDSCAPING LIMITS	—LS—	--- LS ---

HATCH LEGEND

HMA		HMA REMOVAL	
CONCRETE		CONCRETE REMOVAL	



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NO.	REVISION	DESCRIPTION	DATE

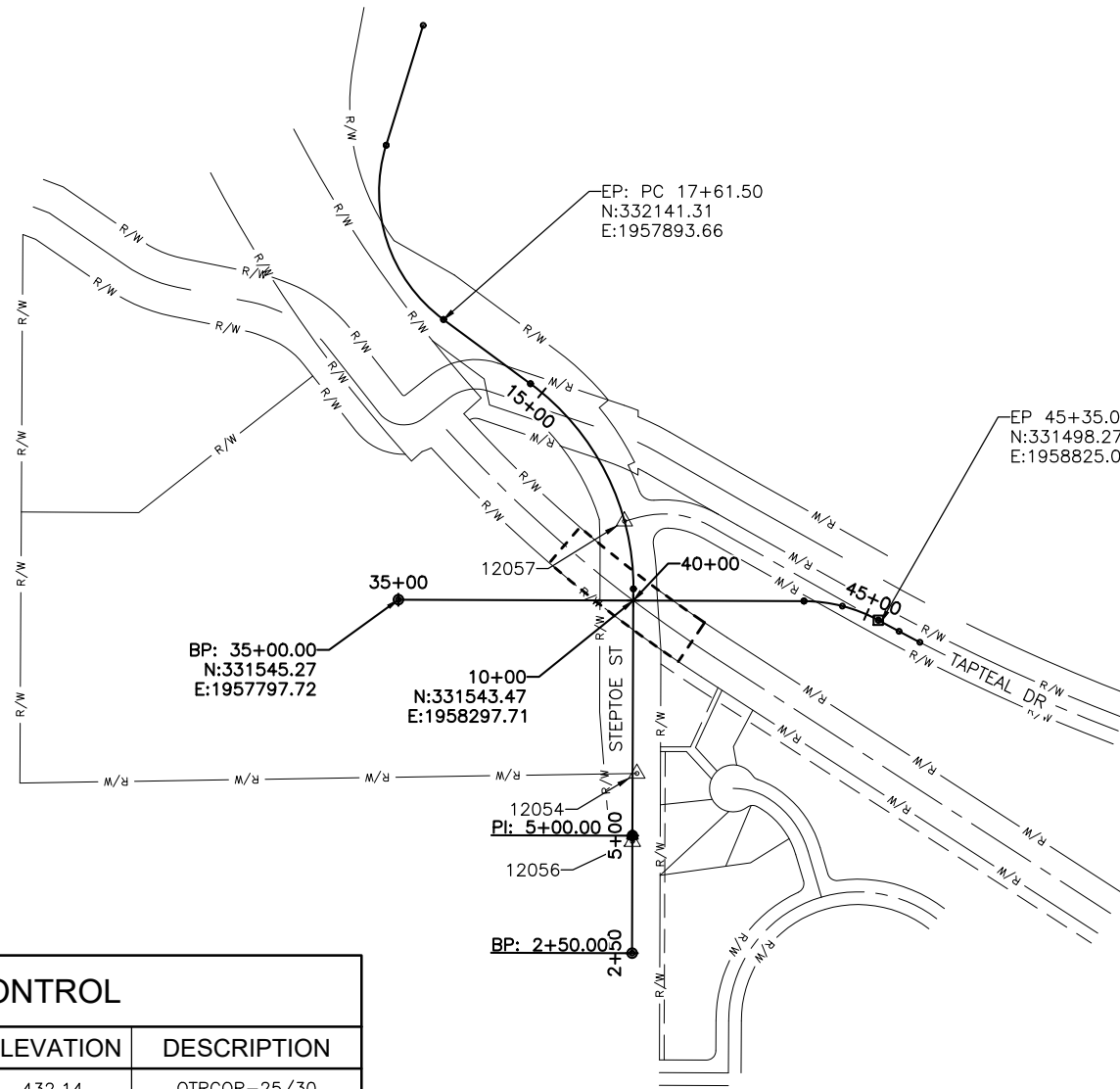
STEPTOE AND TAPTEAL INTERSECTION YOUNG ASSET MANAGEMENT

FILE : 07-21-030-G-2
 JUB PROJ. # : 07-21-030
 DRAWN BY: WG
 DESIGN BY: WG
 CHECKED BY: RD

ONE INCH
AT FULL SIZE, IF NOT ONE INCH, SCALE ACCORDINGLY
 LAST UPDATED: 11/4/2023

SHEET NUMBER:
G-002

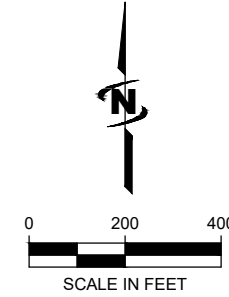
Plot Date: 10/20/2023 11:50 AM, Plotted By: Mary H. Wilkins
 Date Created: 03/02/22, JUB.COM\CENTRAL\Clients\SWA\Young\GASSET\HIGHWAY\PROJECTS\07-21-030, STEPTOE/TAPTEAL\DESIGN\ASUS\SHEET\07-21-030_G-3.DWG



SURVEY CONTROL				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
12054	331175.80	1958305.45	432.14	QTRCOR-25/30
12056	331030.74	1958295.90	441.28	MON-STEPTOE/CANYON
12057	331712.17	1958278.82	410.93	MON-STEPTOE/TAPTEAL


BASIS OF BEARINGS
 1983 (NAD 83/91), WASHINGTON STATE PLANE COORDINATE SYSTEM, SOUTH ZONE (4602) UTILIZING THE CITY OF RICHLAND'S PUBLISHED GPS CONTROL, POINT NUMBERS 2054 (JUB POINT 12054), 2056 (JUB POINT 12056) AND 2057 (JUB POINT 12057).

VERTICAL DATUM
 NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) BASED ON GPS OBSERVATIONS TO CITY OF RICHLAND PROVIDED GPS CONTROL POINT NO. 2056. THIS MONUMENT IS THE PROJECT BENCHMARK, PUBLISHED ELEVATION BEING 441.28 FEET.

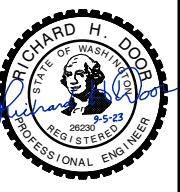


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NO.	REVISION	DESCRIPTION	BY	DATE

STEPTOE AND TAPTEAL INTERSECTION
YOUNG ASSET MANAGEMENT
 SURVEY CONTROL

FILE : 07-21-030_G-3
 JUB PROJ. # : 07-21-030
 DRAWN BY: WG
 DESIGN BY: WG
 CHECKED BY: RD
 ONE INCH
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 LAST UPDATED: 11/4/2023
 SHEET NUMBER:
G-003

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NO.	REVISION	DESCRIPTION	DATE

STEPTOE AND TAPTEAL INTERSECTION
YOUNG ASSET MANAGEMENT

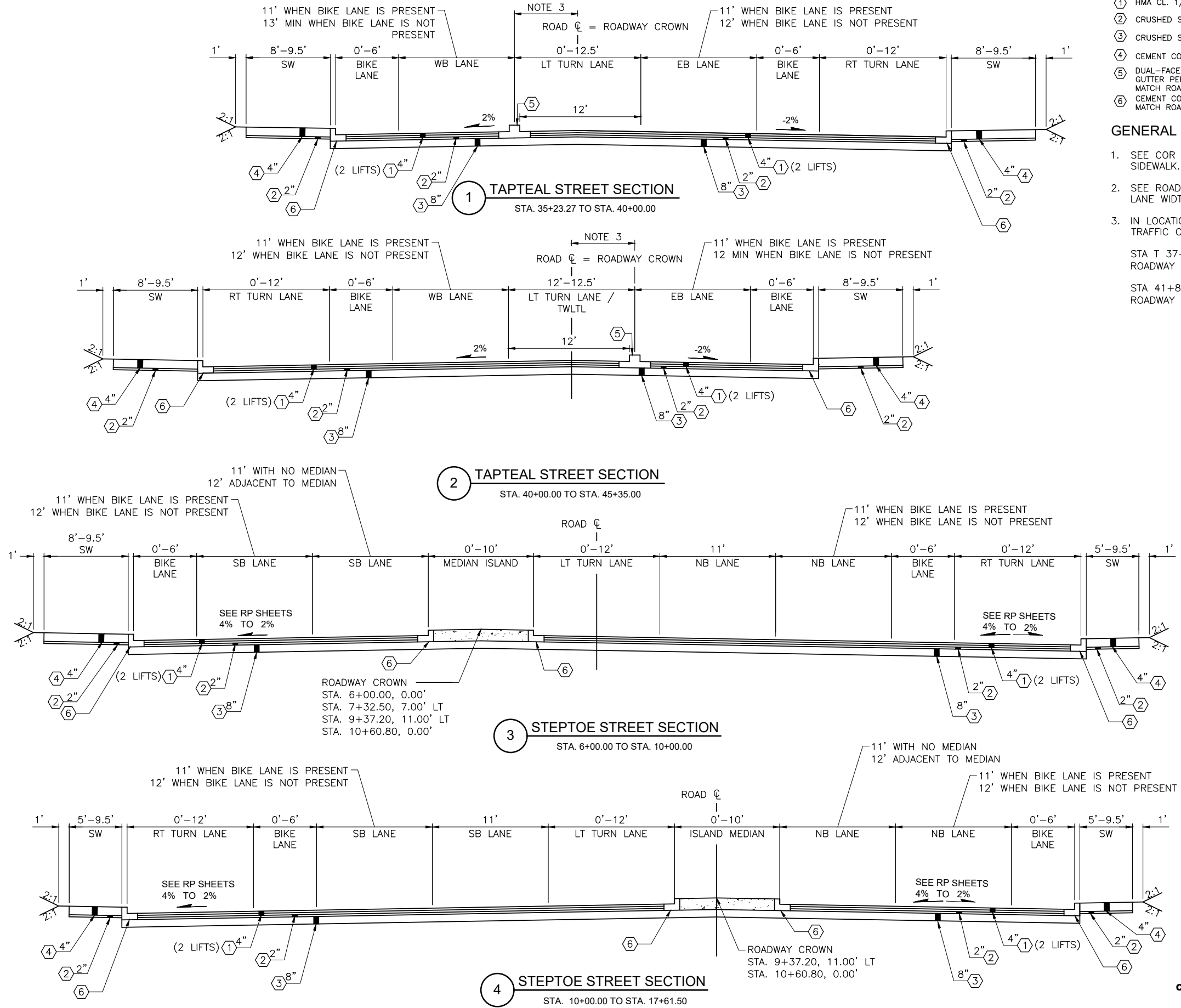
ROADWAY SECTIONS

FILE: 07-21-030_RS-1
JUB PROJ. #: 07-21-030
DRAWN BY: ###
DESIGN BY: ###
CHECKED BY: ###

ONE INCH
AT FULL SIZE, IF NOT ONE
INCH, SCALE ACCORDINGLY
LAST UPDATED: 9/6/2023

SHEET NUMBER:
RS-1

TYPICAL LANE LAYOUT



KEYED NOTES

SURFACING LEGEND

- ① HMA CL. 1/2 IN. PG 64-28
- ② CRUSHED SURFACING TOP COARSE
- ③ CRUSHED SURFACING BASE COARSE
- ④ CEMENT CONC. SIDEWALK
- ⑤ DUAL-FACED CEMENT CONCRETE TRAFFIC CURB AND GUTTER PER WSDOT STD PLAN F.10.12-04, MATCH ROADWAY SLOPE. SEE RP SHEETS FOR LOCATION
- ⑥ CEMENT CONCRETE TRAFFIC CURB AND GUTTER, MATCH ROADWAY SLOPE

GENERAL NOTES

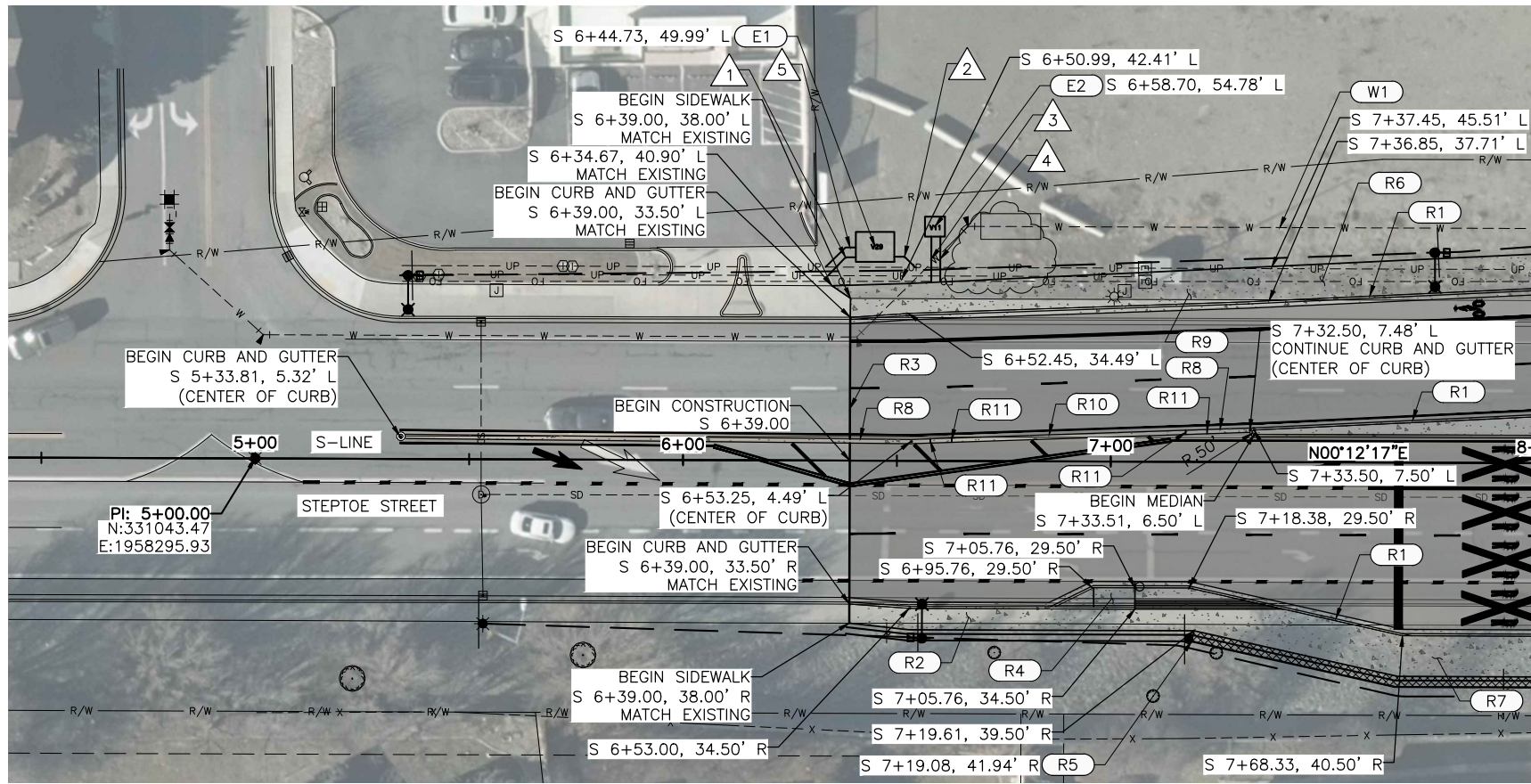
1. SEE COR STD PLAN ST-1 FOR CURB, GUTTER, AND SIDEWALK.
2. SEE ROADWAY PLANS FOR SIDEWALK, MEDIAN, AND LANE WIDTH TRANSITIONS.
3. IN LOCATIONS OF DUAL-FACED CEMENT CONCRETE TRAFFIC CURB TRANSITION ROADWAY CROWN:
STA T 37+11.48 TO T 38+11.48 TRANSITION ROADWAY CROWN FROM CENTERLINE TO 6.0' LT.
STA 41+84.70 TO T 42+84.70 TRANSITION ROADWAY CROWN FROM 6.5' RT TO CENTERLINE.



Know what's below.
Call before you dig.

CALL 2 BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES

Plot Date: 10/20/2023 11:59 AM, Plotted By: Mary H. Williams
 Date Created: 07/27/2023, JUB-GCM-CENTRAL-CALC-LENS-YOUNG-ASSET-MGMT-PROJECTS/07-21-030-STEP-TOE-TAPTEAL-DESIGN/RS-1-DWG



CONDUIT SCHEDULE		
RUN #	CONDUIT SIZE	LENGTH
1	6"	9'
2	6"	6'
3	4"	11'
4	4"	11'
5	4"	11'

CONSTRUCTION NOTES

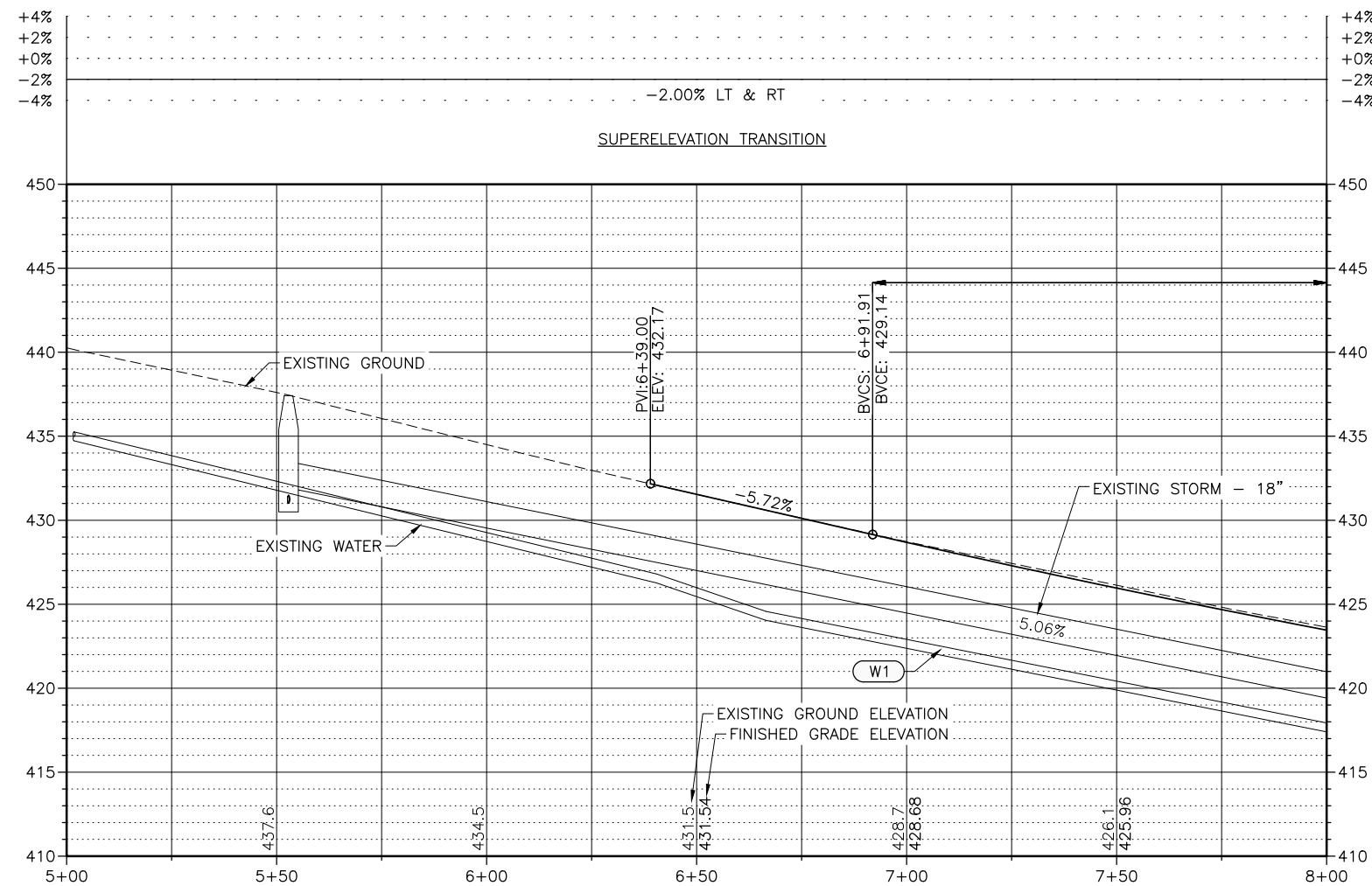
- (R1) CEMENT CONC. TRAFFIC CURB AND GUTTER, MATCH ROADWAY SLOPE
- (R2) 5' CEMENT CONC. SIDEWALK
- (R3) MATCH EXISTING PAVEMENT SAWCUT REQUIRED
- (R4) SEE PAVING DETAILS
- (R5) BEGIN GRAVITY BLOCK WALL, SEE SHEET RP-8
- (R6) 8' CEMENT CONC. SIDEWALK
- (R7) 9.5' CEMENT CONC. SIDEWALK
- (R8) DUAL-FACED CEMENT CONCRETE TRAFFIC CURB AND GUTTER PER WSDOT STD PLAN F-10.12-04, MATCH ROADWAY SLOPE
- (R9) NO. 4A A.R.E.M.A. ROCK, 3" DEPTH, MATCH CONTOUR OF ADJACENT SURFACING
- (R10) 3" HEIGHT DUAL-FACED CEMENT CONCRETE TRAFFIC CURB AND GUTTER PER WSDOT STD PLAN F-10.12-04, MATCH ROADWAY SLOPE
- (R11) TRANSITION FROM 6" HEIGHT DUAL-FACED CEMENT CONCRETE TRAFFIC CURB AND GUTTER TO 3" HEIGHT DUAL FACED CEMENT CONCRETE TRAFFIC CURB AND GUTTER, MATCH ROADWAY SLOPE
S 6+57.80 TO S 6+62.80
S 7+17.51 TO S 7+22.51

WATER NOTES

- (W1) WATERLINE BY CITY OF RICHLAND

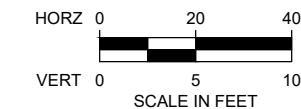
ELECTRIC NOTES

- (E1) INSTALL V29STLS VAULT W/ V19SWTDF LID. COORDINATE W/ ENERGY SERVICES. STUB CONDUITS PER CONDUIT SCHEDULE. ENERGY SERVICES SHALL PERFORM CONNECTION TO EXIST. CONDUIT.
- (E2) INSTALL V3B VAULT W/ V3STL LID. COORDINATE W/ ENERGY SERVICES. STUB CONDUITS PER CONDUIT SCHEDULE. ENERGY SERVICES SHALL PERFORM CONNECTION TO EXIST. CONDUIT.



LEGEND

- PROPOSED HOT MIX ASPHALT (HMA)
- PROPOSED CONCRETE



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NO.	DESCRIPTION	BY	DATE

STEPTOE AND TAPTEAL INTERSECTION
YOUNG ASSET MANAGEMENT

ROADWAY PLAN AND PROFILE
STA 5+00.00 TO STA 8+00.00

FILE: 07-21-030_RP-1
JUB PROJ. #: 07-21-030
DRAWN BY: WG
DESIGN BY: WG
CHECKED BY: RD
AT FULL SIZE, IF NOT ONE INCH SCALE ACCORDINGLY
LAST UPDATED: 12/4/2023
SHEET NUMBER:
RP-1

NO.	REVISION	DESCRIPTION	BY	DATE

STEPTOE AND TAPTEAL INTERSECTION
YOUNG ASSET MANAGEMENT

ROADWAY PLAN AND PROFILE
STA 8+00.00 TO STA. 11+50.00

FILE: 07-21-030_RP-2
JUB PROJ # : 07-21-030
DRAWN BY: WG
DESIGN BY: WG
CHECKED BY: RD
AT FULL SIZE, IF NOT ONE INCH SCALE ACCORDINGLY
LAST UPDATED: 12/12/2023
SHEET NUMBER:
RP-2

CONSTRUCTION NOTES

- (R1) CEMENT CONC. TRAFFIC CURB AND GUTTER, MATCH ROADWAY SLOPE
- (R2) 8' CEMENT CONC. SIDEWALK
- (R3) MATCH EXISTING PAVEMENT SAWCUT REQUIRED
- (R4) INSTALL GATE PER HDR CROSSING DESIGN
- (R5) NOT USED
- (R6) 10' RAISED MEDIAN
- (R7) REFUGE ISLAND
- (R8) PERPENDICULAR CURB RAMP TYPE A
- (R9) SEE PAVING DETAILS
- (R10) PEDESTRIAN CUT-THROUGH
- (R11) FLASHERS (SIDE, FRONT, AND BACK LIGHTS) PER HDR CROSSING DESIGN
- (R12) 9.5' CEMENT CONC. SIDEWALK
- (R13) PROVIDE RAILROAD EQUIPMENT HOUSE PER HDR CROSSING DESIGN
- (R14) NOT USED
- (R15) NO. 4A A.R.E.M.A. ROCK, 3" DEPTH, MATCH CONTOUR OF ADJACENT SURFACING
- (R16) CROSSING PANEL. SEE SHEET PD-7 FOR PAVING DETAILS AND HDR CROSSING DESIGN
- (R17) CEMENT CONCRETE PEDESTRIAN CURB PER WSDOT STD PLAN F-10.12-04
- (R18) CASING BY OTHERS. SEE ATTACHED HDR CROSSING DESIGN

STORMWATER NOTES

- (S1) INSTALL STANDARD MANHOLE W/CAST IN PLACE BASE (MH-1) PER COR STD DETAIL S-03
INV IN (S): 413.79'
INV OUT (N): 413.69'
- (S2) INSTALL 18" SDR35 PVC STORM SEWER PIPE, 50 LF
- (S3) INSTALL TYPE 1 CATCH BASIN (CB-1) PER COR STD DETAIL S-11
INV OUT (NW): 413.94'
- (S4) INSTALL 12" SDR35 PVC STORM SEWER PIPE, 46 LF
- (S5) INSTALL STANDARD MANHOLE W/CAST IN PLACE BASE (MH-2) PER COR STD DETAIL S-03
INV IN (SE): 413.16'
INV OUT (NW): 413.06'
- (S6) INSTALL 18" SDR35 PVC STORM SEWER PIPE, 125 LF
- (S7) INSTALL CATCH BASIN MANHOLE (CB-2) PER COR STD DETAIL S-13
INV IN (SE): 411.78'
INV OUT (W): 411.68'
- (S8) INSTALL 18" SDR35 STORM SEWER PIPE, 55 LF

WATER NOTES

- (W1) WATERLINE BY CITY OF RICHLAND
- (W2) SEE SPINK ENGINEERING PLANS "STEPTOE/TAPTEAL WATER & SEWER EXTENSION" FOR DESIGN OF WATER LINE

ELECTRICAL NOTES

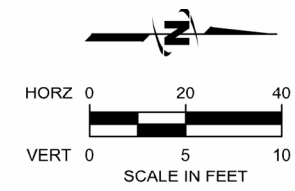
- (E1) INSTALL V3B VAULT W/ V3KO LD. STUB CONDUITS PER CONDUIT SCHEDULE. COORDINATE W/ ENERGY SERVICES. ENERGY SERVICES SHALL PERFORM CONNECTION TO EXIST. CONDUIT.

CURVE #	LENGTH	RADIUS	TANGENT	DELTA	CHORD DIRECTION	CHORD LENGTH
C1	506.60'	540.00'	273.67'	53°45'07"	N26°40'17"W	488.23'

RUN #	CONDUIT SIZE	LENGTH
1	3"	45'
2	3"	5'
3	4"	232'
5	4" & 6"	93'

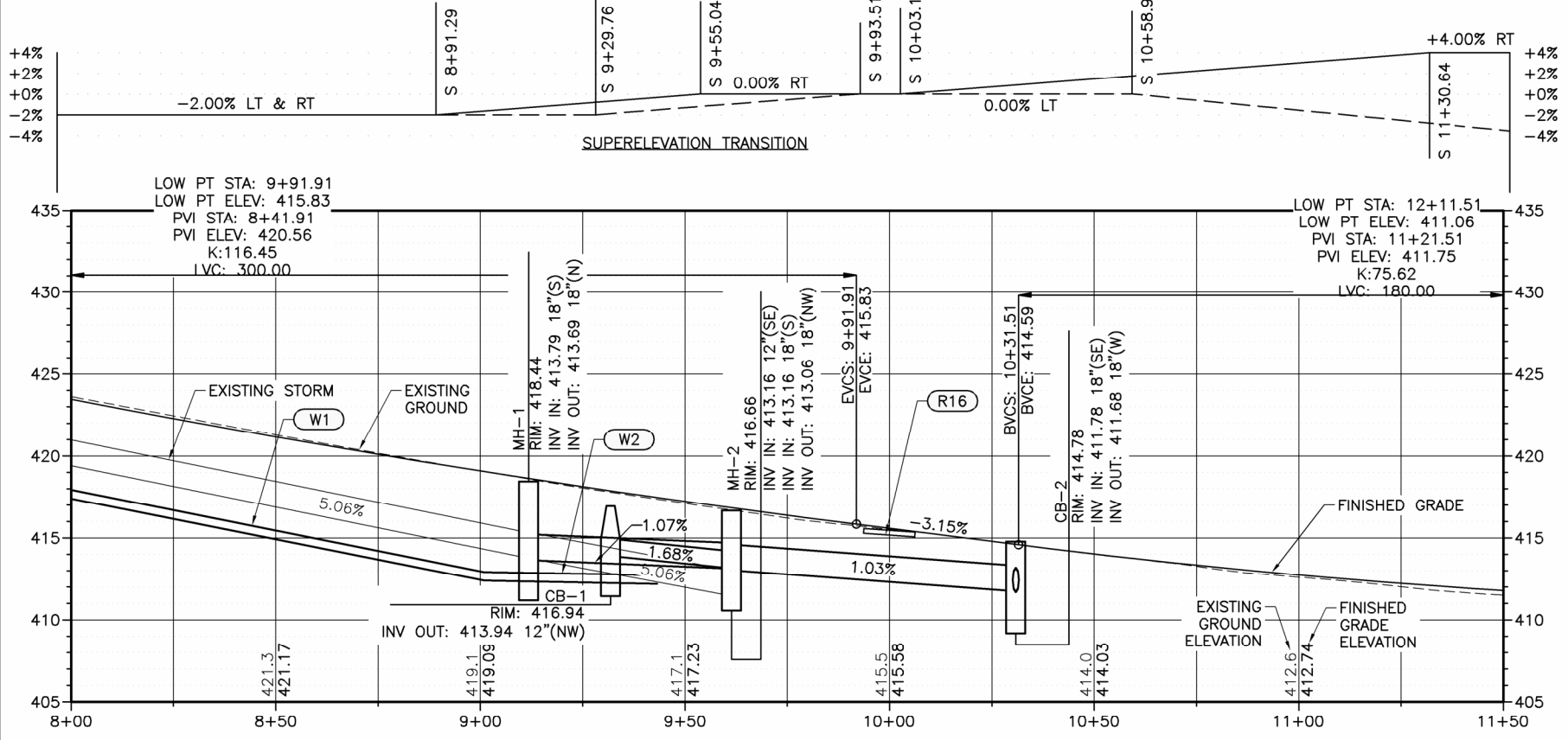
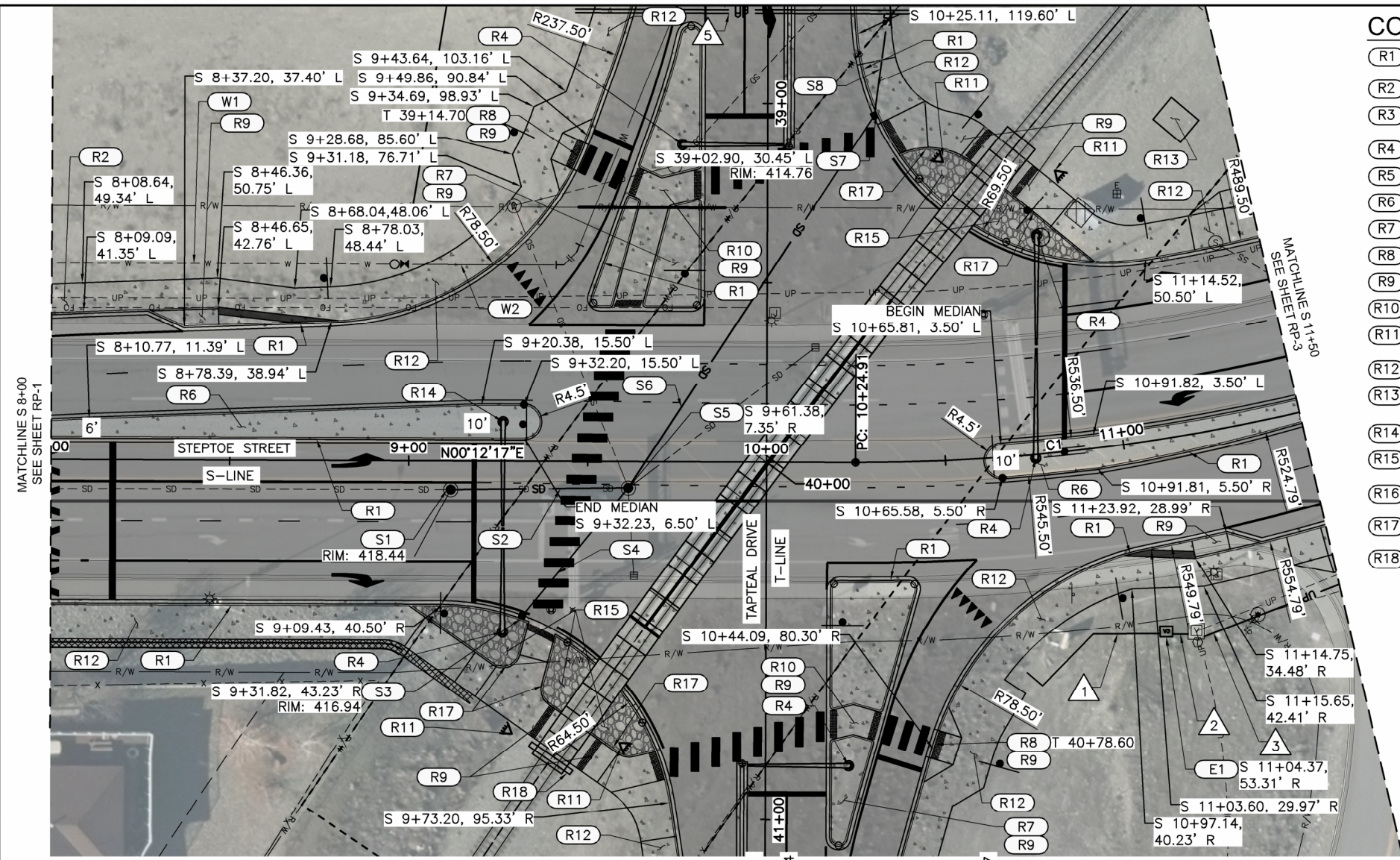
LEGEND

- PROPOSED HOT MIX ASPHALT (HMA)
- PROPOSED CONCRETE



Know what's below.
Call before you dig.

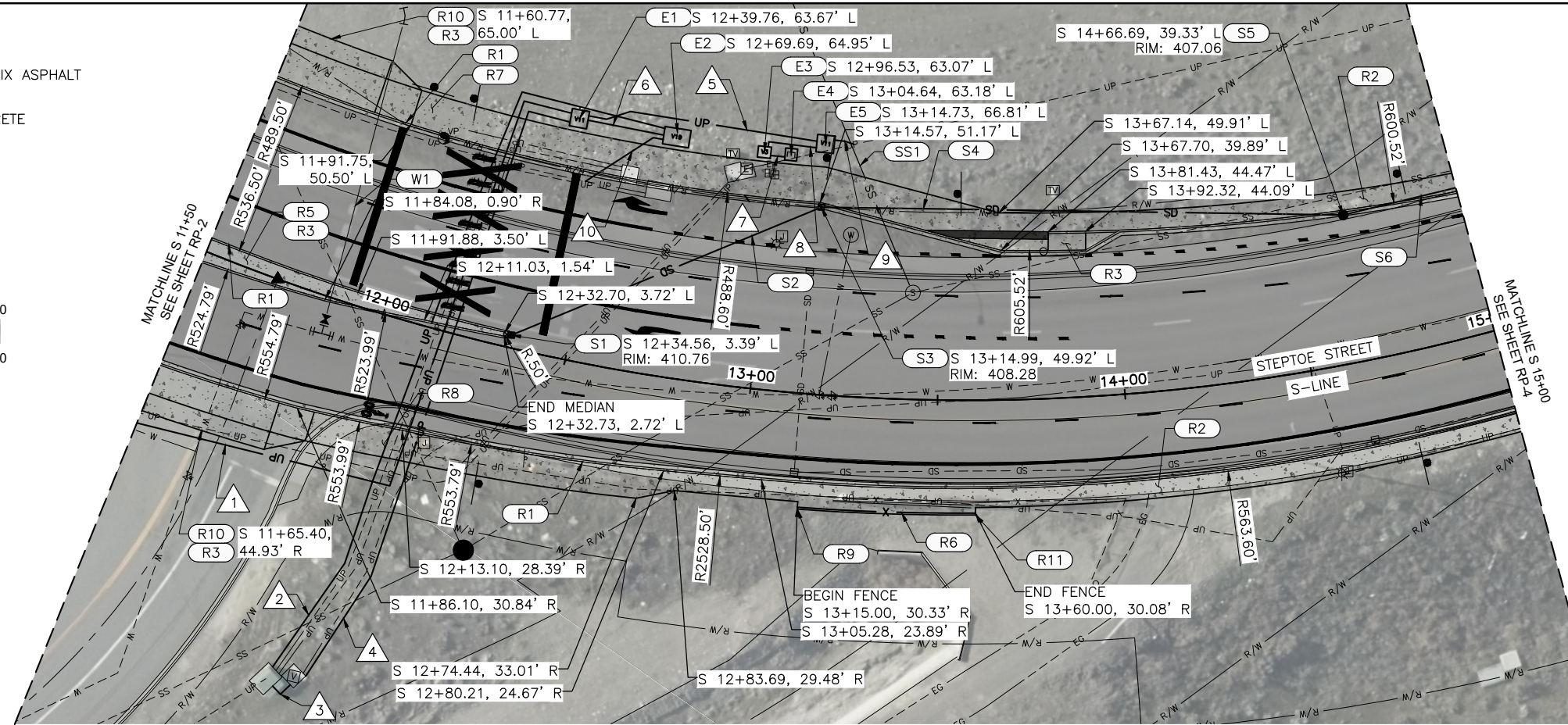
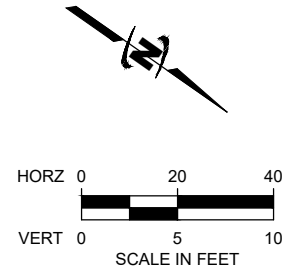
CALL 2 BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES



File Date: 12/22/2023 6:37 PM Plotted By: Mary M. Wilkinson
 Date Created: 12/22/2023 JUB.COM\CENTRAL\CLIENTS\YOUNG\ASSET\MGMT\PROJECTS\07-21-030\STEP\TAPTEAL\DESIGN\CAD\SHEET\07-21-030-RP-2.DWG

LEGEND

	PROPOSED HOT MIX ASPHALT (HMA)
	PROPOSED CONCRETE



CONSTRUCTION NOTES

- (R1) CEMENT CONC. TRAFFIC CURB AND GUTTER, MATCH ROADWAY SLOPE
- (R2) 5' CEMENT CONC. SIDEWALK
- (R3) SEE PAVING DETAILS
- (R4) MATCH EXISTING PAVEMENT SAWCUT REQUIRED
- (R5) 10' RAISED MEDIAN
- (R6) CONSTRUCT TYPE 3 CHAIN LINK FENCE 77 LF
- (R7) 9.5' CEMENT CONC. SIDEWALK
- (R8) 8.0' CEMENT CONC. SIDEWALK
- (R9) BEGIN DROPPED BACK SIDEWALK PER DETAIL 6 SHEET D-1 STA. 13+15.00 RT
- (R10) STANDARD NON-RESIDENTIAL DRIVEWAY (TYPE 1) PER COR STD DETAIL ST-2A
- (R11) END DROPPED BACK SIDEWALK PER DETAIL 6 SHEET D-1 STA. 13+60.00 RT

STORMWATER NOTES

- (S1) INSTALL TYPE 1 CATCH BASIN (CB-3) PER COR STD DETAIL S-11 INV OUT (NW): 407.79'
- (S2) INSTALL 12" SDR35 PVC STORM SEWER PIPE, 89 LF
- (S3) INSTALL TYPE 1 CATCH BASIN (CB-4) PER COR STD DETAIL S-11 INV IN (SE): 405.28' INV OUT (NW): 405.18'
- (S4) INSTALL 12" SDR35 PVC STORM SEWER PIPE, 139 LF
- (S5) INSTALL STANDARD MANHOLE (MH-5) PER COR STD DETAIL S-04 INV IN (SE): 404.06' INV OUT (NW): 403.96'
- (S6) INSTALL 12" SDR35 PVC STORM SEWER PIPE, 119 LF

WATER NOTES

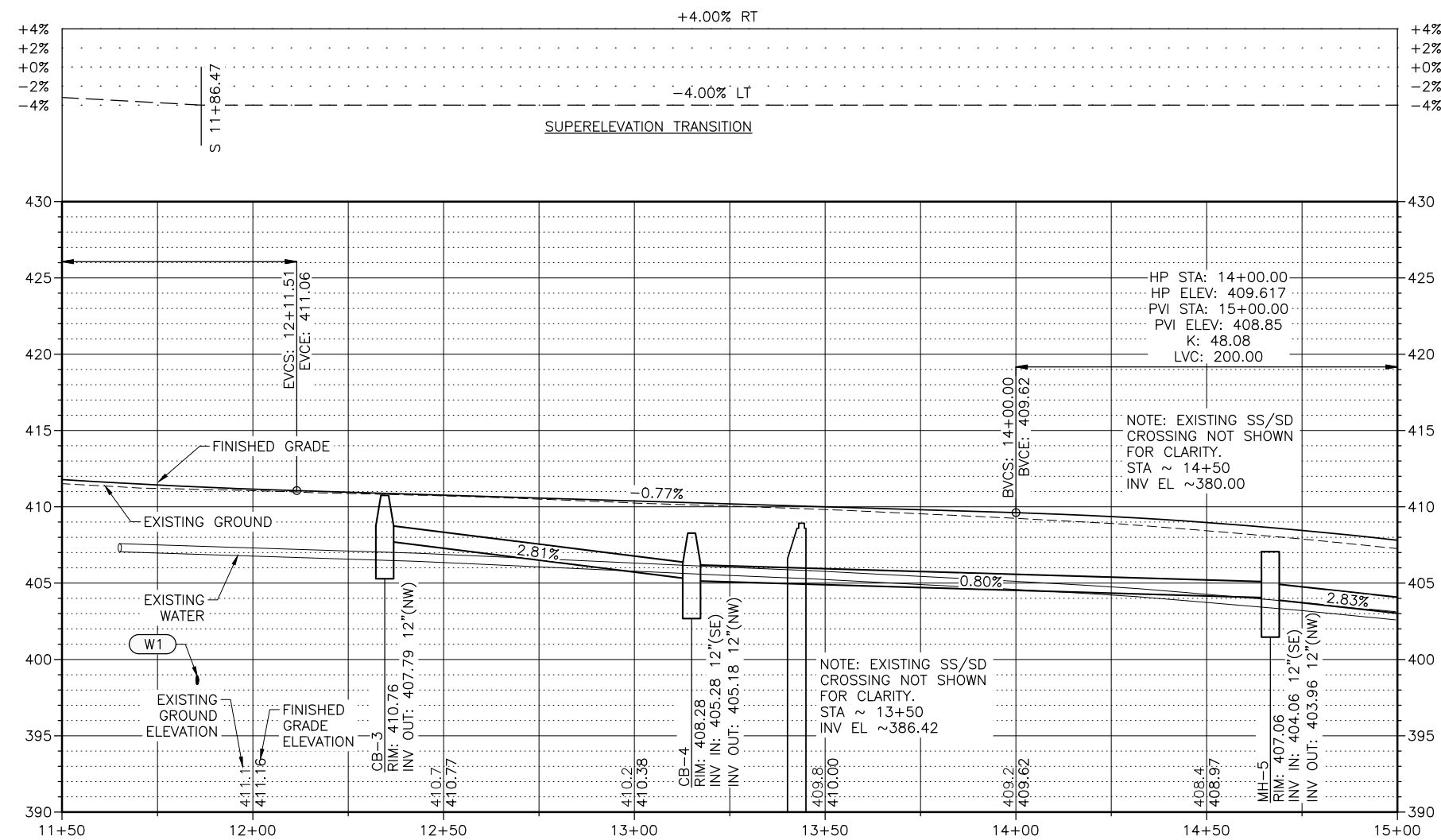
- (W1) REFERENCE THE SPINK ENGINEERING PLANS "STEPTOE/TAPTEAL WATER & SEWER EXTENSION" FOR DESIGN OF WATER LINE

SEWER NOTES

- (SS1) REFERENCE THE SPINK ENGINEERING PLANS "STEPTOE/TAPTEAL WATER & SEWER EXTENSION" FOR DESIGN OF SEWER LINE

ELECTRIC NOTES

- (E1) INSTALL V11B VAULT W/ V11STL LID. COORDINATE W/ ENERGY SERVICES. STUB CONDUITS PER CONDUIT SCHEDULE. ENERGY SERVICES SHALL PERFORM CONNECTION TO EXIST. CONDUIT.
- (E2) INSTALL V29STLS VAULT W/ V19SWTDF LID. COORDINATE W/ ENERGY SERVICES. STUB CONDUITS PER CONDUIT SCHEDULE. ENERGY SERVICES SHALL PERFORM CONNECTION TO EXIST. CONDUIT.
- (E3) INSTALL V3B VAULT W/ V3KO LID. COORDINATE W/ ENERGY SERVICES. STUB CONDUITS PER CONDUIT SCHEDULE. ENERGY SERVICES SHALL PERFORM CONNECTION TO EXIST. CONDUIT.
- (E4) INSTALL RAILROAD DISCONNECT. COORDINATE W/ ENERGY SERVICES. STUB CONDUITS PER CONDUIT SCHEDULE. ENERGY SERVICES SHALL PERFORM CONNECTION TO EXIST. CONDUIT.
- (E5) INSTALL V11B VAULT W/ V11STL LID. COORDINATE W/ ENERGY SERVICES. STUB CONDUITS PER CONDUIT SCHEDULE. ENERGY SERVICES SHALL PERFORM CONNECTION TO EXIST. CONDUIT.



CONDUIT SCHEDULE

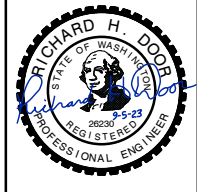
RUN #	CONDUIT SIZE	LENGTH
1	SEE SHEET RP-2	
2	6"	207'
3	4"	7'
4	4"	174'
5	4"	62'
6	4"	21'
7	3"	4'
8	3"	14'
9	4"	5'
10	6"	24'



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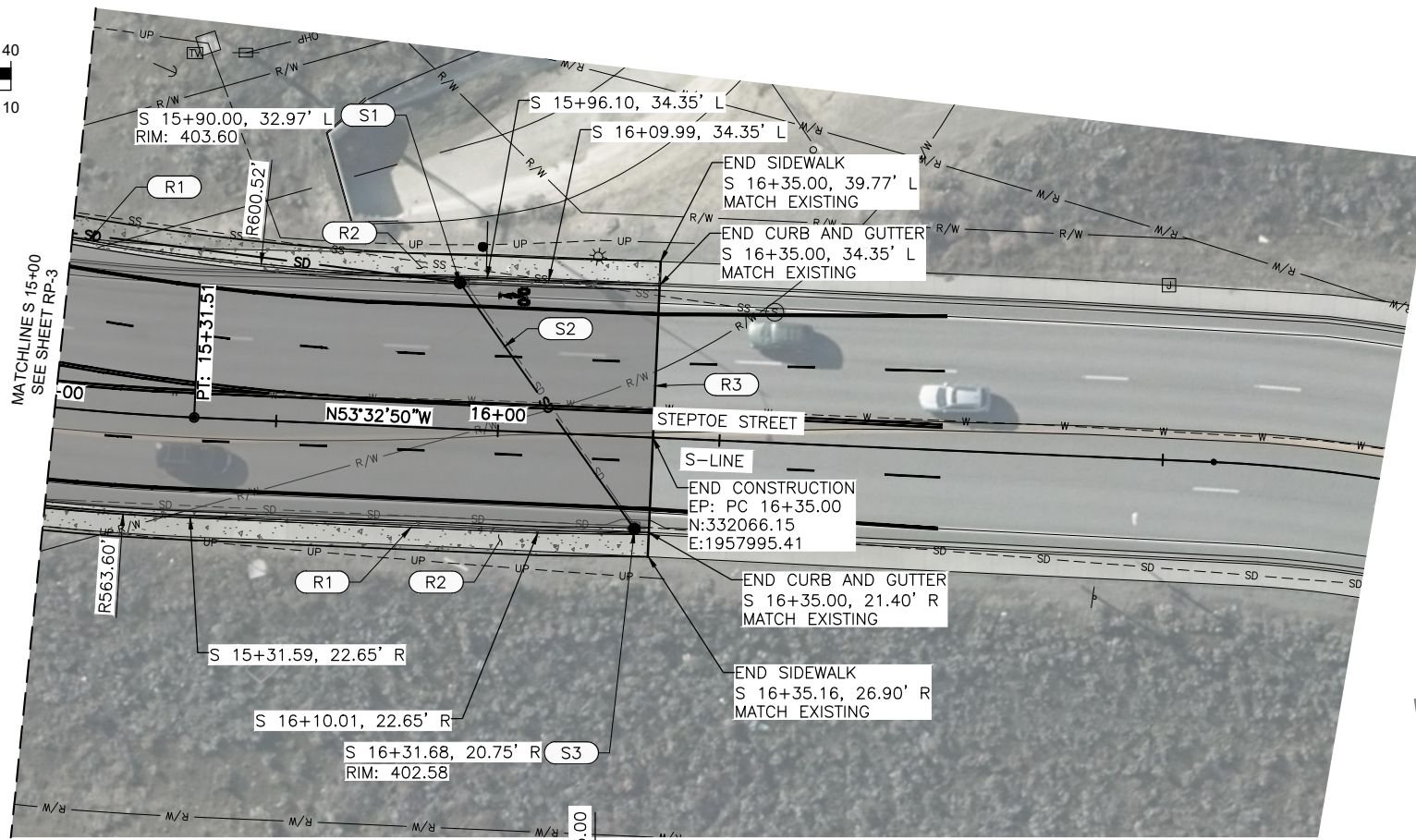
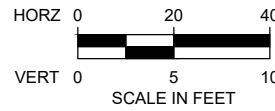
NO.	REVISION	DESCRIPTION	BY	DATE

**STEPTOE AND TAPTEAL INTERSECTION
YOUNG ASSET MANAGEMENT**

ROADWAY PLAN AND PROFILE
STA 11+50.00 TO STA 15+00.00

FILE: 07-21-030_RP-3
JUB PROJ. #: 07-21-030
DRAWN BY: WG
DESIGN BY: WG
CHECKED BY: RD
ONE INCH
AT FULL SIZE, IF NOT ONE INCH, SCALE ACCORDINGLY
LAST UPDATED: 12/4/2023
SHEET NUMBER:
RP-3

Plot Date: 12/24/2023 4:06 PM Plotted By: Mary M. Wilkerson
Date Created: 12/23/23 JUB: C:\CENTRAL\CLIENTS\WALYONG\ASSET MGMT\PROJECTS\07-21-030 STEPTOE/TAPTEAL DESIGN\CAD\SHEET\07-21-030_RP-3.DWG



LEGEND

- PROPOSED HOT MIX ASPHALT (HMA)
- PROPOSED CONCRETE



Know what's below.
Call before you dig.

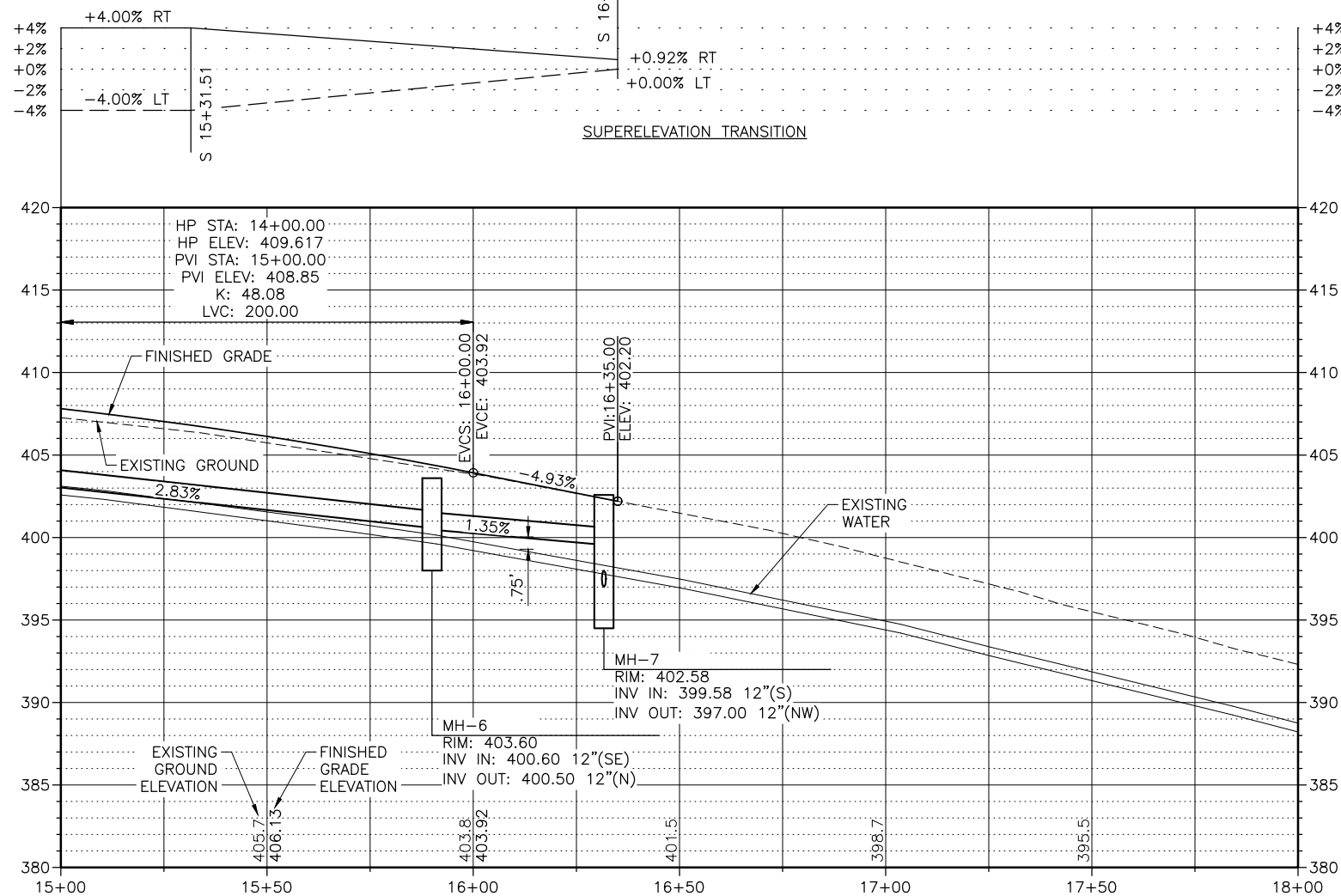
CALL 2 BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES

CONSTRUCTION NOTES

- (R1) CEMENT CONC. TRAFFIC CURB AND GUTTER, MATCH ROADWAY SLOPE
- (R2) 5' CEMENT CONC. SIDEWALK
- (R3) MATCH EXISTING PAVEMENT SAWCUT REQUIRED

STORMWATER NOTES

- (S1) INSTALL STANDARD MANHOLE (MH-6) PER COR STD DETAIL S-04
INV IN (SE): 400.60'
INV OUT (N): 400.50'
- (S2) INSTALL 12" SDR35 PVC STORM SEWER PIPE, 68 LF
- (S3) DIG AND VERIFY LOCATION OF EXISTING PIPE CONNECT EXISTING PIPE TO MH-7
INSTALL STANDARD MANHOLE W/CAST IN PLACE BASE (MH-7) PER COR STD DETAIL S-03
INV IN (S): 399.58'
INV OUT (NW): ~397.00'



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**STEPTOE AND TAPTEAL INTERSECTION
YOUNG ASSET MANAGEMENT**

ROADWAY PLAN AND PROFILE
STA 15+00.00 TO STA 18+00.00

FILE : 07-21-030 RP-4
JUB PROJ. # : 07-21-030
DRAWN BY: WG
DESIGN BY: WG
CHECKED BY: RD
ONE INCH
AT FULL SIZE, IF NOT ONE INCH, SCALE ACCORDINGLY
LAST UPDATED: 8/3/2023
SHEET NUMBER:
RP-4

Plot Date: 10/20/2023 11:08 AM, Plotted By: Mary H. Wilkins
 Date Created: 8/3/2023 JUB: C:\CENTRAL\Clients\SWAYOUNG\ASSETMANAGEMENT\PROJECTS\07-21-030 - STEPTOE\TAPTEAL\DESIGN\ASSETMANAGEMENT\07-21-030 - RP-4.DWG

NO.	REVISION	DESCRIPTION	DATE

**STEPTOE AND TAPTEAL INTERSECTION
YOUNG ASSET MANAGEMENT**

ROADWAY PLAN AND PROFILE
STA 36+00.00 TO STA 38+50.00

CONSTRUCTION NOTES

- (R1) CEMENT CONC. TRAFFIC CURB AND GUTTER, MATCH ROADWAY SLOPE
- (R2) 8' CEMENT CONC. SIDEWALK
- (R3) DUAL-FACED CEMENT CONCRETE TRAFFIC CURB AND CUTTER
- (R4) SEE PAVING DETAILS
- (R5) 9.5' CEMENT CONC. SIDEWALK

STORMWATER NOTES

- (S1) INSTALL TYPE 1 CATCH BASIN (CB-5) PER COR STD DETAIL S-11 INV OUT (E): 410.82'
- (S2) INSTALL 12" SDR35 PVC STORM SEWER PIPE, 10 LF
- (S3) INSTALL TYPE 1 CATCH BASIN (CB-6) PER COR STD DETAIL S-11 INV IN (W): 410.77' INV OUT (N): 408.83'
- (S4) INSTALL 12" SDR35 PVC STORM SEWER PIPE, 51 LF
- (S5) INSTALL TYPE 1 CATCH BASIN (CB-7) PER COR STD DETAIL S-11 INV OUT (E): 410.95'
- (S6) INSTALL 12" SDR35 PVC STORM SEWER PIPE, 10 LF
- (S7) INSTALL CATCH BASIN MANHOLE (CB-8) PER COR STD DETAIL S-13 INV IN (S): 408.58' INV IN (W): 410.90' INV OUT (E): 407.98'
- (S8) INSTALL 12" SDR35 PVC STORM SEWER PIPE, 100 LF
- (S9) DIG AND VERIFY LOCATION OF EXISTING PIPE INSTALL STANDARD MANHOLE W/CAST IN PLACE BASE (MH-3) PER COR STD DETAIL S-03 OVER EXISTING PIPE INV IN (E): 411.13' INV IN (W): 407.45' INV OUT (NW): ~402.33 (CONNECT TO EXISTING PIPE)

WATER NOTES

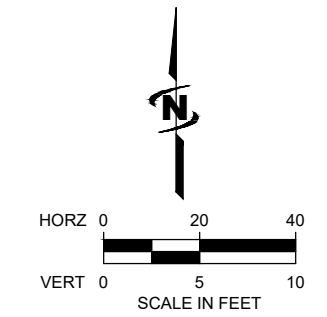
- (W1) REFERENCE THE SPINK ENGINEERING PLANS "STEPTOE/TAPTEAL WATER & SEWER EXTENSION" FOR DESIGN OF WATER LINE

SEWER NOTES

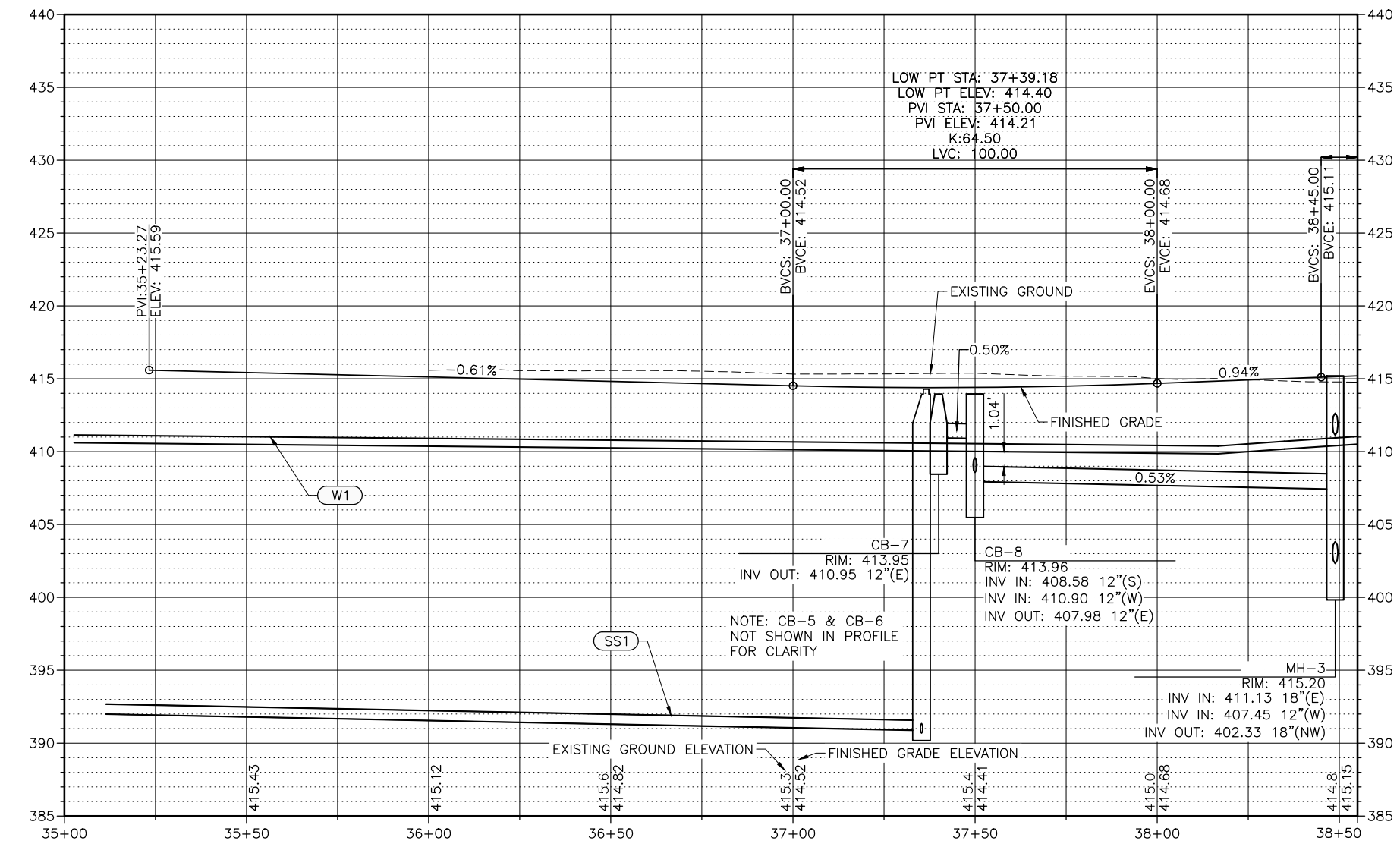
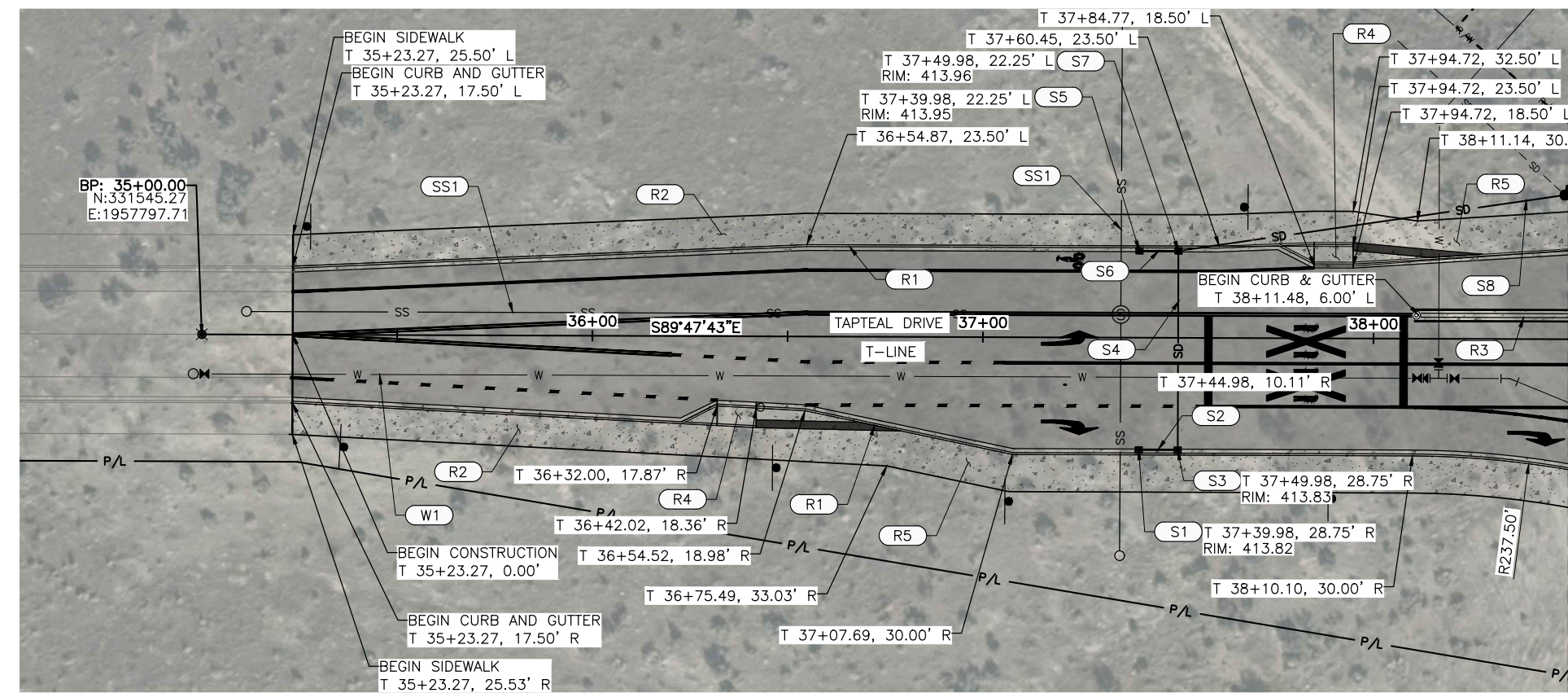
- (SS1) REFERENCE THE SPINK ENGINEERING PLANS "STEPTOE/TAPTEAL WATER & SEWER EXTENSION" FOR DESIGN OF SEWER LINE

LEGEND

- PROPOSED HOT MIX ASPHALT (HMA)
- PROPOSED CONCRETE



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Plot Date: 10/20/2023 11:08 AM, Plotted By: Mary H. Wilkinson
 Date Created: 03/20/2023, JUB: C:\CENTRAL\CALCULATED\SWA\YOUNG\ASSET\PROJECTS\07-21-030_STEPTOE/TAPTEAL\DESIGN\CADD\SHEET\07-21-030_RP-5.DWG

CONSTRUCTION NOTES

(R1) DUAL-FACED CEMENT CONCRETE TRAFFIC CURB AND GUTTER

STORMWATER NOTES

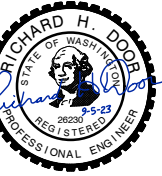
WATER NOTES

(W1) REFERENCE THE SPINK ENGINEERING PLANS "STEPTOE/TAPTEAL WATER & SEWER EXTENSION" FOR DESIGN OF WATER LINE



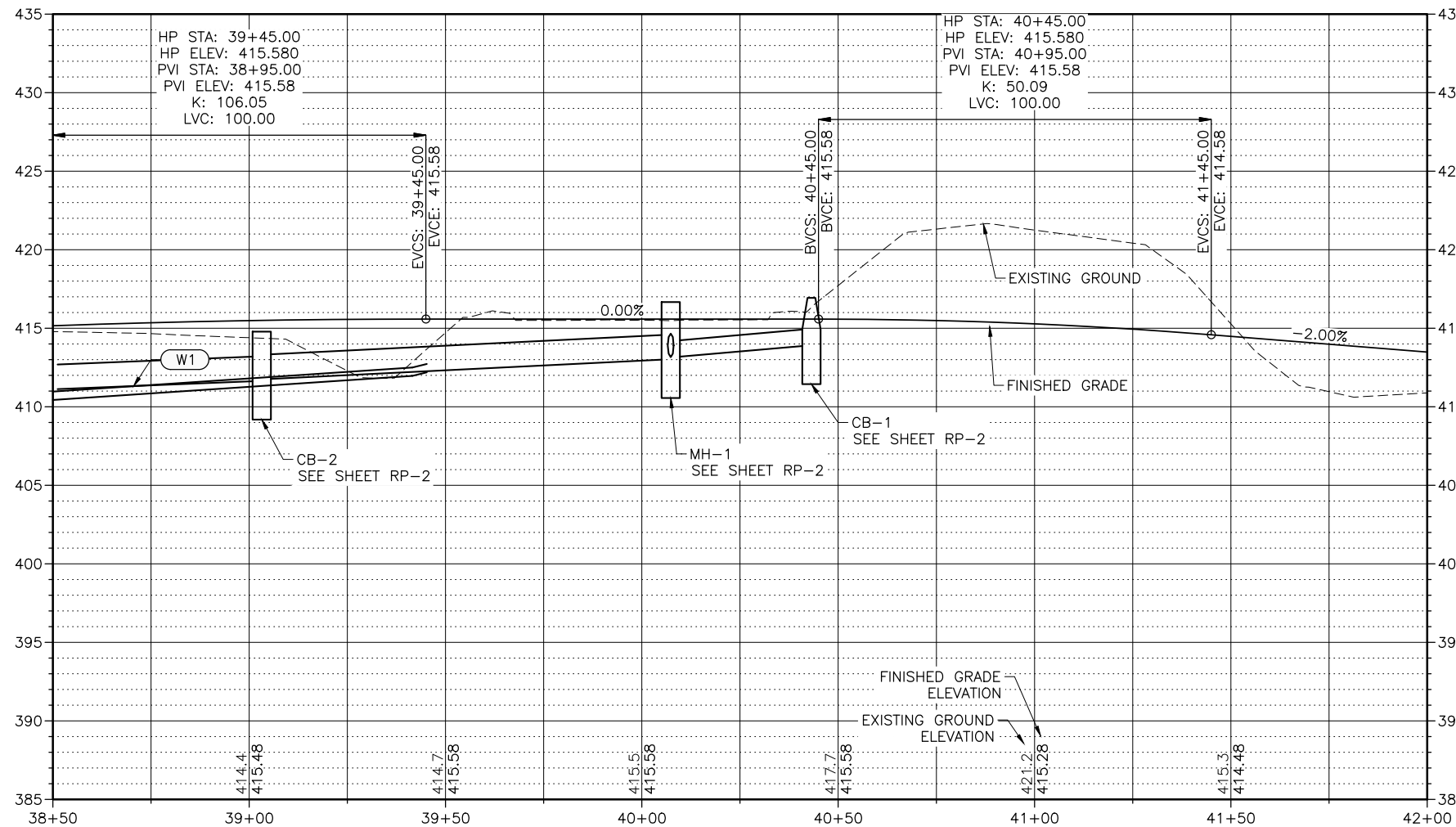
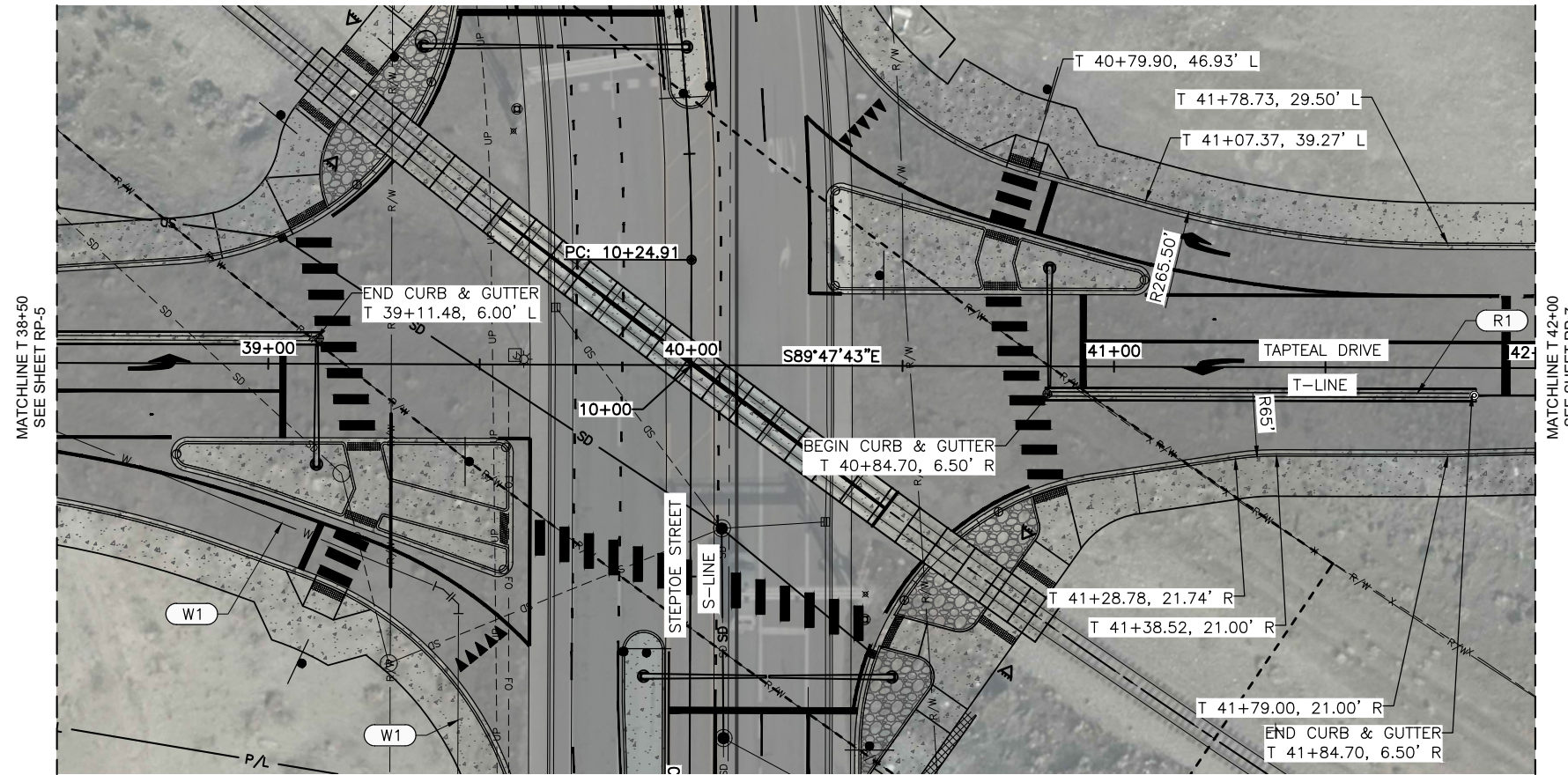
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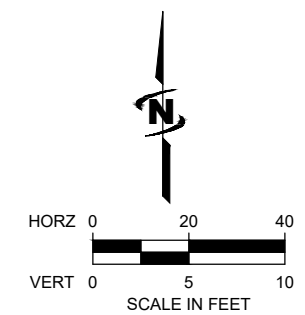
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NO.	REVISION	DESCRIPTION	BY	DATE



LEGEND

- PROPOSED HOT MIX ASPHALT (HMA)
- PROPOSED CONCRETE



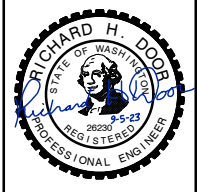
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**STEPTOE AND TAPTEAL INTERSECTION
YOUNG ASSET MANAGEMENT**

ROADWAY PLAN AND PROFILE
STA 36+00.00 TO STA 38+50.00

FILE: 07-21-030 RP-6
JUB PROJ. #: 07-21-030
DRAWN BY: WG
DESIGN BY: WG
CHECKED BY: RD
ONE INCH = 40 FEET
AT FULL SIZE, IF NOT ONE INCH, SCALE ACCORDINGLY
LAST UPDATED: 5/10/2023
SHEET NUMBER:
RP-6



NO.	REVISION	DESCRIPTION	BY	DATE

**STEPTOE AND TAPTEAL INTERSECTION
YOUNG ASSET MANAGEMENT**

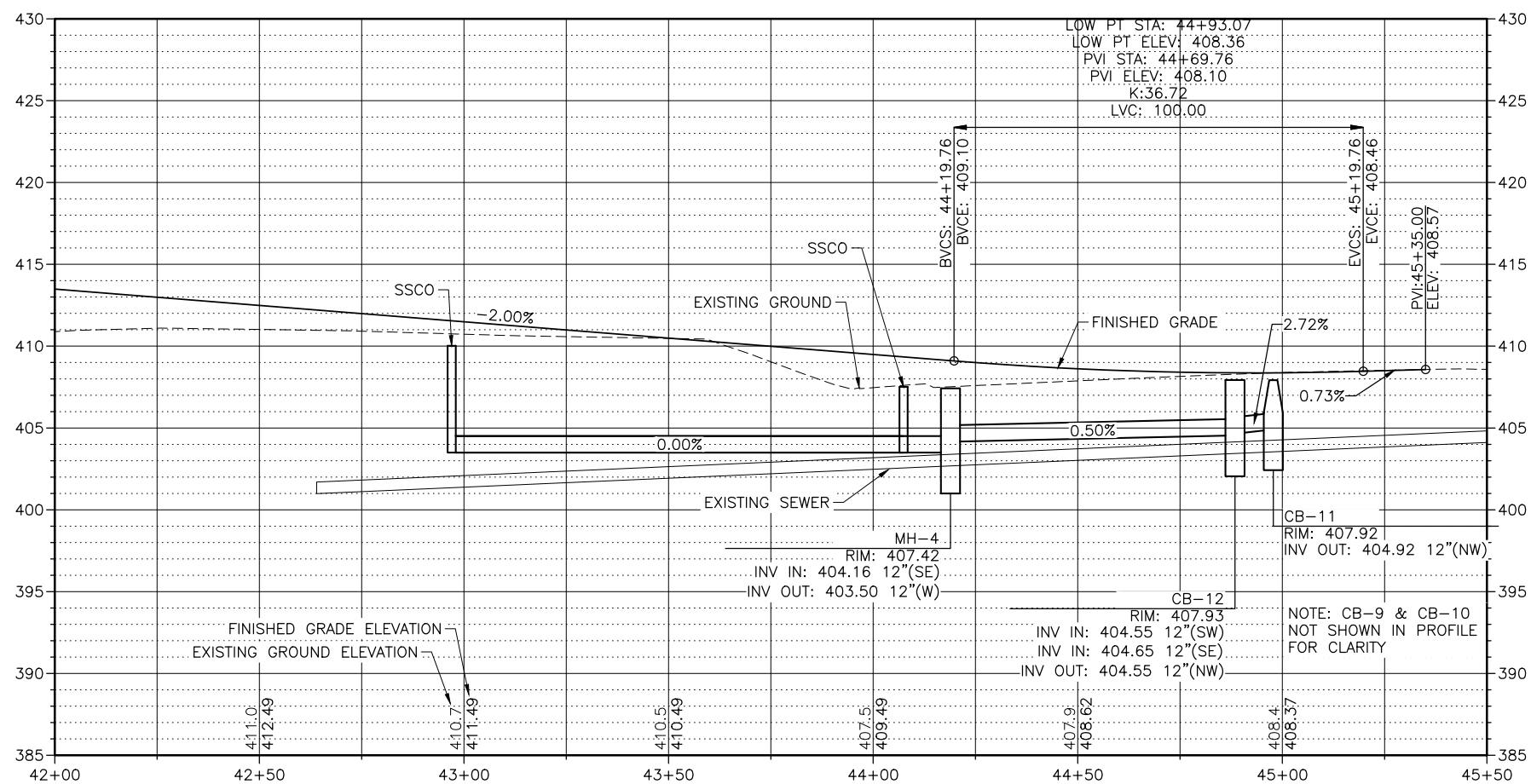
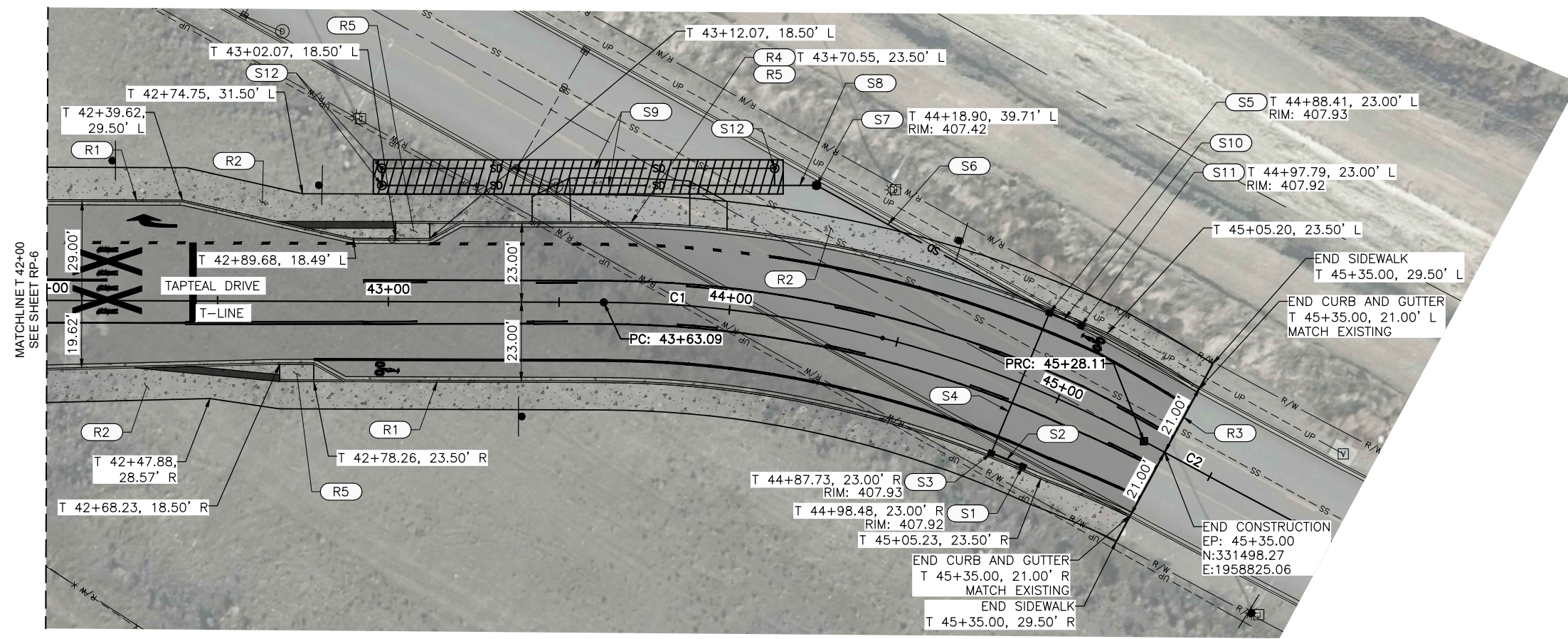
ROADWAY PLAN AND PROFILE
STA 36+00.00 TO STA 38+50.00

CONSTRUCTION NOTES

- (R1) CEMENT CONC. TRAFFIC CURB AND GUTTER, MATCH ROADWAY SLOPE
- (R2) 9.5' CEMENT CONC. SIDEWALK
- (R3) MATCH EXISTING PAVEMENT SAWCUT REQUIRED
- (R4) STANDARD NON-RESEIDENTIAL DRIVEWAY (TYPE 1) PER COR STD DETAIL ST-2A
- (R5) 8' CEMENT CONC. SIDEWALK
- (R5) SEE PAVING DETAILS

STORMWATER NOTES

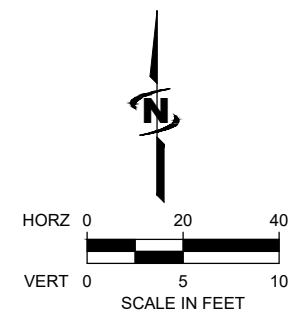
- (S1) INSTALL TYPE 1 CATCH BASIN (CB-9) PER COR STD DETAIL S-11
INV OUT (NW): 404.92' 12"
- (S2) INSTALL 12" SDR35 PVC STORM SEWER PIPE, 10 LF
- (S3) INSTALL TYPE 1 CATCH BASIN (CB-10) PER COR STD DETAIL S-11
INV IN (SE): 404.87' 12"
INV OUT (NE): 404.77' 12"
- (S4) INSTALL 12" SDR35 PVC STORM SEWER PIPE, 45 LF
- (S5) INSTALL CATCH BASIN MANHOLE (CB-12) PER COR STD DETAIL S-13
INV IN (SW): 404.55' 12"
INV IN (SE): 404.65' 12"
INV OUT (NW): 404.55' 12"
- (S6) INSTALL 12" SDR35 PVC STORM SEWER PIPE, 78 LF
- (S7) INSTALL SEDIMENTATION MANHOLE (MH-4) PER COR STD DETAIL S-21
INV IN (SE): 404.33' 12"
INV OUT (NW): 403.50' 12"
- (S8) INSTALL 12" SDR35 PVC STORM SEWER PIPE, 10 LF
- (S9) INSTALL 10'WX5'HX120'L INFILTRATION TRENCH W/ (2) 12" PERFORATED DRAIN PIPES AT 0% PER DETAIL 1 ON SHEET D-1
- (S10) INSTALL 12" SDR35 PVC STORM SEWER PIPE, 10 LF
- (S11) INSTALL TYPE 1 CATCH BASIN (CB-11) PER COR STD DETAIL S-11
INV OUT (NW): 404.92' 12"
- (S12) INSTALL SSCO PER COR STD DETAIL S-09. SEE DETAIL 1 ON SHEET D-1



CURVE #	LENGTH	RADIUS	TANGENT	DELTA	CHORD DIRECTION	CHORD LENGTH
C1	165.02'	333.00'	84.24'	28°23'37"	S75°35'54"E	163.34'
C2	100.01'	4160.28'	50.01'	1°22'38"	S62°05'25"E	100.01'

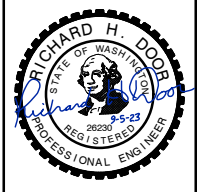
LEGEND

- PROPOSED HOT MIX ASPHALT (HMA)
- PROPOSED CONCRETE



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Call what you dig.**

**CALL 2 BUSINESS DAYS IN ADVANCE BEFORE
YOU DIG, GRADE, OR EXCAVATE FOR THE
MARKING OF UNDERGROUND MEMBER
UTILITIES**

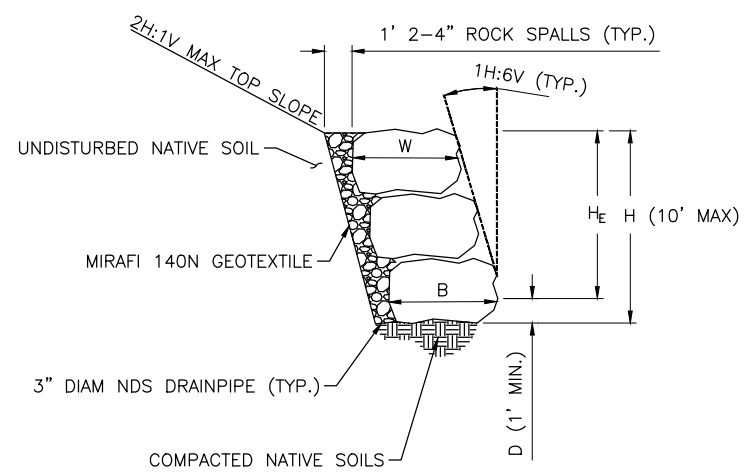


NO.	DESCRIPTION	BY	DATE

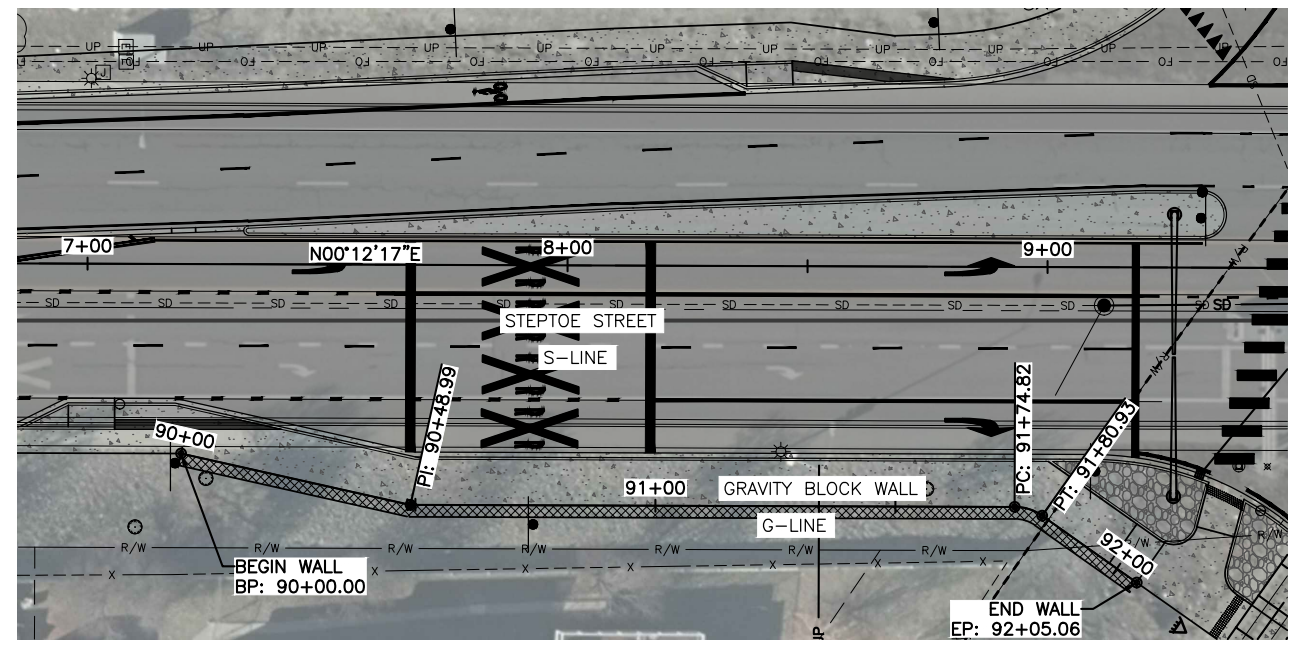
**STEPTOE AND TAPEAL INTERSECTION
YOUNG ASSET MANAGEMENT**

GRAVITY BLOCK WALL PLAN AND PROFILE

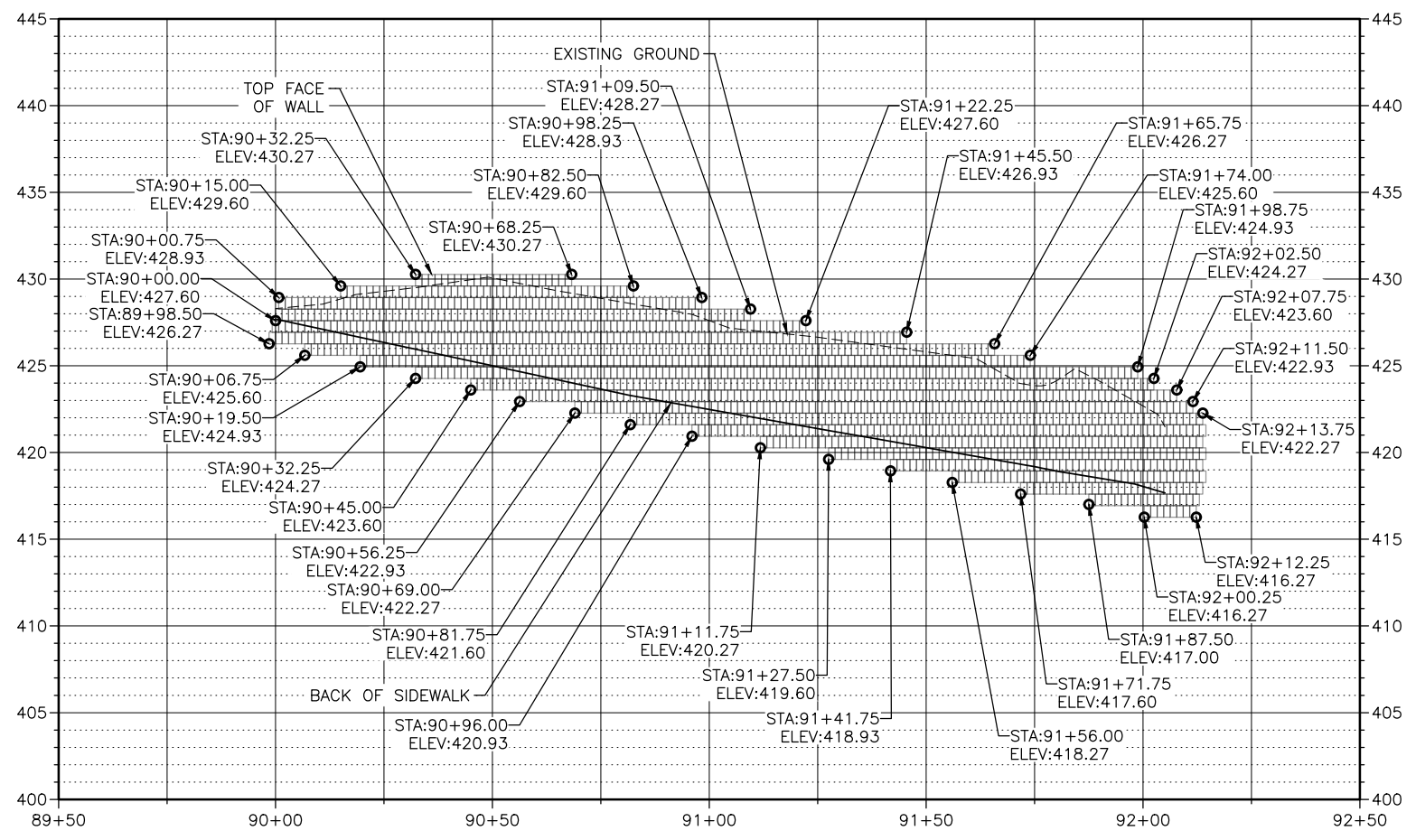
H _E (FT)	H (FT)	D (FT)	B (FT)	W (FT)
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7.0	8.0	1.0	4.0	2.0
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3.0	4.0	1.0	2.0	1.0



WALL SECTION



WALL PLAN



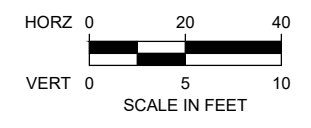
WALL PROFILE

NOTES:

- ROCK WALL CONSTRUCTION IS A CRAFT AND DEPENDS LARGELY ON THE SKILL AND EXPERIENCE OF THE BUILDER. THE AMERICAN ROCKERY ASSOCIATION STANDARD ROCK WALL CONSTRUCTION GUIDELINES, 12/2/92 SHOULD BE USED TO GUIDE CONSTRUCTION OF THE WALLS.
- THE GEOTECHNICAL ENGINEER SHOULD REVIEW THE ROCK WALL IN THE FOLLOWING SEQUENCE; (1) AFTER COMPLETION OF THE CUT AND PRIOR TO SETTING THE FIRST ROW OF ROCKS, (2) AFTER COMPLETION OF THE FIRST ROW OF ROCKS, (3) BACKFILL, (4) AFTER COMPLETION OF THE WALL.
- IT IS THE OWNER'S RESPONSIBILITY TO INTERCEPT SURFACE DRAINAGE FROM ABOVE THE ROCK WALL AND DIRECT IT AWAY FROM THE ROCK WALL TO A POSITIVE AND PERMANENT DISCHARGE POINT WELL BELOW AND BEYOND THE TOE OF THE ROCK WALL.
- IT IS THE OWNER'S RESPONSIBILITY TO PROVIDE FENCING OR FALL PROTECTION ABOVE THE ROCK WALL AS REQUIRED.
- A ROCK WALL IS A PROTECTIVE SYSTEM WHICH HELPS RETARD THE WEATHERING AND EROSION PROCESS ON AN EXPOSED SOIL FACE.
- WHILE BY ITS NATURE (MASS, SIZE, AND SHAPE OF THE ROCKS) IT WILL PROVIDE SOME DEGREE OF RETENTION, IT IS NOT A DESIGNED OR ENGINEERED SYSTEM IN THE SENSE A REINFORCED CONCRETE RETAINING WALL WOULD BE CONSIDERED DESIGNED OR ENGINEERED.
- THE DEGREE OF RETENTION ACHIEVED IS DEPENDENT ON THE SIZE OF THE ROCK USED; THAT IS, THE MASS OR WEIGHT, AND THE HEIGHT OF THE WALL BEING CONSTRUCTED. THE LARGER THE ROCK, THE MORE COMPETENT THE ROCK WALL SHOULD BE.
- ROCK WALLS SHOULD BE CONSIDERED MAINTENANCE ITEMS THAT WILL REQUIRE PERIODIC INSPECTION AND REPAIR. THEY SHOULD BE LOCATED SO THAT THEY CAN BE REACHED BY A CONTRACTOR IF REPAIRS BECOME NECESSARY.
- SEE WALL SECTION FOR MAXIMUM ROCK WALL HEIGHT.
- ROCK SHOULD BE PLACED TO GRADUALLY DECREASE IN SIZE WITH INCREASING WALL HEIGHT IN ACCORDANCE WITH GEOTECHNICAL ENGINEERS RECCOMENDATIONS.
- MINIMUM WIDTH OF KEYWAY EXCAVATION, W, SHOULD BE EQUAL TO THE THICKNESS OF THE BASAL ROCK (AS DETERMINED BY GEOTECHNICAL ENGINEER'S DESIGN) PLUS 1 FOOT.
- THE LONG DIMENSION OF THE ROCKS SHOULD EXTEND BACK TOWARDS THE CUT OR FILL FACE TO PROVIDE MAXIMUM STABILITY. ROCKS SHOULD NOT BE STACKED LIKE SHOE BOXES. THEY SHOULD BE PLACED TO AVOID CONTINUOUS JOINT PLANES IN VERTICAL OR LATERAL DIRECTIONS. WHENEVER POSSIBLE EACH ROCK SHOULD BEAR ON TWO OR MORE ROCKS BELOW IT, WITH GOOD FLAT-TO-FLAT CONTACT.

LEGEND

- PROPOSED HOT MIX ASPHALT (HMA)
- PROPOSED CONCRETE



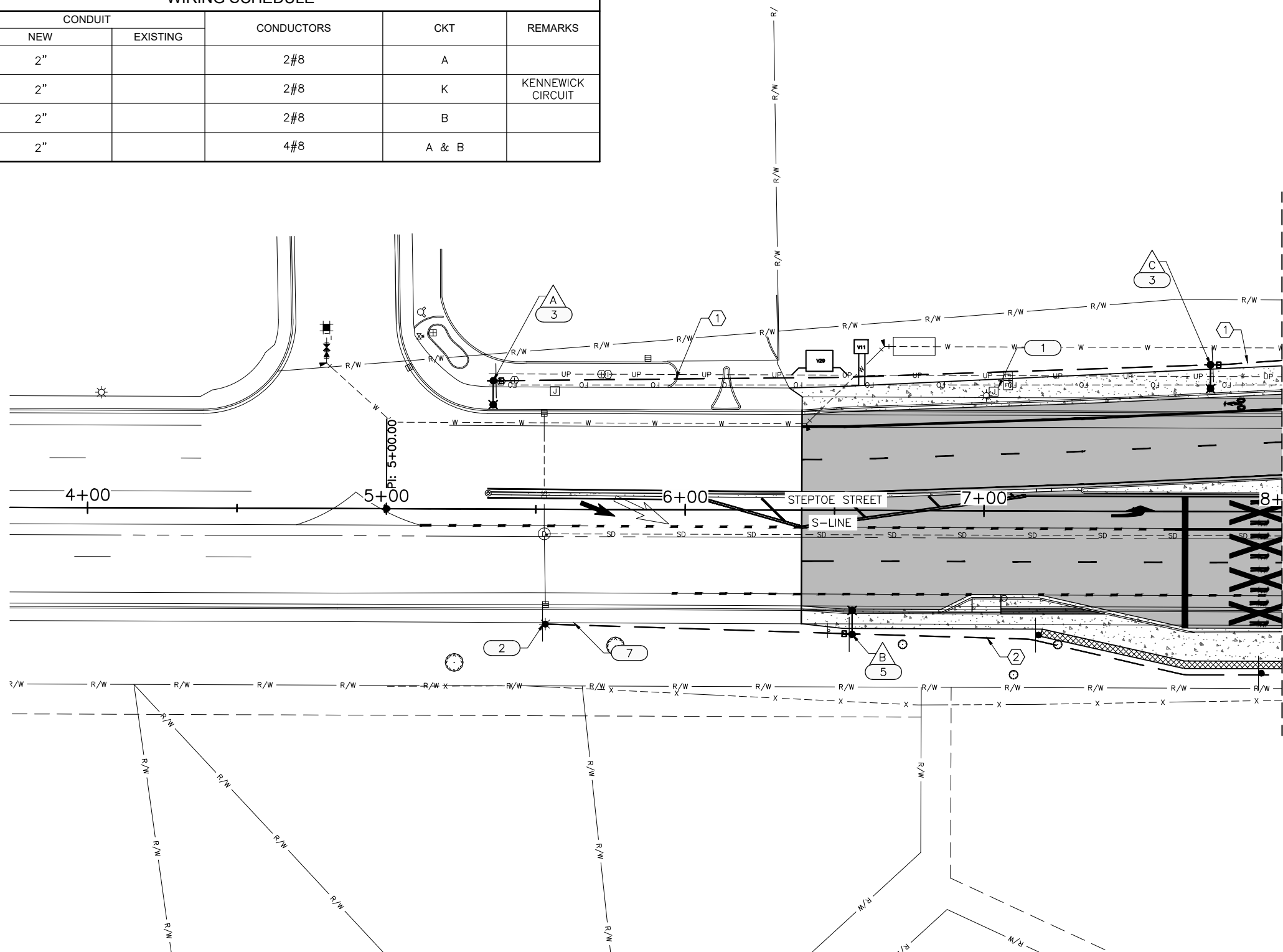
CALL 2 BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES

LUMINAIRE SCHEDULE

LIGHT ID	LOCATION		POLE DATA			LIGHT DATA		CONDUIT CROSSING
	STATION	OFFSET	POLE HEIGHT	ARM LENGTH	FOUNDATION	LUMEN OUTPUT	COLOR TEMP.	
A	S 5+36.00	42.9' LT	30'	12'	CONCRETE	HIGH	4K	
B	S 6+56.00	41.5' RT	30'	12'	CONCRETE	HIGH	4K	
C	S 7+76.00	49.1' LT	30'	12'	CONCRETE	HIGH	4K	

WIRING SCHEDULE

RUN	CONDUIT		CONDUCTORS	CKT	REMARKS
	NEW	EXISTING			
1	2"		2#8	A	
2	2"		2#8	K	KENNEWICK CIRCUIT
3	2"		2#8	B	
4	2"		4#8	A & B	



MATCHLINE S 8+00
SEE SHEET IL-2

KEYED NOTES

- 1 PROTECT AND SALVAGE EXISTING LUMINAIRE AND JUNCTION BOX TO THE CITY OF RICHLAND.
- 2 RETAIN AND PROTECT EXISTING LUMINAIRE
- 3 SET MOUNTING BASE/JUNCTION BOX PER CITY OF RICHLAND STANDARD DRAWING SL-02
- 4 SERVICE DISCONNECT PER CITY OF RICHLAND STANDARD DRAWING SL-05. COORDINATE POWER SERVICE WITH CITY OF RICHLAND ENERGY SERVICES.
- 5 SET MOUNTING BASE/JUNCTION BOX PER CITY OF KENNEWICK STANDARD DRAWING 6-1
- 6 INSTALL ONE GTT MODEL 711 OPTICOM PREEMPTION DETECTOR ON STREETLIGHT POLE FOR ADVANCE EMERGENCY DETECTION. SEE SIGNAL PLAN SHEETS.
- 7 INTERCEPT EXISTING CITY OF KENNEWICK STREET LIGHT CIRCUIT - FOR LIGHTS B & E ONLY.

GENERAL NOTES:

1. USE WIDE SWEEPS FOR ALL CONDUIT CORNERS/CURVES.
2. ALL CONDUIT TO BE 2" PVC UNLESS OTHERWISE NOTED ON THE PLANS.
3. ALL WIRE TO BE PER CITY OF RICHLAND STANDARD DRAWING SL-05.



J-U-B ENGINEERS, INC.

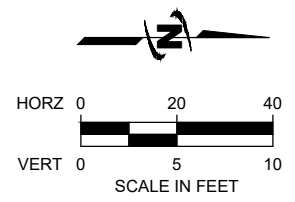
3611 S. Zintel Way
Kennewick, WA 99337
Phone: 509.783.2144
www.jub.com



NO.	REVISION	DESCRIPTION	BY	DATE

STEPTOE AND TAPTEAL INTERSECTION
YOUNG ASSET MANAGEMENT

ILLUMINATION
STA 5+00.00 TO STA 8+00.00



Know what's below.
Call before you dig.

CALL 2 BUSINESS DAYS IN ADVANCE BEFORE
YOU DIG, GRADE, OR EXCAVATE FOR THE
MARKING OF UNDERGROUND MEMBER
UTILITIES

FILE: 07-21-030_IL-1
JUB PROJ. #: 07-21-030
DRAWN BY: WG
DESIGN BY: WG
CHECKED BY: RD
ONE INCH AT FULL SIZE, IF NOT ONE INCH, SCALE ACCORDINGLY
LAST UPDATED: 9/6/2023
SHEET NUMBER: IL-1

Plot Date: 10/20/2023 11:58 AM, Plotted By: Mary H. Wilkins
 Date Created: 6/1/2023, JUB.COM\CENTRAL\CLIENTS\WA\YOUNG\ASSET MGMT\PROJECTS\07-21-030_STEPTOE\TAPTEAL\DESIGN\ASSET\SHEET\07-21-030_IL-1.DWG

LUMINAIRE SCHEDULE

LIGHT ID	LOCATION		POLE DATA			LIGHT DATA		CONDUIT CROSSING
	STATION	OFFSET	POLE HEIGHT	ARM LENGTH	FOUNDATION	LUMEN OUTPUT	COLOR TEMP.	
D	T 38+87.00	55.0' RT	30'	12'	CONCRETE	HIGH	4K	
E	S 9+10.00	42.5' RT	30'	12'	CONCRETE	HIGH	4K	
F	S 11+15.00	61.7' LT	30'	12'	CONCRETE	HIGH	4K	YES

KEYED NOTES

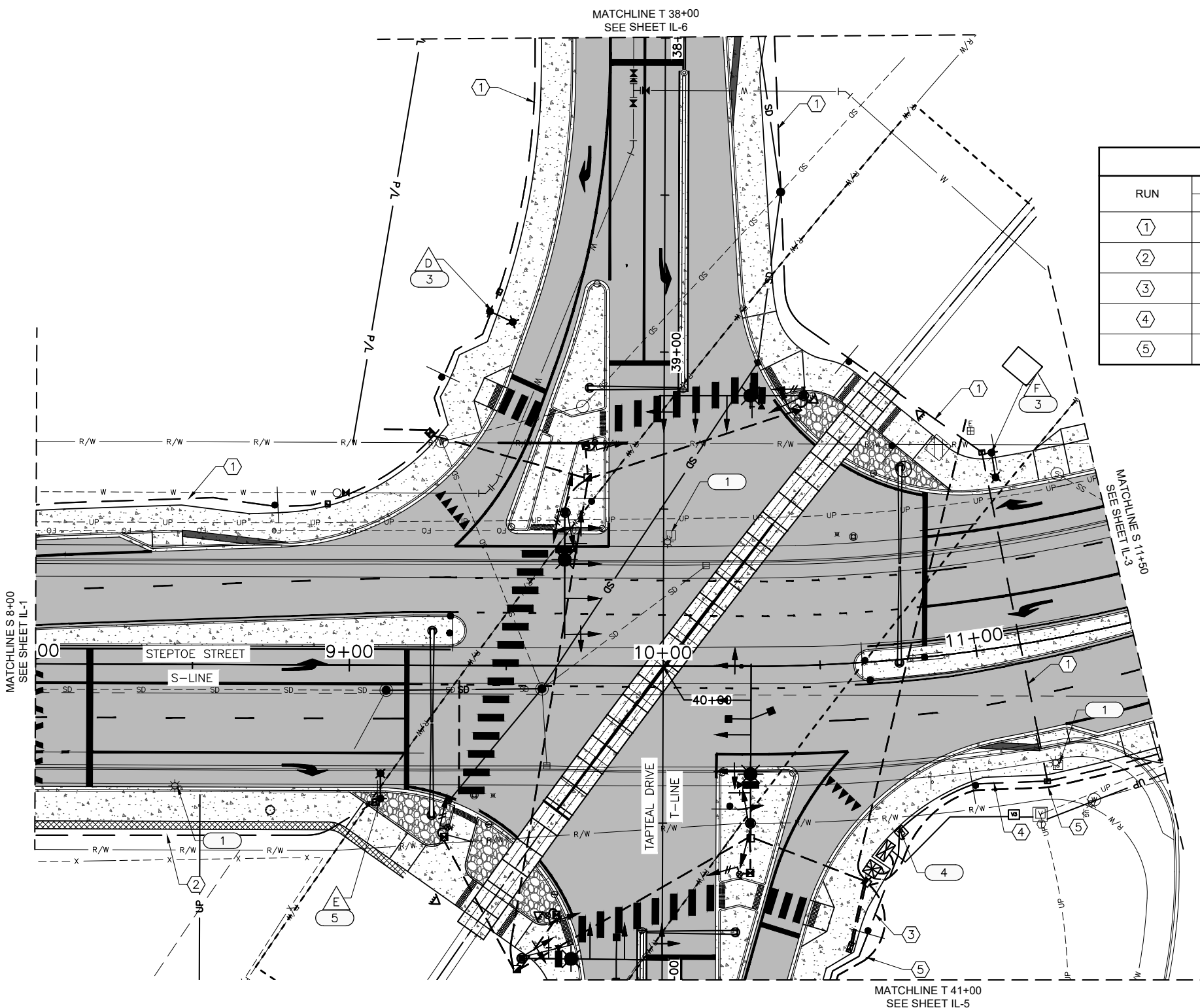
- PROTECT AND SALVAGE EXISTING LUMINAIRE AND JUNCTION BOX TO THE CITY OF RICHLAND.
- RETAIN AND PROTECT EXISTING LUMINAIRE
- SET MOUNTING BASE/JUNCTION BOX PER CITY OF RICHLAND STANDARD DRAWING SL-02
- SERVICE DISCONNECT PER CITY OF RICHLAND STANDARD DRAWING SL-05. COORDINATE POWER SERVICE WITH CITY OF RICHLAND ENERGY SERVICES.
- SET MOUNTING BASE/JUNCTION BOX PER CITY OF KENNEWICK STANDARD DRAWING 6-1
- INSTALL ONE GTT MODEL 711 OPTICOM PREEMPTION DETECTOR ON STREETLIGHT POLE FOR ADVANCE EMERGENCY DETECTION. SEE SIGNAL PLAN SHEETS.

GENERAL NOTES:

- USE WIDE SWEEPS FOR ALL CONDUIT CORNERS/CURVES.
- ALL CONDUIT TO BE 2" PVC UNLESS OTHERWISE NOTED ON THE PLANS.
- ALL WIRE TO BE PER CITY OF RICHLAND STANDARD DRAWING SL-05.

WIRING SCHEDULE

RUN	CONDUIT		CONDUCTORS	CKT	REMARKS
	NEW	EXISTING			
①	2"		2#8	A	
②	2"		2#8	K	KENNEWICK CIRCUIT
③	2"		2#8	B	
④	2"		4#8	A & B	
⑤	2"		3C	SIGNAL	PREEMPTION



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9-5-23

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STEPTOE AND TAPTEAL INTERSECTION
YOUNG ASSET MANAGEMENT

ILLUMINATION
STA 8+00.00 TO STA 11+50.00

FILE : 07-21-030 IL-2
JUB PROJ. # : 07-21-030
DRAWN BY: WG
DESIGN BY: WG
CHECKED BY: RD
ONE INCH
AT FULL SIZE, IF NOT ONE
INCH, SCALE ACCORDINGLY
LAST UPDATED: 7/25/2023

SHEET NUMBER:

IL-2

CALL 2 BUSINESS DAYS IN ADVANCE BEFORE
YOU DIG, GRADE, OR EXCAVATE FOR THE
MARKING OF UNDERGROUND MEMBER
UTILITIES



Know what's below.
Call before you dig.

LUMINAIRE SCHEDULE

LIGHT ID	LOCATION		POLE DATA			LIGHT DATA		
	STATION	OFFSET	POLE HEIGHT	ARM LENGTH	FOUNDATION	LUMEN OUTPUT	COLOR TEMP.	CONDUIT CROSSING
G	S 12+35.00	37.2' RT	30'	12'	CONCRETE	HIGH	4K	
H	S 13+55.00	55.0' LT	30'	12'	CONCRETE	HIGH	4K	YES
1	S 14+75.00	30.0' RT	30'	12'	CONCRETE	HIGH	4K	

WIRING SCHEDULE

RUN	CONDUIT		CONDUCTORS	CKT	REMARKS
	NEW	EXISTING			
1	2"		2#8	A	
2	2"		2#8	K	KENNEWICK CIRCUIT
3	2"		2#8	B	
4	2"		4#8	A & B	
5	2"		3C	SIGNAL	PREEMPTION

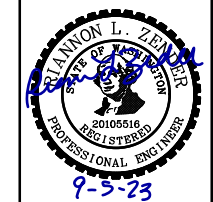
KEYED NOTES

- PROTECT AND SALVAGE EXISTING LUMINAIRE AND JUNCTION BOX TO THE CITY OF RICHLAND.
- RETAIN AND PROTECT EXISTING LUMINAIRE
- SET MOUNTING BASE/JUNCTION BOX PER CITY OF RICHLAND STANDARD DRAWING SL-02
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GENERAL NOTES:

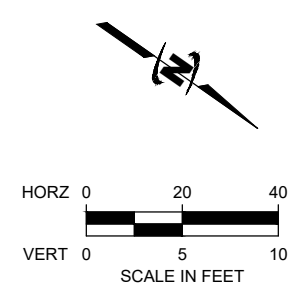
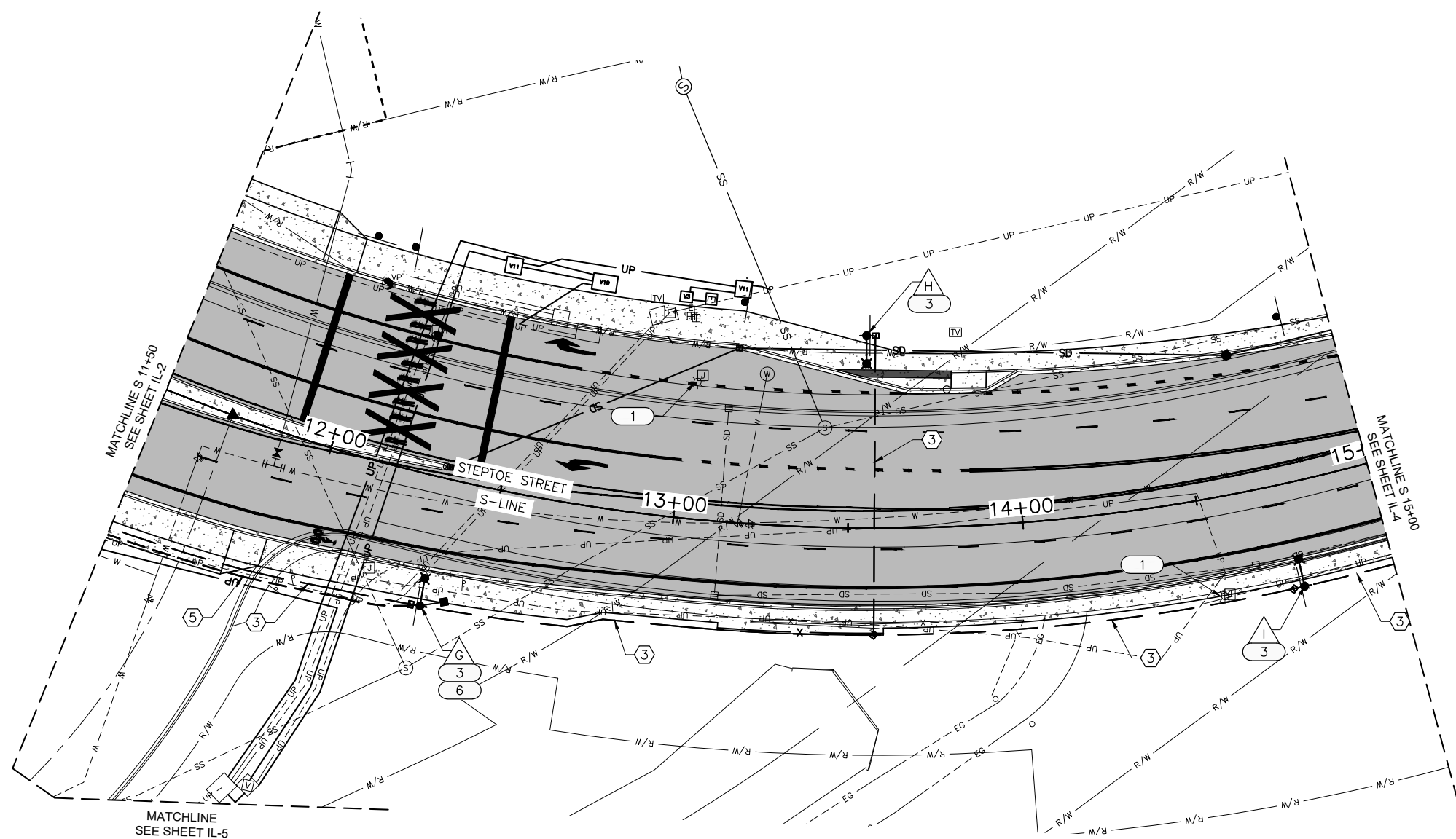
- USE WIDE SWEEPS FOR ALL CONDUIT CORNERS/CURVES.
- ALL CONDUIT TO BE 2" PVC UNLESS OTHERWISE NOTED ON THE PLANS.
- ALL WIRE TO BE PER CITY OF RICHLAND STANDARD DRAWING SL-05.

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NO.	REVISION	DESCRIPTION	BY	DATE



CALL 2 BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES

**STEPTOE AND TAPTEAL INTERSECTION
YOUNG ASSET MANAGEMENT**

ILLUMINATION
STA 11+50.00 TO STA 15+00.00

FILE : 07-21-030 IL-3
JUB PROJ. # : 07-21-030
DRAWN BY: WG
DESIGN BY: WG
CHECKED BY: RD

ONE INCH
AT FULL SIZE, IF NOT ONE INCH, SCALE ACCORDINGLY
LAST UPDATED: 8/3/2023

SHEET NUMBER:
IL-3

Plot Date: 12/20/2023 11:59 AM, Plotted By: Mary H. Wilkinson
 Date Created: 8/1/2022, JUB: CONCENTRAL/CALCULATED/CLIENTS/YOUNG/ASSET MANAGEMENT/PROJECTS/07-21-030 STEPTOE/TAPTEAL/DESIGN/ASSET/SHEET/07-21-030-IL-3.DWG

LUMINAIRE SCHEDULE

LIGHT ID	LOCATION		POLE DATA			LIGHT DATA		CONDUIT CROSSING
	STATION	OFFSET	POLE HEIGHT	ARM LENGTH	FOUNDATION	LUMEN OUTPUT	COLOR TEMP.	
J	S 15+95.00	41.3' LT	30'	12'	CONCRETE	HIGH	4K	YES
K	NOT USED							

WIRING SCHEDULE

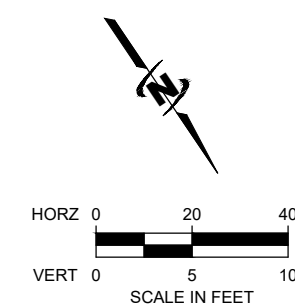
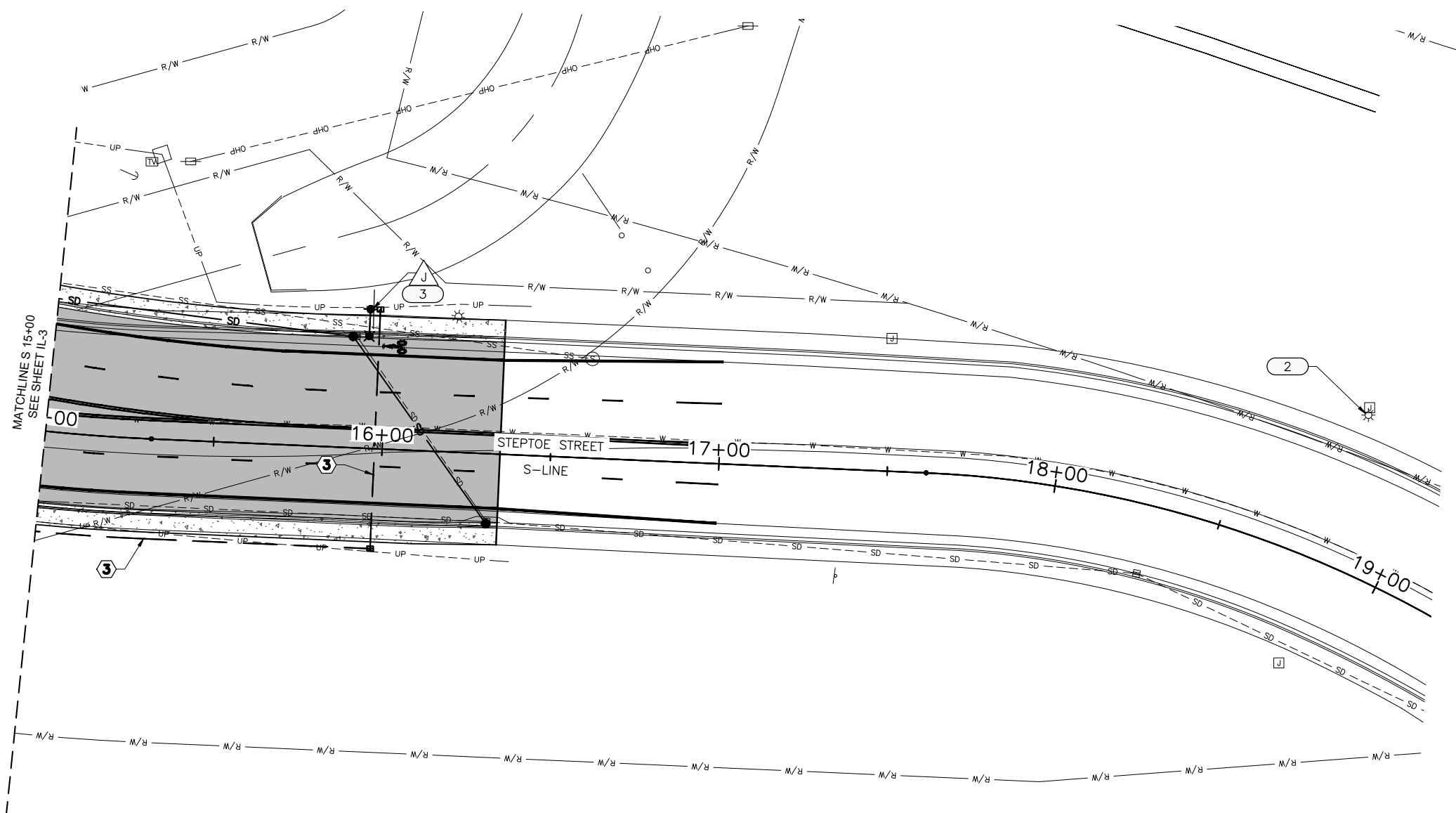
RUN	CONDUIT		CONDUCTORS	CKT	REMARKS
	NEW	EXISTING			
1	2"		2#8	A	
2	2"		2#8	K	KENNEWICK CIRCUIT
3	2"		2#8	B	
4	2"		4#8	A & B	

KEYED NOTES

- 1 PROTECT AND SALVAGE EXISTING LUMINAIRE AND JUNCTION BOX TO THE CITY OF RICHLAND.
- 2 RETAIN AND PROTECT EXISTING LUMINAIRE
- 3 SET MOUNTING BASE/JUNCTION BOX PER CITY OF RICHLAND STANDARD DRAWING SL-02
- 4 SERVICE DISCONNECT PER CITY OF RICHLAND STANDARD DRAWING SL-05. COORDINATE POWER SERVICE WITH CITY OF RICHLAND ENERGY SERVICES.
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GENERAL NOTES:

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3. ALL WIRE TO BE PER CITY OF RICHLAND STANDARD DRAWING SL-05.



Know what's below.
Call before you dig.

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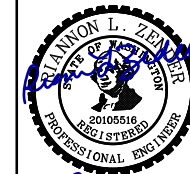


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NO.	REVISION	DESCRIPTION	BY	DATE

STEPTOE AND TAPTEAL INTERSECTION
YOUNG ASSET MANAGEMENT

ILLUMINATION
STA 15+00.00 TO STA 18+00.00

FILE: 07-21-030_IL-4
JUB PROJ. #: 07-21-030
DRAWN BY: WG
DESIGN BY: WG
CHECKED BY: RD

ONE INCH
AT FULL SIZE, IF NOT ONE
INCH, SCALE ACCORDINGLY

LAST UPDATED: 8/3/2023

SHEET NUMBER:

IL-4

LUMINAIRE SCHEDULE

LIGHT ID	LOCATION		POLE DATA			LIGHT DATA		CONDUIT CROSSING
	STATION	OFFSET	POLE HEIGHT	ARM LENGTH	FOUNDATION	LUMEN OUTPUT	COLOR TEMP.	
L	T 41+07.00	51.3' LT	30'	12'	CONCRETE	HIGH	4K	
M	NOT USED							
N	T 42+19.00	41.0' LT	30'	12'	CONCRETE	HIGH	4K	YES
O	T 43+39.00	33.5' RT	30'	12'	CONCRETE	HIGH	4K	YES
P	T 44+59.00	33.5' LT	30'	12'	CONCRETE	HIGH	4K	

WIRING SCHEDULE

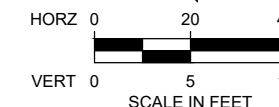
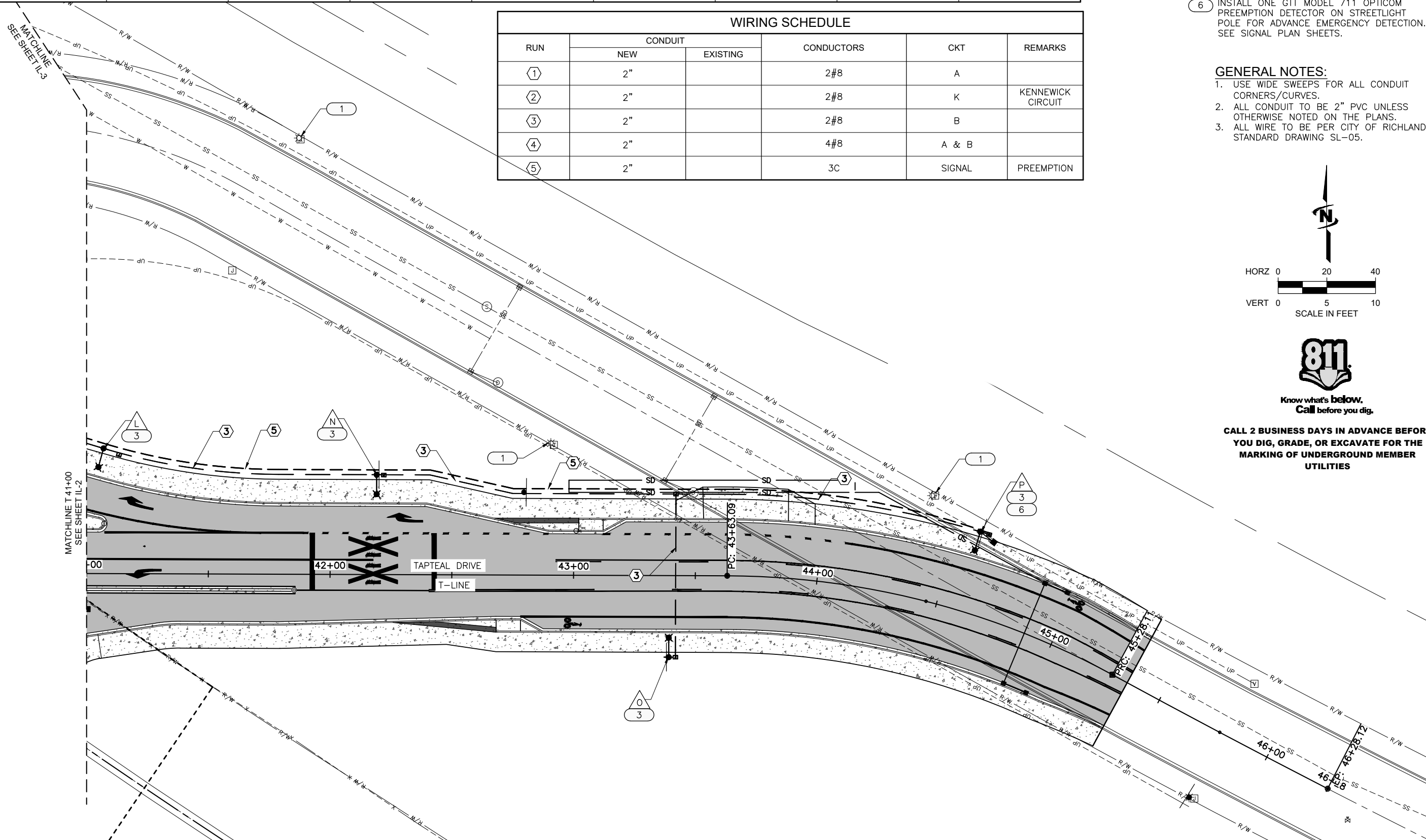
RUN	CONDUIT		CONDUCTORS	CKT	REMARKS
	NEW	EXISTING			
①	2"		2#8	A	
②	2"		2#8	K	KENNEWICK CIRCUIT
③	2"		2#8	B	
④	2"		4#8	A & B	
⑤	2"		3C	SIGNAL	PREEMPTION

KEYED NOTES

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LANNON L. ZIEGLER
P.E.
20105516
REGISTERED PROFESSIONAL ENGINEER
9-5-23

NO.	DESCRIPTION	DATE

STEPTOE AND TAPTEAL INTERSECTION
YOUNG ASSET MANAGEMENT
ILLUMINATION
STA 41+00.00 TO STA 45+50.00

FILE : 07-21-030 IL-5
JUB PROJ. # : 07-21-030
DRAWN BY: WG
DESIGN BY: WG
CHECKED BY: RD
ONE INCH
AT FULL SIZE, IF NOT ONE
INCH, SCALE ACCORDINGLY
LAST UPDATED: 8/3/2023

SHEET NUMBER:
IL-5

LUMINAIRE SCHEDULE

LIGHT ID	LOCATION		POLE DATA			LIGHT DATA		CONDUIT CROSSING
	STATION	OFFSET	POLE HEIGHT	ARM LENGTH	FOUNDATION	LUMEN OUTPUT	COLOR TEMP.	
Q	T 35+27.00	27.0' LT	30'	12'	CONCRETE	HIGH	4K	YES
R	T 36+47.00	33.6' RT	30'	12'	CONCRETE	HIGH	4K	
S	T 37+67.00	33.5' LT	30'	12'	CONCRETE	HIGH	4K	YES

WIRING SCHEDULE

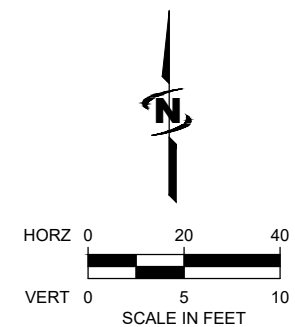
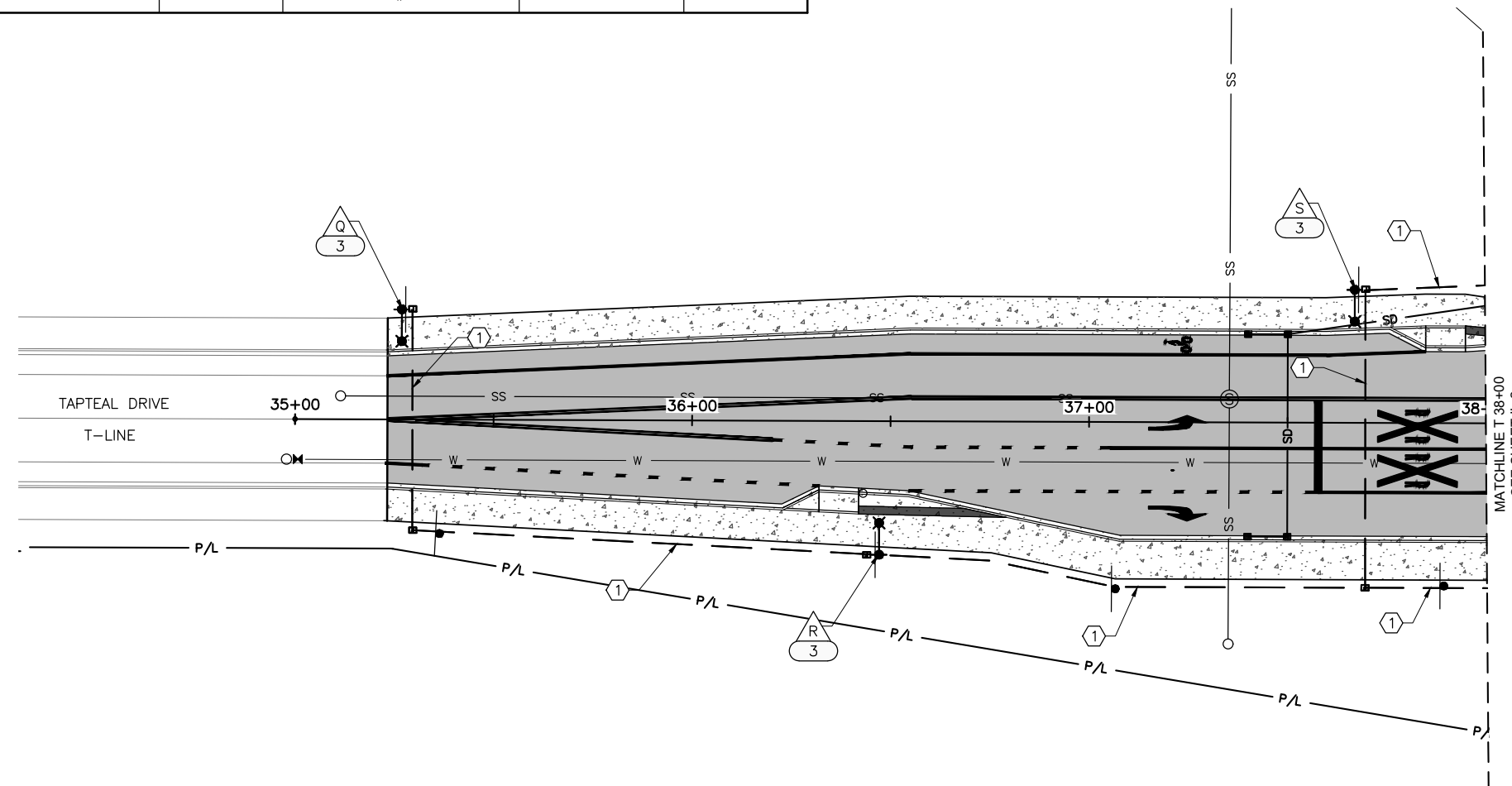
RUN	CONDUIT		CONDUCTORS	CKT	REMARKS
	NEW	EXISTING			
1	2"		2#8	A	
2	2"		2#8	K	KENNEWICK CIRCUIT
3	2"		2#8	B	
4	2"		4#8	A & B	

KEYED NOTES

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NO.	REVISION	DESCRIPTION	BY	DATE

STEPTOE AND TAPTEAL INTERSECTION
YOUNG ASSET MANAGEMENT

ILLUMINATION
STA 8+00.00 TO STA 11+50.00

FILE: 07-21-030_IL-6
JUB PROJ. #: 07-21-030
DRAWN BY: WG
DESIGN BY: WG
CHECKED BY: RD
ONE INCH
AT FULL SIZE, IF NOT ONE INCH, SCALE ACCORDINGLY
LAST UPDATED: 6/17/2023

SHEET NUMBER:

IL-6

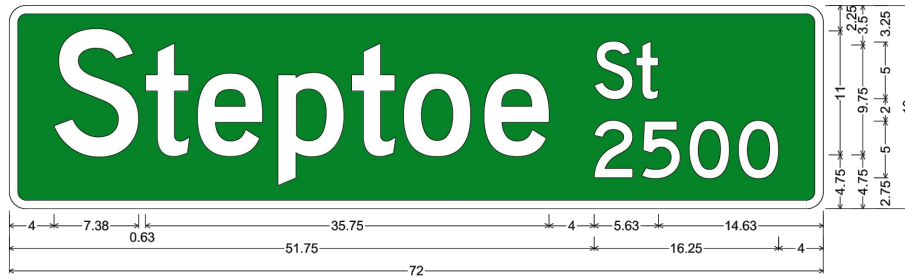
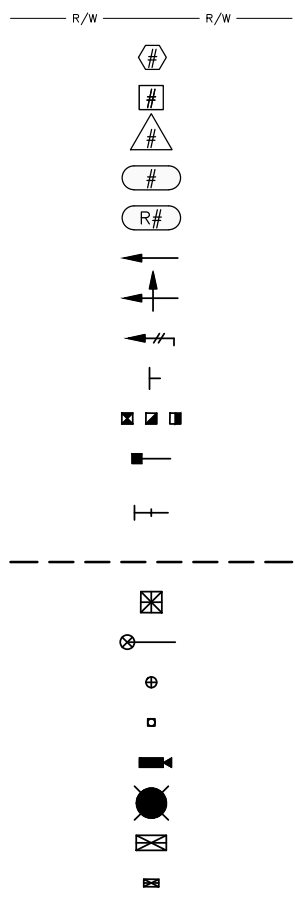
GENERAL NOTES:

- ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF RICHLAND STANDARD SPECIFICATIONS, WASHINGTON STATE DEPARTMENT OF TRANSPORTATION (WSDOT) STANDARDS AND SPECIFICATIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
- THE LOCATIONS OF FEATURES SHOWN SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO CONSTRUCTION WORK.
- ALL WORK SHALL BE CONSISTENT WITH UTILITY AGENCY REQUIREMENTS. THE CONTRACTOR SHALL CONTACT ALL PERTINENT UTILITY AGENCIES 48 HOURS PRIOR TO COMMENCING WORK, AND SHALL COORDINATE WITH AFFECTED UTILITY AGENCIES THROUGHOUT THE PROJECT.
- THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES ARE APPROXIMATE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BY FIELD VERIFICATION BEFORE COMMENCING WORK AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THEIR FAILURE TO EXACTLY LOCATE AND PRESERVE ALL UNDERGROUND UTILITIES. THE CONTRACTOR SHALL NOTIFY THE AFFECTED UTILITY COMPANY AND THE CITY IMMEDIATELY UPON ANY DAMAGE AND BE RESPONSIBLE FOR REPLACING ANY DAMAGED EQUIPMENT TO THE SATISFACTION OF THE AFFECTED UTILITY COMPANY AND/OR THE CITY.
- POLE LOCATIONS SHALL BE STAKED IN THE FIELD AND APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL VERIFY ACCEPTABLE MINIMUM OVERHEAD CLEARANCE FOR ALL SIGNAL HEADS ABOVE THE STREET IS ATTAINABLE USING APPROVED SIGNAL HEAD MOUNTING PRIOR TO PLACING FOUNDATIONS.
- VEHICLE SIGNAL HEADS SHALL HAVE 12" RED, YELLOW, AND GREEN LED LENSES AND TUNNEL VISORS PER CITY OF RICHLAND SPECIFICATIONS. VEHICLE SIGNAL HEADS SHALL BE INSTALLED ON MAST ARMS USING TYPE N MOUNTS (USING CABLE, NOT BANDING), PER WSDOT STANDARD PLAN J-75.20-01. TYPE K MOUNTS WILL BE USED FOR SIDE OF POLE MOUNTING PER WSDOT STANDARD PLAN J-75.10-02. MOUNTING HARDWARE TO BE AS CALLED OUT IN THE SPECIFICATIONS. VEHICLE SIGNAL HEADS SHALL HAVE LOUVERED BACKPLATES WITH 2" YELLOW REFLECTIVE BORDERS.
- INSTALL MAST ARM AND POLE MOUNTED SIGNS PER WSDOT STANDARD PLAN G-30.10-04. VALIDATE STREET NAMES AND ADDRESSES WITH THE CITY OF RICHLAND TRAFFIC ENGINEER PRIOR TO FABRICATION.
- COUNTDOWN PEDESTRIAN SIGNAL HEADS SHALL BE INSTALLED ON POLES USING TYPE E MOUNTS, PER WSDOT STANDARD PLAN J-75.10-02. THE COUNTDOWN HEADS SHALL BE INSTALLED PARALLEL WITH THE ASSOCIATED CROSSWALK.
- APS STYLE PEDESTRIAN PUSHBUTTON ASSEMBLIES SHALL BE INSTALLED FACING THE INTERSECTION AND PARALLEL WITH THE ASSOCIATED CROSSWALK, MOUNTED AT 42" ABOVE THE SIDEWALK GRADE.
- THE JUNCTION BOX AND CONDUIT LOCATIONS ARE SHOWN APPROXIMATE. JUNCTION BOXES SHALL BE PLACED OUTSIDE OF SIDEWALKS UNLESS OTHERWISE NOTED OR DIRECTED BY THE ENGINEER. JUNCTION BOXES LOCATED IN SIDEWALK SHALL HAVE NON-SKID LIDS. ALL JUNCTION BOXES, NEW AND EXISTING SHALL HAVE PROPER GROUNDING ROD AND CONNECTIONS PER NEC.

LEGEND

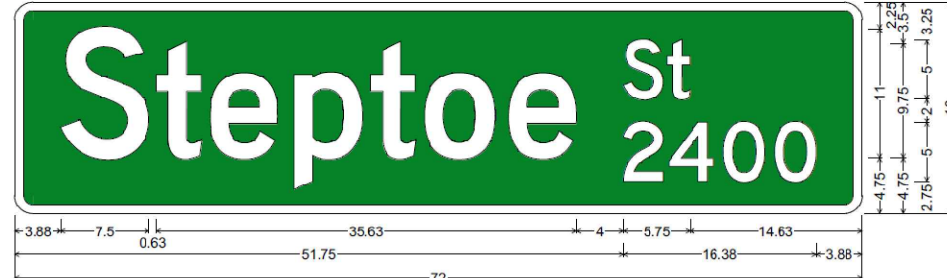
- DESCRIPTION**
- RIGHT OF WAY
 - CONSTRUCTION NOTE
 - SIGNAL POLE CONSTRUCTION NOTE
 - WIRE NOTE
 - SIGN NOTE
 - SIGN REMOVAL NOTE
 - VEHICLE SIGNAL HEAD
 - VEHICLE SIGNAL TURN HEAD
 - PEDESTRIAN SIGNAL HEAD
 - PEDESTRIAN PUSHBUTTON
 - QUAZITE JUNCTION BOX (TYPE 1, 2, & 3)
 - EMERGENCY VEHICLE PREEMPTION DEVICE
 - MAST ARM MOUNTED STREET/REGULATORY SIGN & POLE MOUNTED REGULATORY SIGN
 - CONDUIT
 - TRAFFIC SIGNAL CONTROLLER CABINET
 - SIGNAL POLE AND MAST ARM
 - TYPE I SIGNAL POLE
 - PEDESTRIAN PUSHBUTTON POST
 - VIDEO DETECTION CAMERA
 - LUMINAIRE
 - ELECTRICAL SERVICE CABINET
 - BATTERY BACKUP SYSTEM CABINET

PROPOSED SYMBOL



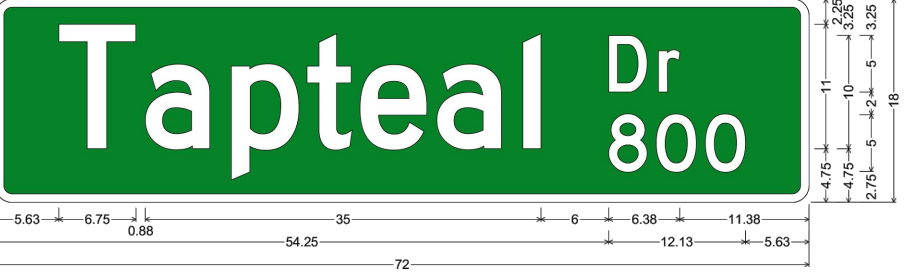
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"Steptoe", D 2K specified length; "St", D 2K; "2500", D 2K 80% spacing;

1



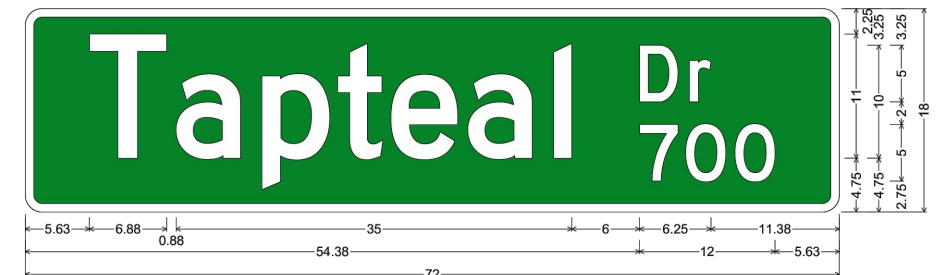
1.50" Radius, 0.75" Border, White on Green;
"Steptoe", D 2K specified length; "St", D 2K; "2400", D 2K 80% spacing;

3



1.50" Radius, 0.75" Border, White on Green;
"Tapteal", D 2K specified length; "Dr", D 2K; "800", D 2K 80% spacing;

2

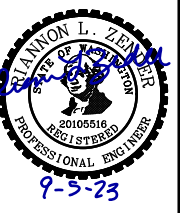


1.50" Radius, 0.75" Border, White on Green;
"Tapteal", D 2K specified length; "Dr", D 2K; "700", D 2K 80% spacing;

4



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NO.	DESCRIPTION	BY	DATE

**STEPTOE AND TAPTEAL INTERSECTION
YOUNG ASSET MANAGEMENT**

TRAFFIC SIGNAL NOTES AND LEGEND



**Know what's below.
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**CALL 2 BUSINESS DAYS IN ADVANCE BEFORE
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MARKING OF UNDERGROUND MEMBER
UTILITIES**

FILE : 07-21-030 TS-1
JUB PROJ. # : 07-21-030
DRAWN BY: WG
DESIGN BY: WG
CHECKED BY: RD

ONE INCH
AT FULL SIZE, IF NOT ONE
INCH, SCALE ACCORDINGLY

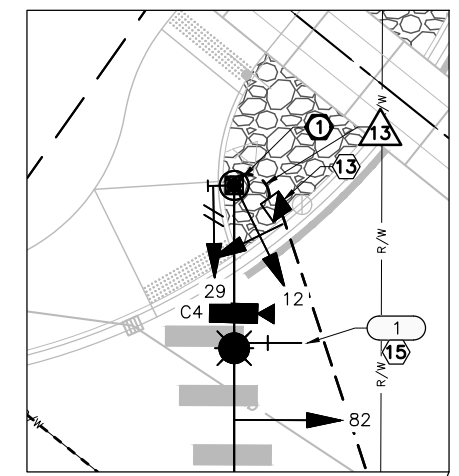
LAST UPDATED: 10/17/2023

SHEET NUMBER:
TS-1

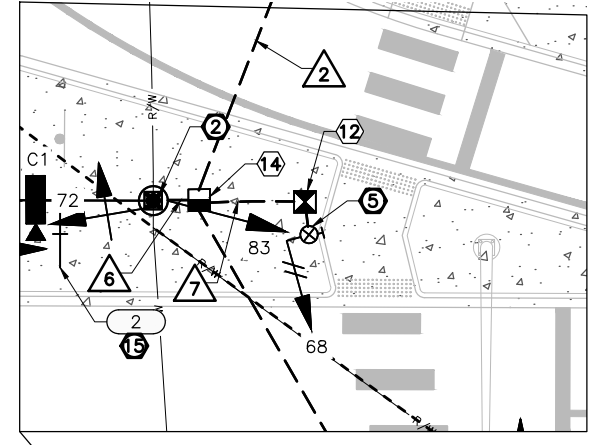
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 Date Created: 10/17/2023, JUB, C:\CENTRAL\Clients\SWA\Young\ASSET\TAPTEAL\PROJECTS\07-21-030_TS-1.DWG

KEYED NOTES

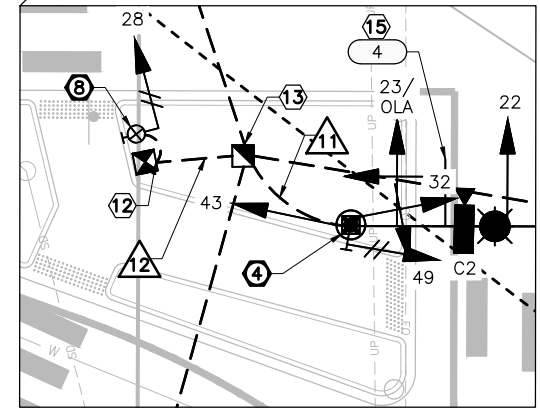
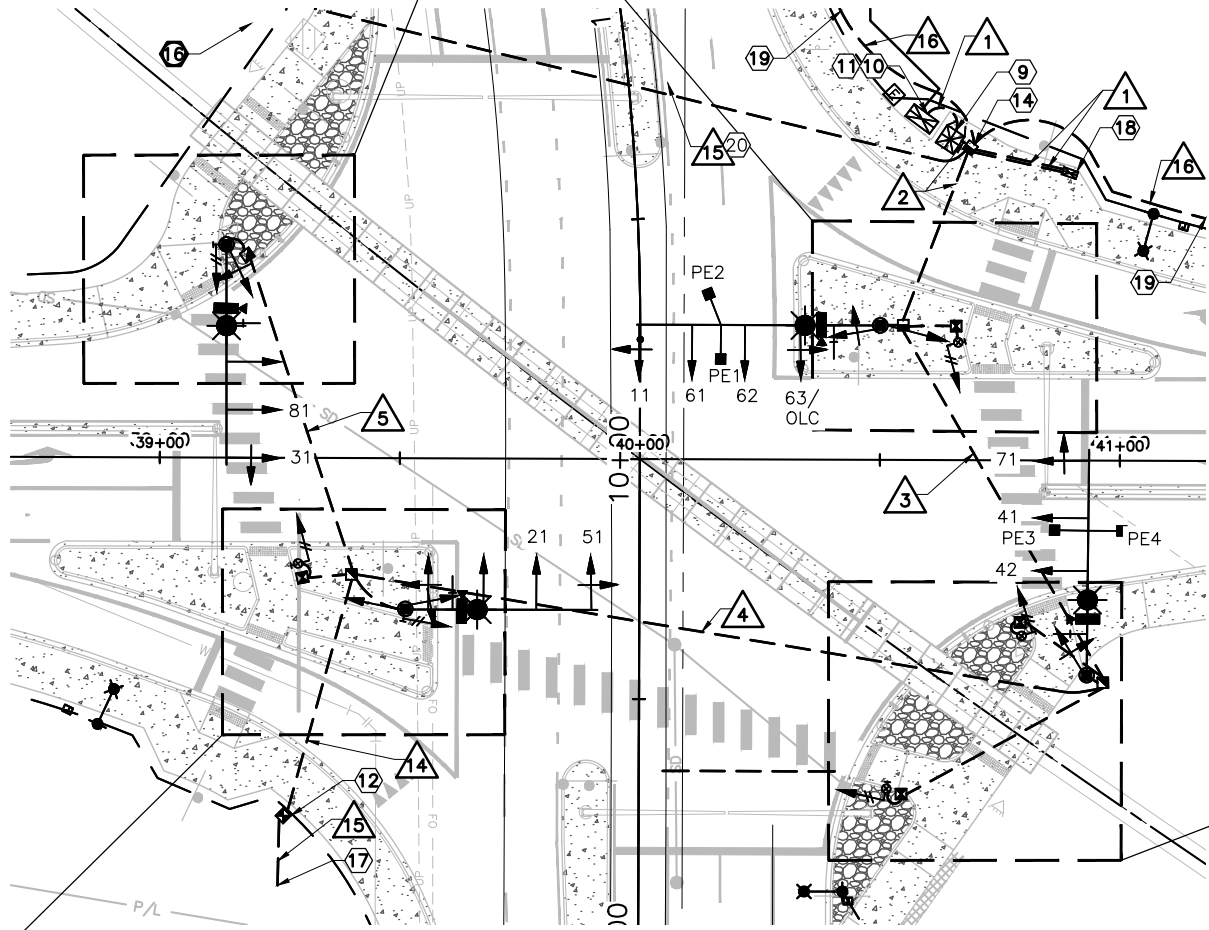
- ① CONSTRUCT FOUNDATION PER WSDOT STANDARD PLAN J-26.10-03, AND PROVIDE AND INSTALL TYPE III SIGNAL POLE WITH 45FT MAST ARM AND INTEGRAL TERMINAL COMPARTMENT PER RICHLAND STANDARD DETAIL TS-12. PROVIDE AND INSTALL THREE VEHICLE SIGNAL HEADS, AND ONE STREET NAME SIGN ON MAST ARM. PROVIDE AND INSTALL ONE VEHICLE SIGNAL HEAD, ONE COUNTDOWN PEDESTRIAN SIGNAL HEAD, AND ONE ACCESSIBLE PEDESTRIAN SIGNAL (APS) STYLE PEDESTRIAN PUSHBUTTON ASSEMBLY WITH SHORT UNIVERSAL EXTENSION BRACKET ON SIGNAL POLE. PROVIDE AND INSTALL ONE HIGH LUMEN OUTPUT 4000K LUMINAIRE ON 16FT ARM AT 35FT MOUNTING HEIGHT. PROVIDE AND INSTALL ONE VIDEO DETECTION CAMERA ON LUMINAIRE ARM PER CITY OF RICHLAND SPECIFICATIONS. THE TOP OF THE FOUNDATION SHALL BE FLUSH WITH THE TOP OF THE SIDEWALK.
- ② CONSTRUCT FOUNDATION PER WSDOT STANDARD PLAN J-26.10-03, AND PROVIDE AND INSTALL TYPE III SIGNAL POLE WITH 50FT MAST ARM AND INTEGRAL TERMINAL COMPARTMENT PER RICHLAND STANDARD DETAIL TS-12. PROVIDE AND INSTALL FOUR VEHICLE SIGNAL HEADS, ONE GTT MODEL 722 OPTICOM PREEMPTION DETECTOR, AND ONE STREET NAME SIGN ON MAST ARM. PROVIDE AND INSTALL TWO VEHICLE SIGNAL HEADS ON SIGNAL POLE. PROVIDE AND INSTALL ONE HIGH LUMEN OUTPUT 4000K LUMINAIRE ON 16FT ARM AT 35FT MOUNTING HEIGHT. PROVIDE AND INSTALL ONE VIDEO DETECTION CAMERA ON LUMINAIRE ARM PER CITY OF RICHLAND SPECIFICATIONS. THE TOP OF THE FOUNDATION SHALL BE FLUSH WITH THE TOP OF THE SIDEWALK.
- ③ CONSTRUCT FOUNDATION PER WSDOT STANDARD PLAN J-26.10-03, AND PROVIDE AND INSTALL TYPE III SIGNAL POLE WITH 45FT MAST ARM AND INTEGRAL TERMINAL COMPARTMENT PER RICHLAND STANDARD DETAIL TS-12. PROVIDE AND INSTALL THREE VEHICLE SIGNAL HEADS AND ONE GTT MODEL 722 OPTICOM PREEMPTION DETECTOR ON MAST ARM. PROVIDE AND INSTALL ONE VEHICLE SIGNAL HEAD ON SIGNAL POLE. PROVIDE AND INSTALL ONE STREET NAME SIGN ON MAST ARM. PROVIDE AND INSTALL ONE HIGH LUMEN OUTPUT 4000K LUMINAIRE ON 16FT ARM AT 35FT MOUNTING HEIGHT. PROVIDE AND INSTALL ONE VIDEO DETECTION CAMERA ON LUMINAIRE ARM PER CITY OF RICHLAND SPECIFICATIONS. THE TOP OF THE FOUNDATION SHALL BE FLUSH WITH THE TOP OF THE SIDEWALK.
- ④ CONSTRUCT FOUNDATION PER WSDOT STANDARD PLAN J-26.10-03, AND PROVIDE AND INSTALL TYPE III SIGNAL POLE WITH 40FT MAST ARM AND INTEGRAL TERMINAL CABINET PER RICHLAND STANDARD DETAIL TS-12. PROVIDE AND INSTALL FOUR VEHICLE SIGNAL HEADS, AND ONE STREET NAME SIGN ON MAST ARM. PROVIDE AND INSTALL TWO VEHICLE SIGNAL HEADS, ONE COUNTDOWN PEDESTRIAN SIGNAL HEAD AND ONE ACCESSIBLE PEDESTRIAN SIGNAL (APS) STYLE PEDESTRIAN PUSHBUTTON ASSEMBLY WITH MEDIUM UNIVERSAL EXTENSION BRACKET ON SIGNAL POLE. INSTALL ONE HIGH LUMEN OUTPUT 4000K LUMINAIRE ON 16FT ARM AT 35FT MOUNTING HEIGHT. PROVIDE AND INSTALL ONE VIDEO DETECTION CAMERA ON LUMINAIRE ARM PER CITY OF RICHLAND SPECIFICATIONS. THE TOP OF THE FOUNDATION SHALL BE FLUSH WITH THE TOP OF THE SIDEWALK.
- ⑤⑧ CONSTRUCT FOUNDATION PER WSDOT STANDARD PLAN J-20.11-03, SHEET 2 OF 2, AND PROVIDE AND INSTALL TYPE 1 SIGNAL POLE. PROVIDE AND INSTALL ONE COUNTDOWN STYLE PEDESTRIAN SIGNAL HEAD AND ONE ACCESSIBLE PEDESTRIAN SIGNAL (APS) STYLE PEDESTRIAN PUSHBUTTON ASSEMBLY ON POST. TOP OF FOUNDATION SHALL BE FLUSH WITH THE TOP OF SIDEWALK.
- ⑥⑦ CONSTRUCT FOUNDATION PER WSDOT STANDARD PLAN J-21.10-04, SHEET 1 OF 2 AND PROVIDE AND INSTALL TYPE 1 SIGNAL POLE. PROVIDE AND INSTALL ONE COUNTDOWN STYLE PEDESTRIAN SIGNAL HEAD AND ONE ACCESSIBLE PEDESTRIAN SIGNAL (APS) STYLE PEDESTRIAN PUSHBUTTON ASSEMBLY ON POST. TOP OF FOUNDATION SHALL BE FLUSH WITH THE TOP OF SIDEWALK.
- ⑨ PROVIDE AND INSTALL TRAFFIC SIGNAL CONTROLLER CABINET ON NEW FOUNDATION PER RICHLAND STANDARD DETAIL TS-11 SPECIAL PROVISIONS. CONTRACTOR TO PROVIDE AND INSTALL NEW COBALT CONTROLLER UNIT, NEW OPTICOM 764 PHASE SELECTOR, NEW MMU, AND VIDEO DETECTION COMMUNICATION PANEL AND OTHER EQUIPMENT AS REQUIRED BY THE SPECIAL PROVISIONS AND MATERIALS LIST. ALIGN FOUNDATION JUST OFF BACK OF SIDEWALK SUCH THAT THERE IS SPACE TO STAND AND OPEN DOORS FACING THE TRAFFIC SIGNAL.
- ⑩ PROVIDE AND INSTALL SERVICE CABINET PER RICHLAND STANDARD DETAIL TS-13 AND SPECIAL PROVISIONS.
- ⑪ FINAL SERVICE CONNECTION TO BE MADE BY POWER COMPANY, RICHLAND ENERGY SERVICES.
- ⑫ PROVIDE AND INSTALL NEW QUAZITE TYPE 1 JUNCTION BOX.
- ⑬ PROVIDE AND INSTALL NEW QUAZITE TYPE 2 JUNCTION BOX.
- ⑭ PROVIDE AND INSTALL NEW QUAZITE TYPE 3 JUNCTION BOX.
- ⑮ PROVIDE AND INSTALL STREET NAME SIGN (#) PER SHEET TS-1.
- ⑯ RAILROAD SIGNAL HOUSE AND CONNECTION BY OTHERS
- ⑰ STUB CONDUIT TO A POINT 2 FEET TO THE SOUTH FROM NEW JUNCTION BOX FOR CONNECTION TO FIBER (BY OTHERS).
- ⑱ INSTALL NEW BATTERY BACKUP CABINET ON QUAZITE CABINET BASE.
- ⑲ INSTALL ONE GTT MODEL 711 OPTICOM PREEMPTION DETECTOR ON STREETLIGHT POLE G AND POLE P FOR ADVANCE EMERGENCY DETECTION. SEE SHEETS IL-3 AND IL-5.
- ⑳ PROVIDE CONDUIT FROM RAILROAD SIGNAL HOUSE TO CONTROLLER CABINET.



NORTH WEST CORNER DETAIL

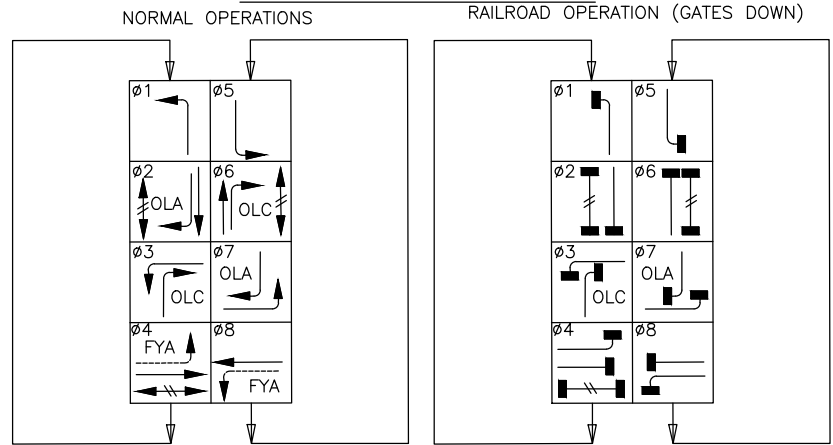


NORTH EAST CORNER DETAIL



SOUTH WEST CORNER DETAIL

PROPOSED SIGNAL PHASING



- VEHICLE MOVEMENT
- ↕ PROTECTED TURN
- PERMITTED TURN
- ↔ PEDESTRIAN MOVEMENT
- RESTRICTED MOVEMENT

PRE-EMPTION SCHEDULE

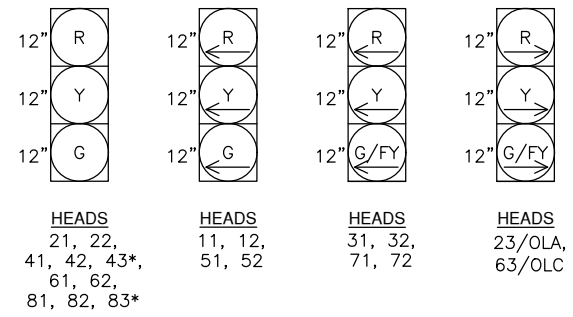
CIRCUIT	PHASE(S)
PE1	1&6
PE2	2&5
PE2-1*	2&5
PE3	3&8
PE4	4&7
PE4-1*	4&7

*LUMINAIRE MOUNTED. SEE ILLUMINATION SHEETS.

NOTES:

1. SEE SHEET TS-1 FOR GENERAL NOTES, SIGN LEGEND, AND DRAWING LEGEND.
2. SEE SHEET TS-3 FOR WIRING DIAGRAM, WIRING SCHEDULE, AND DETAILS
3. SEE TS-3A FOR RAILROAD SIGNAL INTERCONNECT CIRCUITS.
4. SEE SHEET TS-4 FOR TRAFFIC SIGNAL POLE CHART.
5. SEE RAILROAD SIGNAL HOUSE SHEETS FOR ADDITIONAL RAILROAD INTERCONNECT DETAILS.

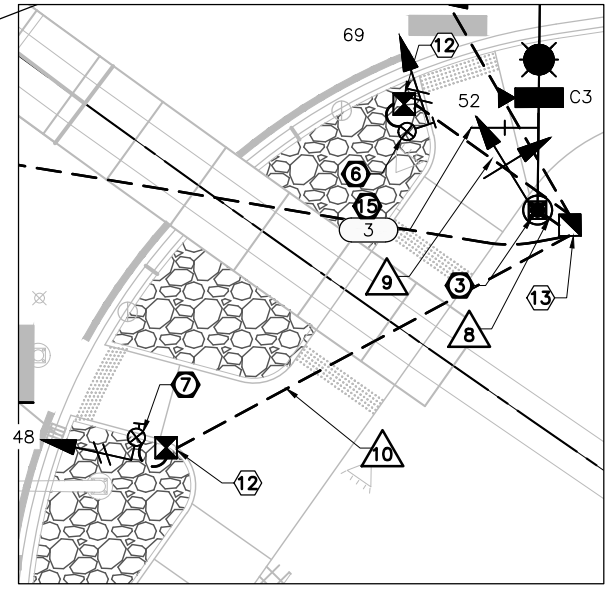
SIGNAL HEAD ASSIGNMENT



* HEADS 43 & 83 SHALL BE PROVIDED WITH GEOMETRICALLY PROGRAMMED LOUVERS (GPL). HEAD ANGLES TO BE FIELD ADJUSTED TO LIMIT VIEW OF DRIVERS TURNING RIGHT.



COUNTDOWN PEDESTRIAN HEADS
28, 29, 48, 49, 68, 69

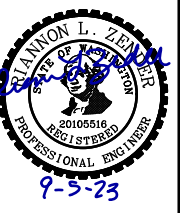


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STEPTOE AND TAPTEAL INTERSECTION
YOUNG ASSET MANAGEMENT

TRAFFIC SIGNAL PLAN

FILE: 07-21-030 TS-2
JUB PROJ #: 07-21-030
DRAWN BY: WG
DESIGN BY: WG
CHECKED BY: RD

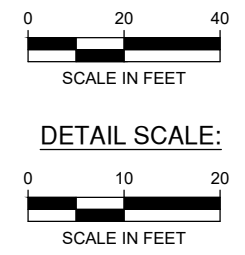
ONE INCH
AT FULL SIZE, IF NOT ONE INCH SCALE ACCORDINGLY
LAST UPDATED: 10/20/2023

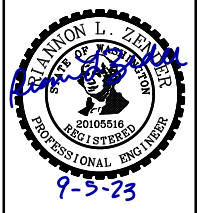
SHEET NUMBER:
TS-2

Plot Date: 10/20/2023 11:12 AM, Plotted By: Mary H. Wilkinson
 File: C:\CENTRAL\Clients\SWAL\Young\ASSET\TRAFFIC SIGNAL\PROJECTS\07-21-030_STEP1\TRAFFIC SIGNAL\DESIGN\07-21-030_TS-2.DWG



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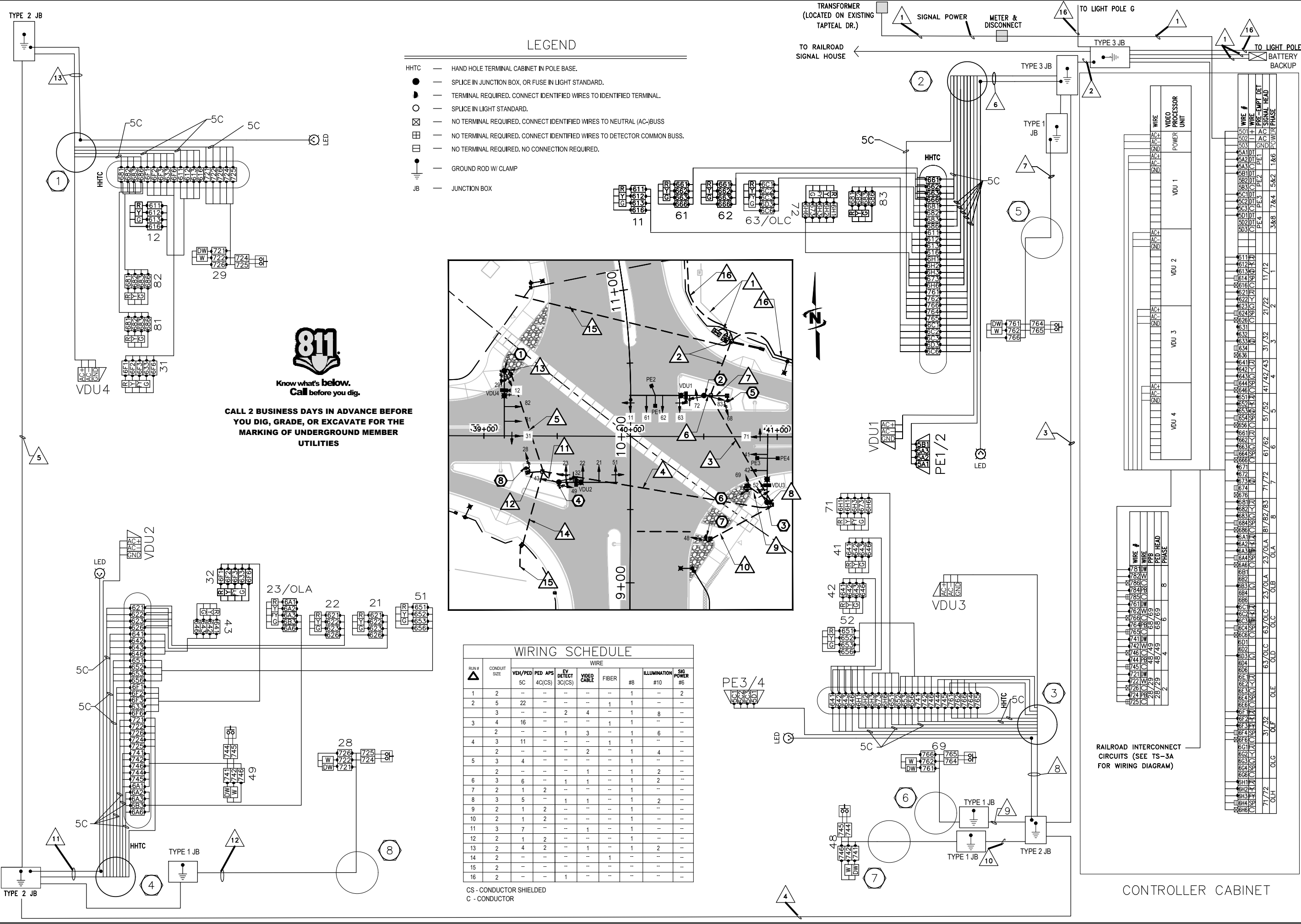




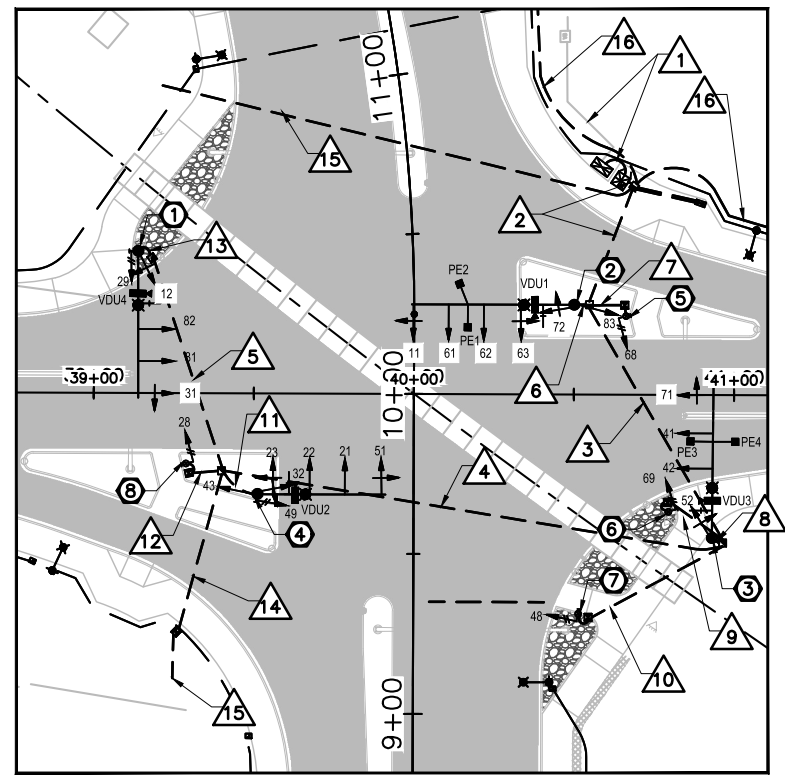
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**STEPTOE AND TAPTEAL INTERSECTION
 YOUNG ASSET MANAGEMENT**
 TRAFFIC SIGNAL WIRING DIAGRAM



- LEGEND**
- HHTC — HAND HOLE TERMINAL CABINET IN POLE BASE.
 - — SPLICE IN JUNCTION BOX, OR FUSE IN LIGHT STANDARD.
 - — TERMINAL REQUIRED. CONNECT IDENTIFIED WIRES TO IDENTIFIED TERMINAL.
 - — SPLICE IN LIGHT STANDARD.
 - ⊠ — NO TERMINAL REQUIRED. CONNECT IDENTIFIED WIRES TO NEUTRAL (AC)-BUSS
 - ⊡ — NO TERMINAL REQUIRED. CONNECT IDENTIFIED WIRES TO DETECTOR COMMON BUSS.
 - ⊞ — NO TERMINAL REQUIRED. NO CONNECTION REQUIRED.
 - | — GROUND ROD W/ CLAMP
 - JB — JUNCTION BOX



WIRING SCHEDULE

RUN #	CONDUIT SIZE	WIRE						
		VEH/PED SC	VED 4C(CS)	APS 4C(CS)	EV DETECT 3C(CS)	VIDEO CABLE	FIBER #	ILLUMINATION #10
1	2	-	-	-	-	-	1	2
2	5	22	-	-	-	1	1	-
3	3	-	-	2	4	1	8	-
4	3	11	-	1	3	1	6	-
5	3	4	-	-	2	1	4	-
6	3	6	-	1	1	1	2	-
7	2	1	2	-	-	1	-	-
8	3	5	-	1	1	1	2	-
9	2	1	2	-	-	1	-	-
10	2	1	2	-	-	1	-	-
11	3	7	-	-	1	1	-	-
12	2	1	2	-	-	1	-	-
13	2	4	2	-	1	1	2	-
14	2	-	-	-	-	1	-	-
15	2	-	-	-	-	1	-	-
16	2	-	-	1	-	-	-	-

CS - CONDUCTOR SHIELDED
 C - CONDUCTOR

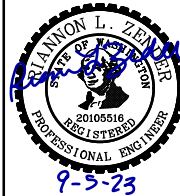
811
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Plot Date: 10/20/2023 11:12 AM, Plotted By: Mary H. Wilkins
 Date Created: 09/20/2023, JUB.COM\CENTRAL\CAD\LEWIS\YOUNG\ASSET\MGMT\PROJECTS\07-21-030_STEP\TAPTEAL\DESIGN\CAD\SHEET\07-21-030_TS-3.DWG



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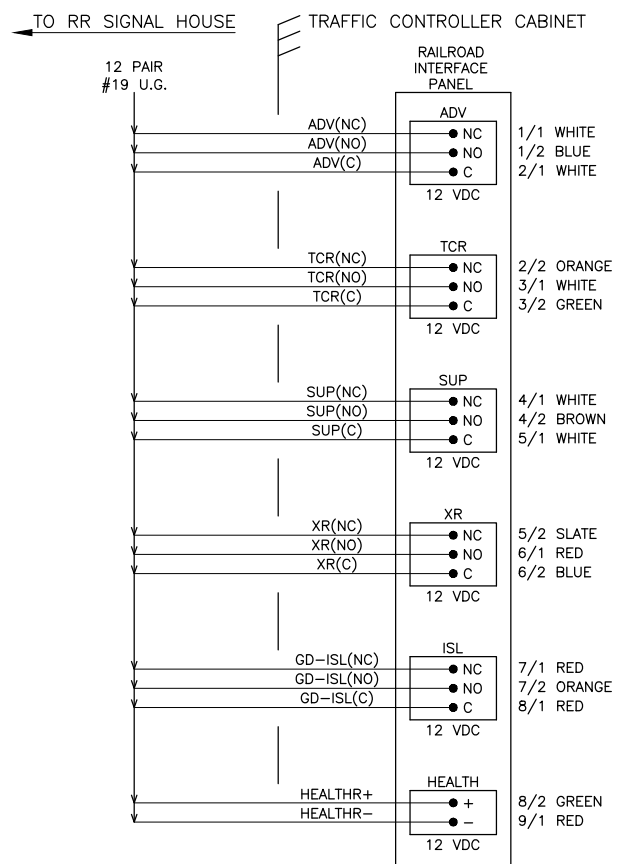
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RAILROAD INTERCONNECT CIRCUITS:

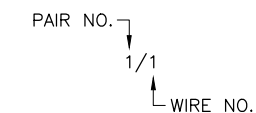
- TCR = ADVANCE PREEMPTION – TRANSFER ROW TO TRACK CLEARANCE GREEN INTERVAL.
- SUP = SUPERVISION – CHECKS THE INTEGRITY OF THE TCR CIRCUIT.
- XR = CROSSING ACTIVE – INDICATES GRADE CROSSING WARNING SYSTEM IS ACTIVE.
- GD/ISL = GATE DOWN/ISLAND – EXTEND TRACK CLEARANCE GREEN INTERVAL UNTIL GD/ISL INPUT IS RECEIVED AND CROSSING AREA DETECTION IS NOT OCCUPIED.
- HEALTH = INDICATES TO RAILROAD TRAFFIC SIGNAL IS IN HARDWARE FLASH OR THERE'S A POWER OUTAGE.

RAILROAD INTERCONNECT DIAGRAM



COLOR CODE CHART

PAIR NO.	MAJOR COLOR (WIRE #1)	MINOR COLOR (WIRE #2)
#1	WHITE	BLUE
#2	WHITE	ORANGE
#3	WHITE	GREEN
#4	WHITE	BROWN
#5	WHITE	SLATE
#6	RED	BLUE
#7	RED	ORANGE
#8	RED	GREEN
#9	RED	BROWN
#10	RED	SLATE
#11	BLACK	BLUE
#12	BLACK	ORANGE



Plot Date: 10/20/2023 11:12 AM, Plotted By: Mary M. Williams, Date Created: 10/17/2023, JUB: C:\CENTRAL\Clients\SWA\Young\ASSET MGMT\PROJECTS\07-21-030 - STEPTO AND TAPTEAL DESIGN\ASSET MGMT\07-21-030-TS-3A.DWG



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MARKING OF UNDERGROUND MEMBER
UTILITIES

STEPTOE AND TAPTEAL INTERSECTION
YOUNG ASSET MANAGEMENT

RAILROAD SIGNAL INTERCONNECT CIRCUITS

FILE: 07-21-030-TS-3A
 JUB PROJ. #: 07-21-030
 DRAWN BY: WG
 DESIGN BY: WG
 CHECKED BY: RD

ONE INCH
 AT FULL SIZE, IF NOT ONE
 INCH, SCALE ACCORDINGLY

LAST UPDATED: 10/20/2023

SHEET NUMBER:
TS-3A

NO.	REVISION	DESCRIPTION	BY	DATE

LEGEND

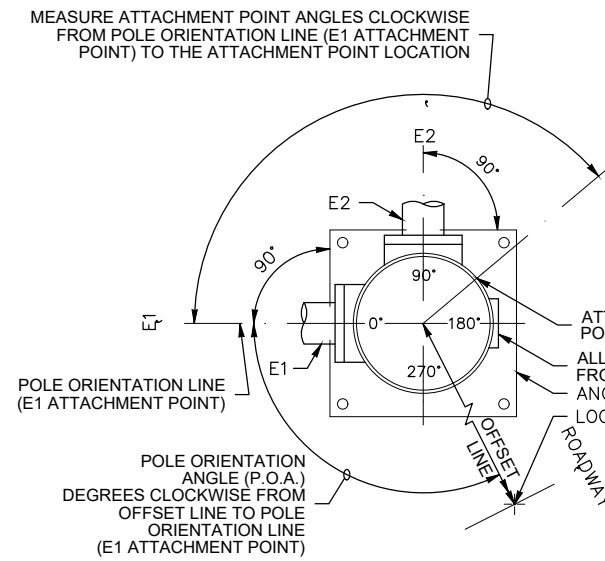
- a. VEHICLE DISPLAY
- b. MAST ARM MTD. SIGN
- c. STREET NAME SIGN
- d. PRE-EMPT DETECTOR
- e. POST MTD. SIGNAL
- f. LUMINAIRE
- g. PEDESTRIAN DISPLAY
- h. TERMINAL CABINET
- i. APS PPB-M
- j. HANDHOLE
- k. VIDEO DETECTION CAMERA

SIGNAL STANDARD IDENTIFICATION TAG DETAIL



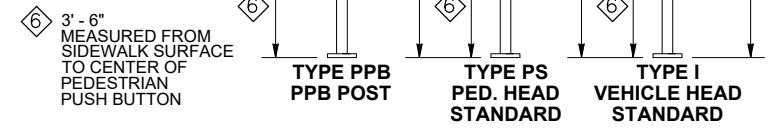
TAG NOTES:
 CORROSION RESISTANT METAL TAG SECURED WITH (2) 0.125" RIVETS AS FOLLOWS:
 - POLE SHAFT - LOCATED WITHIN 6" ABOVE HAND HOLE (TYPE II & III).
 - SIGNAL AND LUMINAIRE MAST ARM (TYPE II & III) - LOCATED WITHIN 6" OF THE LUMINAIRE ARM AND THE POLE SHAFT CONNECTION POINT (TYPE III).
 TEXT SHALL BE A MINIMUM OF 3/16" HIGH, STAMPED OR EMBOSSED.

LUMINAIRE MAST ARM X Y Z (ft)	STANDARD PLAN REFERENCES			
	POLE	FOUNDATION	ELECTRICAL	
6'	J-20.10	J-20.10	J-20.10	
8'	J-20.15	J-20.15	J-20.15	
10'	J-20.15	J-20.15	J-20.15	
12'	J-20.15	J-20.15	J-20.15	
14'	J-20.15	J-20.15	J-20.15	
16'	J-20.15	J-20.15	J-20.15	



POLE ORIENTATION AND ATTACHMENT POINT DETAIL

NOTE:
 TYPE E MOUNTS SHALL BE USED FOR PEDESTRIAN DISPLAYS ON TYPE II OR III SIGNAL STANDARDS, WITH THE FOLLOWING EXCEPTION: PEDESTRIAN DISPLAYS MOUNTED ON OCTAGONAL (8 SIDED) SIGNAL STANDARDS AT AN ANGLE OTHER THAN A 45 DEGREE INCREMENT SHALL USE A TYPE A MOUNT FOR TWO PEDESTRIAN DISPLAYS, OR A TYPE B MOUNT FOR A SINGLE PEDESTRIAN DISPLAY.



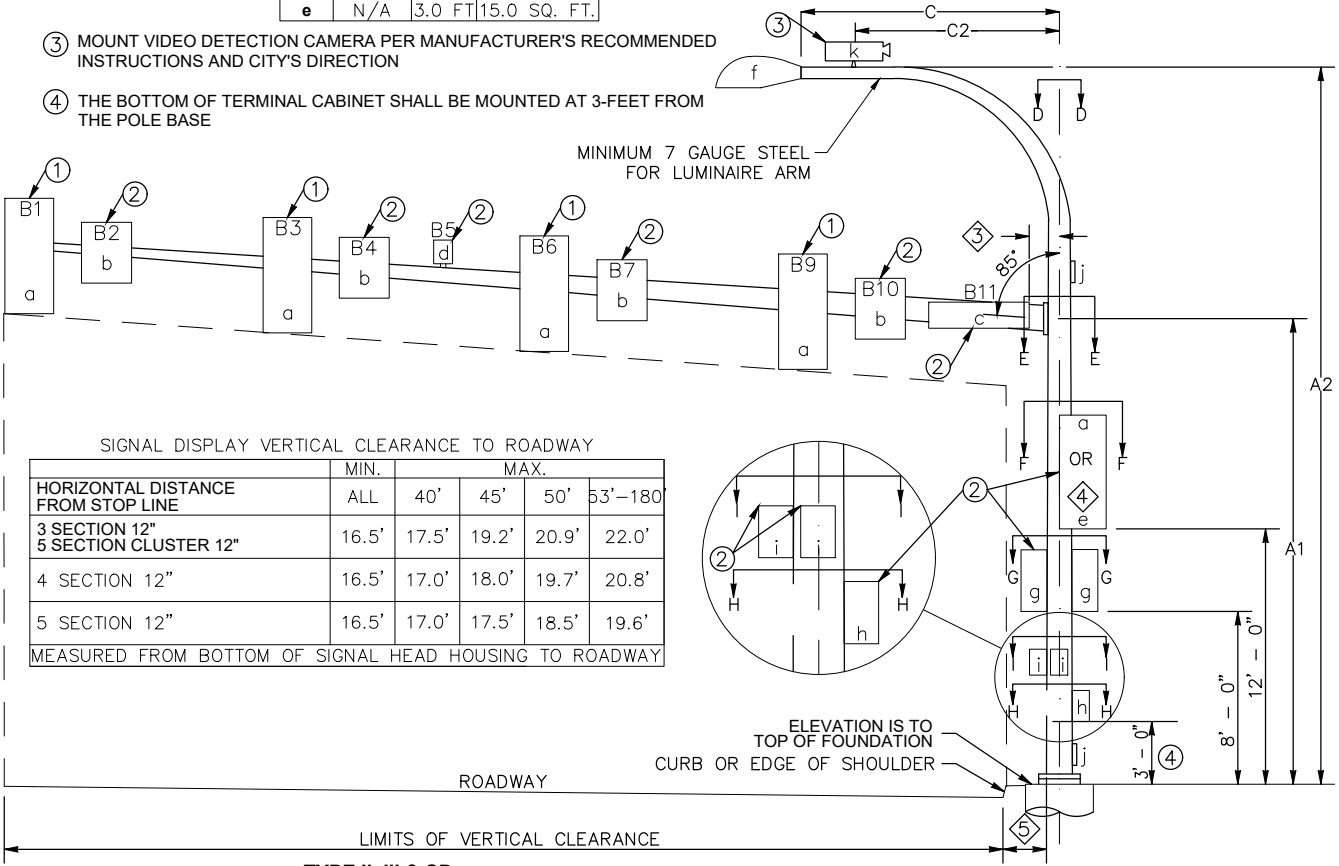
NOTES

- MOUNTING COUPLING INSTALLED AT OFFSET DISTANCE INDICATED IN CHART. FOR TYPE N MOUNTS ONLY, DRILL 1" DIA. HOLE IN MAST ARM AND INSTALL PLASTIC SPLIT BUSHING FOR CABLE ENTRANCE.
- FIELD INSTALLED. SIGN SIZES SHALL NOT EXCEED THE MAXIMUM VALUES LISTED HERE:
- MOUNT VIDEO DETECTION CAMERA PER MANUFACTURER'S RECOMMENDED INSTRUCTIONS AND CITY'S DIRECTION
- THE BOTTOM OF TERMINAL CABINET SHALL BE MOUNTED AT 3- FEET FROM THE POLE BASE

SIGN	HEIGHT	WIDTH	AREA
b	3.0 FT	N/A	7.5 SQ. FT.
c	3.0 FT	N/A	36.0 SQ. FT.
e	N/A	3.0 FT	15.0 SQ. FT.

③ 1' - 0" MIN. TO 2' - 6" MAX. FROM POLE CENTERLINE TO SIGN EDGE

④ FOR POST MOUNTED SIGNS THERE SHALL BE 2' - 0" MIN. FROM THE FACE OF THE CURB OR THE EDGE OF THE SHOULDER TO THE EDGE OF THE SIGN



SIGNAL DISPLAY VERTICAL CLEARANCE TO ROADWAY

HORIZONTAL DISTANCE FROM STOP LINE	MIN.	MAX.			
3 SECTION 12"	16.5'	17.5'	19.2'	20.9'	22.0'
4 SECTION 12"	16.5'	17.0'	18.0'	19.7'	20.8'
5 SECTION 12"	16.5'	17.0'	17.5'	18.5'	19.6'

MEASURED FROM BOTTOM OF SIGNAL HEAD HOUSING TO ROADWAY

- ⑤ PLACEMENT SHALL BE 2' - 0" MIN. FROM FACE OF CURB OR EDGE OF SHOULDER; 3' - 0" MIN. FROM FACE OF GUARDRAIL; 4' - 0" MIN. FROM CONC. BARRIER TYPE 2 (MEASURED FROM A POINT WHERE THE BARRIER BASE MEETS THE SHOULDER SURFACE (TOE), MEASUREMENT TAKEN FROM TRAFFIC SIDE OF BARRIER; TO FACE OF POLE)
- ⑦ DMS OR VMS IS NOT ALLOWED ON THESE POLES.

SIGNAL STANDARD DETAIL CHART

STD. No.	Centerline Stationing	FIELD LOCATION					POLE TYPE	MOUNTING HEIGHT (FT)		SIGNAL MAST ARM DATA											LUMINAIRE ARM (FT)	VIDEO PLACEMENT	TOTAL MAST ARM (FT)	CALCULATED POLE XYZ (FT ³)	POLE ATTACHMENT POINT ANGLES (deg.)												FOUNDATION DESIGN XYZ (FT)	SOIL BEARING PRESSURE (PSF)	FOUNDATION DEPTH (FT)				REMARKS			
		STATION	OFFSET	LT.	RT.	ELEV.		P.O.A.	A1	A2	OFFSETS (FT) (Z) (POLE TO ATTACHMENT POINT)														ALTERNATE 1		ALTERNATE 2																			
											B1	B2	B3	B4	B5	B6	B7	B8	B9	B10					B11	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11			3' RD.	3' SQ.	4' RD.	3' RD.		4' RD.		
1	STEPTOE ST	10+48.10	85.9	X		414.60	90	19	35	44.5	34.5		24.5							16.5	9.2	9.2		9.2			9	16	15	45	1169		+	0	++	90	++	1350	1000	11'	9'	9'	11'	9'	STANDARD (PER WSDOT STD PLAN J-26.10-03)	
2	STEPTOE ST	10+27.75	50.0	X		415.65	0	19	35	49.5	38.5	32.5	27.5							9	9.2	9.2		9.2			9	16	15	50	1359		+	+	0		180		1500	1000	11'	9'	9'	15'	12'	STANDARD (PER WSDOT STD PLAN J-26.10-03)
3	STEPTOE ST	9+55.30	93.5	X		417.10	90	19	35	44.5	34.5	30	24.5							17	9.2	9.2		9.2			9	16	15	45	1173		+	0		90		1350	1000	11'	9'	9'	11'	9'	STANDARD (PER WSDOT STD PLAN J-26.10-03)	
4	STEPTOE ST	9+68.60	48.7	X		416.60	0	19	35	39.5	28		17							11	9.2	9.2		9.2			9	16	15	40	995		+	+	0	++	180	++	1350	1000	11'	9'	9'	11'	9'	STANDARD (PER WSDOT STD PLAN J-26.10-03)
5	STEPTOE ST	10+24.50	66.2	X		415.20	0																																					STANDARD (PER WSDOT STD PLAN J-26.10-04)		
6	STEPTOE ST	9+63.50	79.6	X		416.20	0																																					STANDARD (PER WSDOT STD PLAN J-26.10-04)		
7	STEPTOE ST	9+31.50	51.5	X		417.10	0																																					STANDARD (PER WSDOT STD PLAN J-26.10-04)		
8	STEPTOE ST	9+78.00	71.2	X		416.20	0																																					STANDARD (PER WSDOT STD PLAN J-26.10-04)		
9																																													STANDARD (PER WSDOT STD PLAN J-26.10-04)	
10																																													STANDARD (PER WSDOT STD PLAN J-26.10-04)	

* ELEVATION IS TO TOP OF FOUNDATION. FIELD VERIFY ELEVATION PRIOR TO ORDERING SIGNAL STANDARDS.

** CALCULATED POLE XYZ (FT³) IS THE SUM OF THE TOTAL XYZ (FT³) FOR THE SIGNAL ARM AND THE XYZ (FT³) FOR THE LUMINAIRE ARM (IF PRESENT).

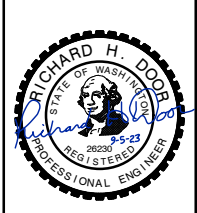
+ FIELD DRILLED AND INSTALLED. ALIGN PROPOSED SIGNAL HEAD WITH RIGHT OR LEFT TURN LANES AS SHOWN ON PLANS.

++ FIELD DRILLED AND INSTALLED. ALIGN WITH PROPOSED CROSSWALK.



Know what's below.
 Call before you dig.

CALL 2 BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES



NO.	REVISION	DESCRIPTION	BY	DATE

STEPTOE AND TAPTEAL INTERSECTION
YOUNG ASSET MANAGEMENT
PAVEMENT MARKINGS AND SIGNING PLAN
 STA 5+00.00 TO STA 8+00.00

KEYED NOTES - MARKINGS

- DOUBLE YELLOW CENTER LINE WITH 4" SEPARATION PER WSDOT STD PLAN M-20.10-04
- EDGE LINE WITH COLOR C (W=WHITE, Y=YELLOW) PER WSDOT STD PLAN M-20.10-04
- TRAFFIC ARROW FOR LOW SPEED ROADWAYS PER WSDOT STD PLAN M-24.40-02 WHERE T=TYPE
- 4" DOTTED LANE OR EXTENSION LINE WITH COLOR C (W=WHITE, Y=YELLOW) & SKIP PATTERN # (1=1' LINE AND 3' GAP, 2=2' LINE AND 6' GAP, 3=3' LINE AND 9' GAP) PER WSDOT STD PLAN M-20.10-04
- 8" DOTTED LANE OR EXTENSION LINE WITH COLOR C (W=WHITE, Y=YELLOW) & SKIP PATTERN # (1=1' LINE AND 3' GAP, 2=2' LINE AND 6' GAP, 3=3' LINE AND 9' GAP) PER WSDOT STD PLAN M-20.10-04
- LANE LINE PER WSDOT STD PLAN M-20.10-04
- 8" WIDE LANE LINE WITH COLOR C (W=WHITE, Y=YELLOW) PER WSDOT STD PLAN M-20.10-04
- CROSSWALK LINE (PLASTIC) PER WSDOT STD PLAN M-15.10-01
- STOP LINE PER WSDOT STD PLAN M-24.60-04
- BICYCLE LANE SYMBOL PER WSDOT STD PLAN M-9-50.02 WITH OPTIONAL ARROW A (0=NONE, 1=THRU, 2=RIGHT-TURN, 3=LEFT-TURN)
- TWO-WAY LEFT-TURN CENTER LINE PER WSDOT STD PLAN M-20.10-04
- YIELD LINE SYMBOL (SHARKS TEETH) PER WSDOT STD PLAN M-24.60
- WHITE LAYOUT AT GRADE RAILROAD CROSSING SYMBOL PER WSDOT STD PLAN M-11.10-04
- 24 IN. WHITE TRANSVERSE LINE
- CHEVRON CROSSHATCH MAKING AT 20' SPACING. 8" WIDE YELLOW PER STD PLAN M-24.60-04

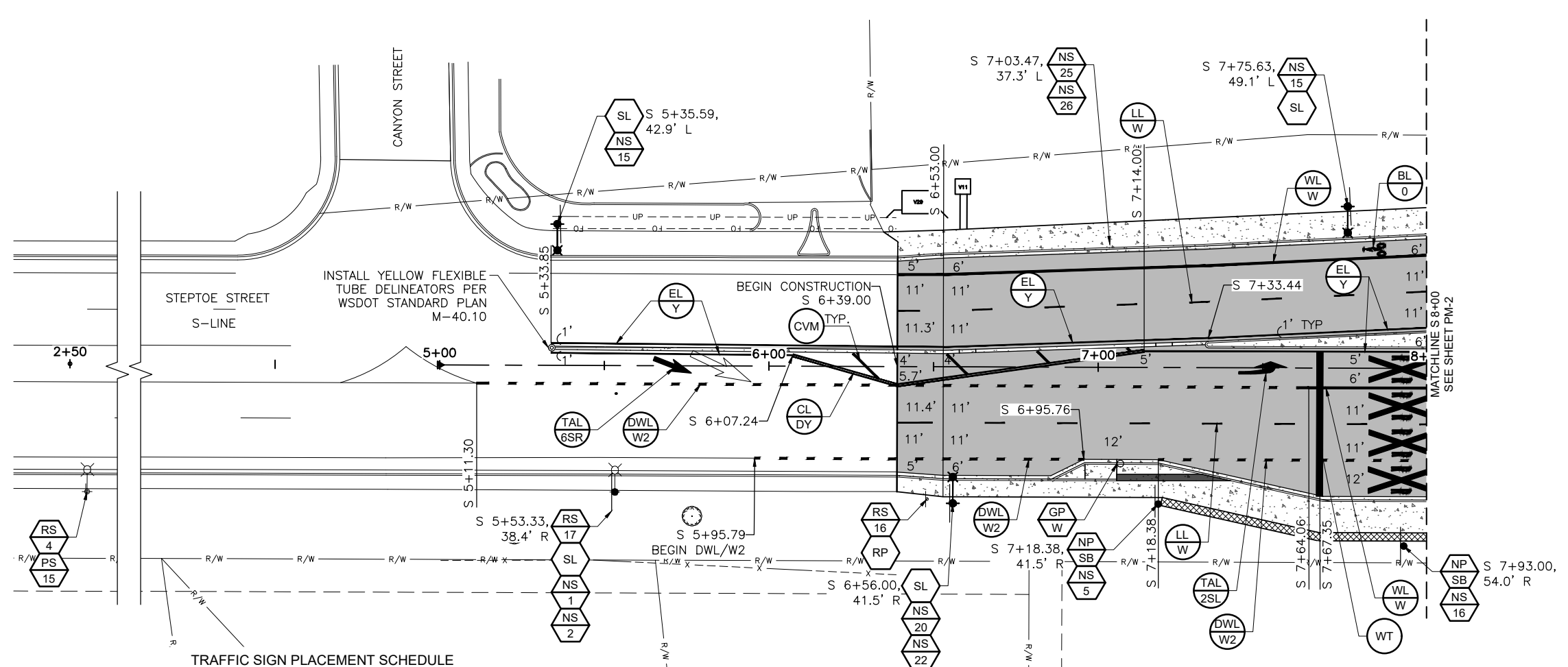
KEYED NOTES - SIGNING

- INSTALL NEW POST WITH BASE TYPE T (SB=STANDARD BASE, HD=HEAVY DUTY)
- REMOVE EXISTING SIGN POST AND BASE
- USE STREETLIGHT POLE AS SIGN MOUNT
- INSTALL NEW SIGN NO. X
- RETAIN AND PROTECT EXISTING SIGN NO. X. ADJUST AS REQUIRED
- REMOVE EXISTING SIGN NO. X
- REINSTALL/RELOCATE EXISTING SIGN NO. X TO POSITION SHOWN
- INSTALL FLEXIBLE GUIDE POST, SURFACE MOUNT WITH TYPE T REFLECTIVE SHEETING PER WSDOT STD PLAN M-40.10-03. (W=WHITE FACING TRAFFIC, WW=WHITE BOTH SIDES, Y=YELLOW FACING TRAFFIC, YY=YELLOW BOTH SIDES)



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TRAFFIC SIGN PLACEMENT SCHEDULE

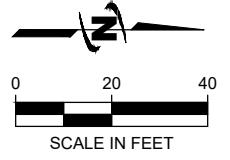
SIGN NO.	MUTCD DESCRIPTION	SIZE	DESCRIPTION
1	R3-17	24"x18"	BIKE LANE
2	R3-17bP	24"x8"	ENDS
3	R3-17aP	24"x8"	BEGINS
4	R3-7R	36"x36"	RIGHT LANE MUST TURN RIGHT
5	R9-6	12"x18"	BIKES YIELD TO PEDS
6	R9-3	18"x18"	NO PEDESTRIAN CROSSING
7	R9-3bL	18"x12"	USE CROSSWALK PLAQUE
8	R9-3bR	18"x12"	USE CROSSWALK PLAQUE
9	W11-2	30"x30"	PEDESTRIAN CROSSING
10	W16-7PL	24"x12"	DIAGONAL ARROW PLAQUE
11	R2-1 (35)	30"x36"	SPEED LIMIT - 35 MPH
12	R2-1 (30)	24"x30"	SPEED LIMIT - 30 MPH
13	W3-3	30"x30"	SIGNAL AHEAD
14	W16-8P	30"x8"	ADVANCED STREET NAME PLAQUE "Tapteal Dr"
15	R8-3	12"x12"	NO PARKING (SYMBOL)
16	W10-1	36" DIAM	AT GRADE CROSSING
17	W4-7	36"x36"	THRU TRAFFIC MERGE LEFT
18	R3-7bP	36"x8"	EXCEPT BICYCLES PLAQUE
19	R4-7	24"x30"	KEEP RIGHT
20	W10-12	36"x36"	SKEWED CROSSING
21			TOURIST DIRECTIONAL SIGN - HOLIDAY INN EXPRESS. EXISTING SIGN TO BE RELOCATED.
22	W8-15P	24"x18"	MOTORCYCLE (PLAQUE)
23	R15-1	48"x9"	GRADE CROSSING
24	R1-2	36"x36"	YIELD
25	R5-11	30"x24"	AUTHORIZED VEHICLES ONLY
26	R5-1	30"x30"	DO NOT ENTER

GENERAL NOTES:

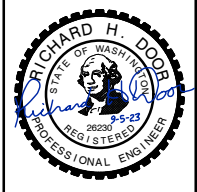
- ALL SIGNS, INCLUDING CHEVRONS, RELATED TO THE NORTHBOUND RIGHT-TURN DROP LANE SHALL REMAIN IN PLACE UNTIL THE DROP LANE CONDITION IS ELIMINATED. THE STOP SIGN SHALL BE MAINTAINED AT TAPTEAL AS NECESSARY. RAILROAD ADVANCE SIGNAGE SHALL ALSO BE MAINTAINED AS NECESSARY DURING CONSTRUCTION.
- SIGNS THAT ARE CLEARLY IN THE DEMOLITION ZONE AND NOT TO BE REPLACED, INCLUDING SOME IN THE ABOVE NOTE MAY NOT BE CALLED OUT ON THE PLANS.
- NO WORK WITHIN 25' OF RAILROAD WITHOUT TRACK SAFETY. COORDINATE WITH THE PORT OF BENTON.

LEGEND

- PROPOSED HOT MIX ASPHALT (HMA)
- PROPOSED CONCRETE
- TACTILE DIRECTIONAL INDICATOR (TDI)



Plot Date: 10/26/2023 11:10 AM, Plotted By: Mary H. Wilkins
 Date Created: 11/20/23, JUB-CONCENTRAL-CHEM-YOUNGASSETMANAGEMENTPROJECTS/07-21-030-STEPTOE/TAPTEAL/DESIGN/ASSETMANAGEMENT/07-21-030-PM-1.DWG



NO.	REVISION	DESCRIPTION	DATE

**STEPTOE AND TAPTEAL INTERSECTION
YOUNG ASSET MANAGEMENT**

PAVEMENT MARKINGS AND SIGNING PLAN
STA 8+00.00 TO STA 11+50.00

KEYED NOTES - MARKINGS

- (CL/DY) DOUBLE YELLOW CENTER LINE WITH 4" SEPARATION PER WSDOT STD PLAN M-20.10-04
- (EL/C) EDGE LINE WITH COLOR C (W=WHITE, Y=YELLOW) PER WSDOT STD PLAN M-20.10-04
- (TAL/T) TRAFFIC ARROW FOR LOW SPEED ROADWAYS PER WSDOT STD PLAN M-24.40-02 WHERE T=TYPE
- (DL/C#) 4" DOTTED LANE OR EXTENSION LINE WITH COLOR C (W=WHITE, Y=YELLOW) & SKIP PATTERN # (1=1' LINE AND 3' GAP, 2=2' LINE AND 6' GAP, 3=3' LINE AND 9' GAP) PER WSDOT STD PLAN M-20.10-04
- (DWL/C#) 8" DOTTED LANE OR EXTENSION LINE WITH COLOR C (W=WHITE, Y=YELLOW) & SKIP PATTERN # (1=1' LINE AND 3' GAP, 2=2' LINE AND 6' GAP, 3=3' LINE AND 9' GAP) PER WSDOT STD PLAN M-20.10-04
- (LL/W) LANE LINE PER WSDOT STD PLAN M-20.10-04
- (WL/C) 8" WIDE LANE LINE WITH COLOR C (W=WHITE, Y=YELLOW) PER WSDOT STD PLAN M-20.10-04
- (XW) CROSSWALK LINE (PLASTIC) PER WSDOT STD PLAN M-15.10-01
- (SB) STOP LINE PER WSDOT STD PLAN M-24.60-04
- (BL/A) BICYCLE LANE SYMBOL PER WSDOT STD PLAN M-9-50.02 WITH OPTIONAL ARROW A (0=NONE, 1=THRU, 2=RIGHT-TURN, 3=LEFT-TURN)
- (TW/Y) TWO-WAY LEFT-TURN CENTER LINE PER WSDOT STD PLAN M-20.10-04
- (YL) YIELD LINE SYMBOL (SHARKS TEETH) PER WSDOT STD PLAN M-24.60
- (GC) WHITE LAYOUT AT GRADE RAILROAD CROSSING SYMBOL PER WSDOT STD PLAN M-11.10-04
- (WT) 24 IN. WHITE TRANSVERSE LINE
- (CVM) CHEVRON CROSSHATCH MAKING AT 20' SPACING. 8" WIDE YELLOW PER STD PLAN M-24.60-04

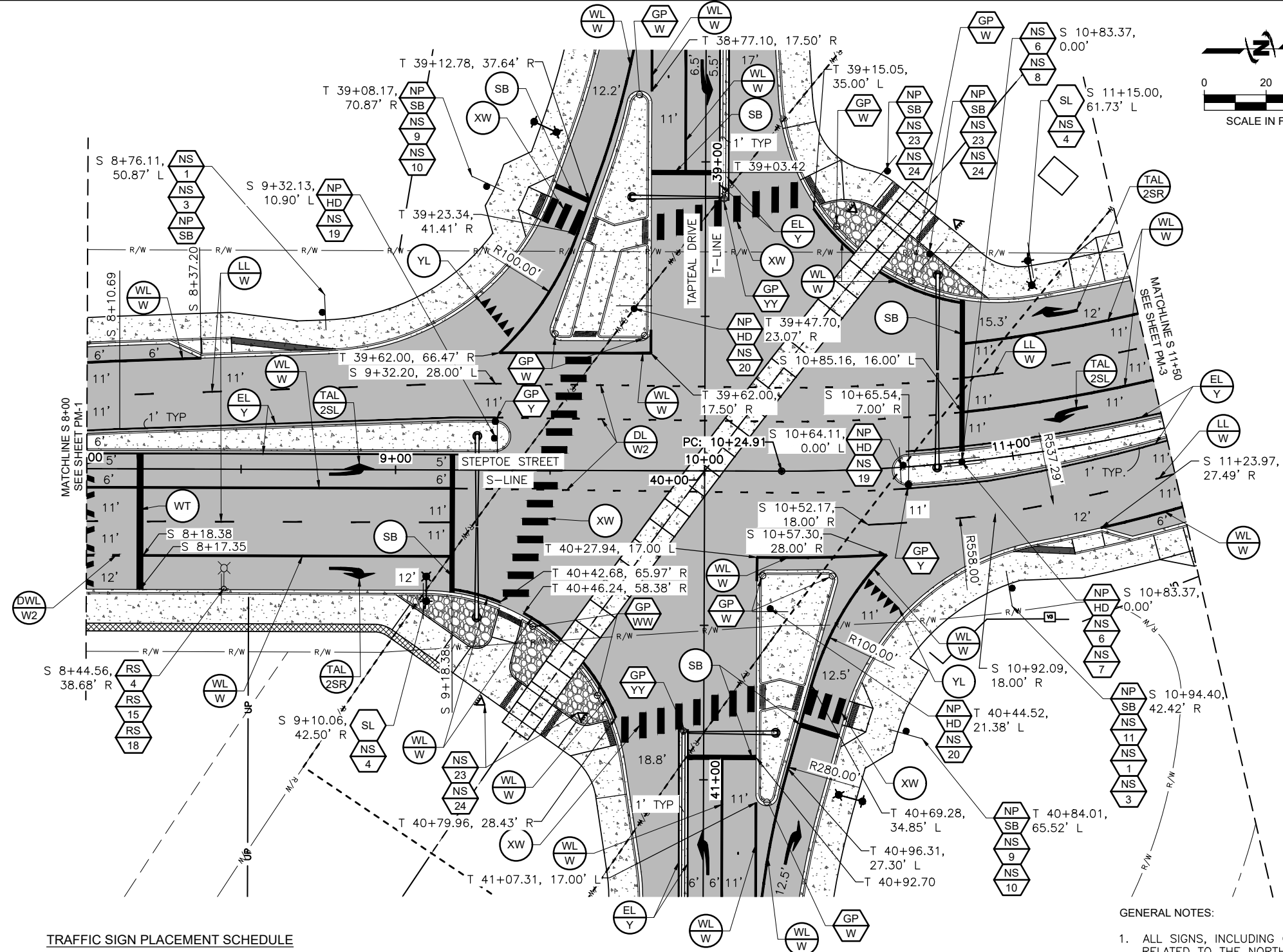
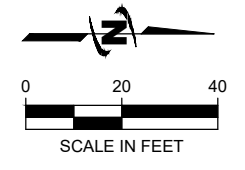
KEYED NOTES - SIGNING

- (NP/T) INSTALL NEW POST WITH BASE TYPE T (SB=STANDARD BASE, HD=HEAVY DUTY)
- (RP) REMOVE EXISTING SIGN POST AND BASE
- (SL) USE STREETLIGHT POLE AS SIGN MOUNT
- (NS/X) INSTALL NEW SIGN NO. X
- (PS/X) RETAIN AND PROTECT EXISTING SIGN NO. X. ADJUST AS REQUIRED
- (RS/X) REMOVE EXISTING SIGN NO. X
- (RI/X) REINSTALL/RELOCATE EXISTING SIGN NO. X TO POSITION SHOWN
- (GP/T) INSTALL FLEXIBLE GUIDE POST, SURFACE MOUNT WITH TYPE T REFLECTIVE SHEETING PER WSDOT STD PLAN M-40.10-03. (W=WHITE FACING TRAFFIC, WW=WHITE BOTH SIDES, Y=YELLOW FACING TRAFFIC, YY=YELLOW BOTH SIDES)



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LEGEND

- (Grey box) PROPOSED HOT MIX ASPHALT (HMA)
- (Dotted box) PROPOSED CONCRETE
- (Black line) TACTILE DIRECTIONAL INDICATOR (TDI)

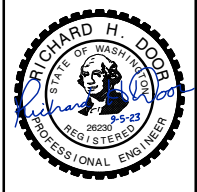
TRAFFIC SIGN PLACEMENT SCHEDULE

SIGN NO.	MUTCD DESCRIPTION	SIZE	DESCRIPTION
1	R3-17	24"x18"	BIKE LANE
2	R3-17bP	24"x8"	ENDS
3	R3-17aP	24"x8"	BEGINS
4	R3-7R	36"x36"	RIGHT LANE MUST TURN RIGHT
5	R9-6	12"x18"	BIKES YIELD TO PEDS
6	R9-3	18"x18"	NO PEDESTRIAN CROSSING
7	R9-3bL	18"x12"	USE CROSSWALK PLAQUE
8	R9-3bR	18"x12"	USE CROSSWALK PLAQUE
9	W11-2	30"x30"	PEDESTRIAN CROSSING
10	W16-7PL	24"x12"	DIAGONAL ARROW PLAQUE
11	R2-1 (35)	30"x36"	SPEED LIMIT - 35 MPH
12	R2-1 (30)	24"x30"	SPEED LIMIT - 30 MPH
13	W3-3	30"x30"	SIGNAL AHEAD
14	W16-8P	30"x8"	ADVANCED STREET NAME PLAQUE "Tapteal Dr"

TRAFFIC SIGN PLACEMENT SCHEDULE

SIGN NO.	MUTCD DESCRIPTION	SIZE	DESCRIPTION
15	R8-3	12"x12"	NO PARKING (SYMBOL)
16	W10-1	36" DIAM	AT GRADE CROSSING
17	W4-7	36"x36"	THRU TRAFFIC MERGE LEFT
18	R3-7bP	36"x8"	EXCEPT BICYCLES PLAQUE
19	R4-7	24"x30"	KEEP RIGHT
20	W10-12	36"x36"	SKewed CROSSING
21			TOURIST DIRECTIONAL SIGN - HOLIDAY INN EXPRESS. EXISTING SIGN TO BE RELOCATED.
22	W8-15P	24"x18"	MOTORCYCLE (PLAQUE)
23	R15-1	48"x9"	GRADE CROSSING
24	R1-2	36"x36"	YIELD
25	R5-11	30"x24"	AUTHORIZED VEHICLES ONLY
26	R5-1	30"x30"	DO NOT ENTER

Plot Date: 10/20/2023 11:14 AM, Plotted By: Mary H. Wilkinson
 Date Created: 9/5/2023, JUB: C:\MICROSOFT\CLIENTS\JUB\WORKSPACE\PROJECTS\07-21-030-STEPTOE\TAPTEAL\DESIGN\ASB\07-21-030-PM-2.DWG



NO.	REVISION	DESCRIPTION	BY	DATE

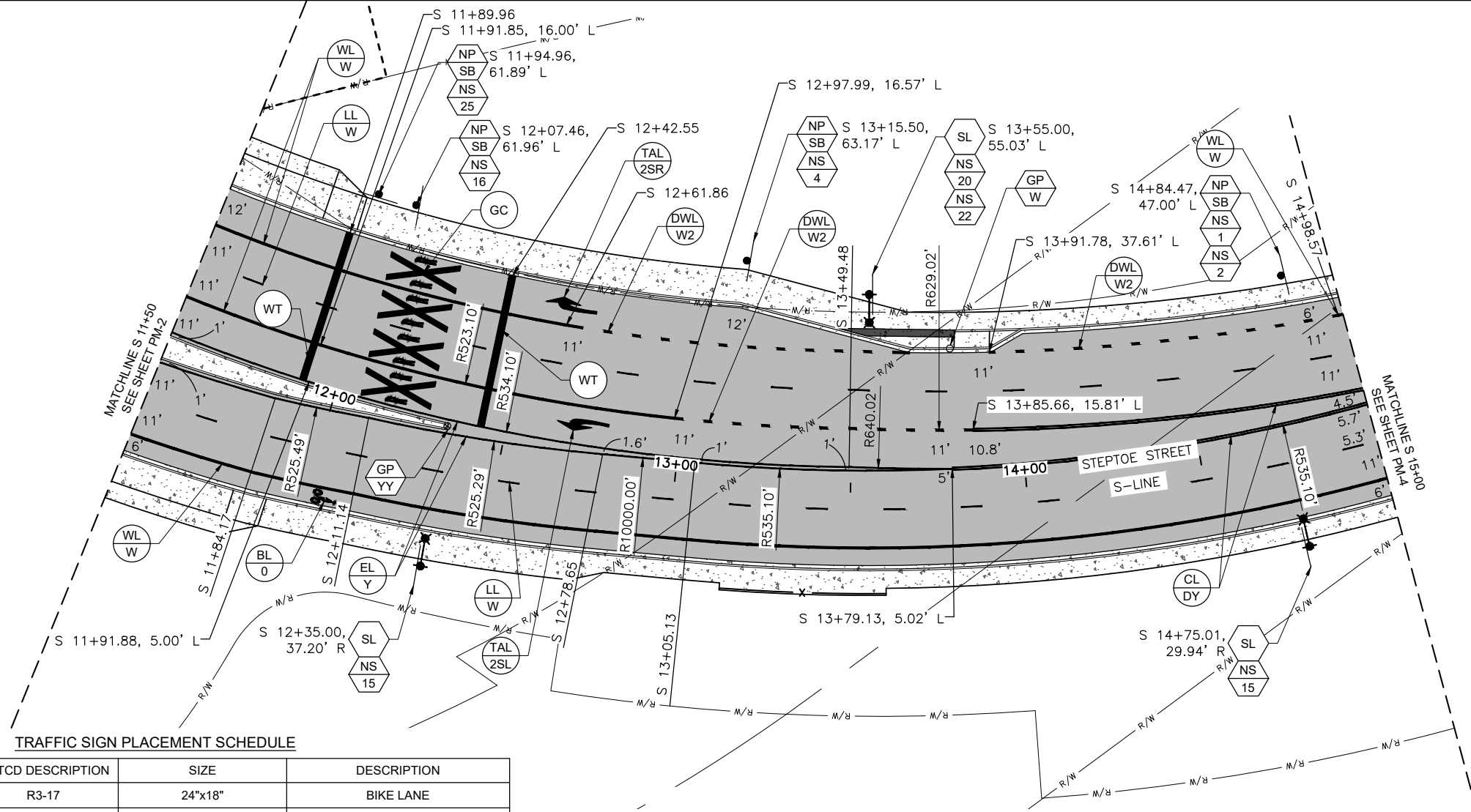
STEPTOE AND TAPTEAL INTERSECTION
YOUNG ASSET MANAGEMENT
PAVEMENT MARKINGS AND SIGNING PLAN
 STA 11+50.00 TO STA 15+00.00

KEYED NOTES - MARKINGS

- (CL/DY) DOUBLE YELLOW CENTER LINE WITH 4" SEPARATION PER WSDOT STD PLAN M-20.10-04
- (EL/C) EDGE LINE WITH COLOR C (W=WHITE, Y=YELLOW) PER WSDOT STD PLAN M-20.10-04
- (TAL/T) TRAFFIC ARROW FOR LOW SPEED ROADWAYS PER WSDOT STD PLAN M-24.40-02 WHERE T=TYPE
- (DL/C#) 4" DOTTED LANE OR EXTENSION LINE WITH COLOR C (W=WHITE, Y=YELLOW) & SKIP PATTERN # (1=1' LINE AND 3' GAP, 2=2' LINE AND 6' GAP, 3=3' LINE AND 9' GAP) PER WSDOT STD PLAN M-20.10-04
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- (WL/C) 8" WIDE LANE LINE WITH COLOR C (W=WHITE, Y=YELLOW) PER WSDOT STD PLAN M-20.10-04
- (XW) CROSSWALK LINE (PLASTIC) PER WSDOT STD PLAN M-15.10-01
- (SB) STOP LINE PER WSDOT STD PLAN M-24.60-04
- (BL/A) BICYCLE LANE SYMBOL PER WSDOT STD PLAN M-9-50.02 WITH OPTIONAL ARROW A (0=NONE, 1=THRU, 2=RIGHT-TURN, 3=LEFT-TURN)
- (TW/Y) TWO-WAY LEFT-TURN CENTER LINE PER WSDOT STD PLAN M-20.10-04
- (YL) YIELD LINE SYMBOL (SHARKS TEETH) PER WSDOT STD PLAN M-24.60
- (GC) WHITE LAYOUT AT GRADE RAILROAD CROSSING SYMBOL PER WSDOT STD PLAN M-11.10-04
- (WT) 24 IN. WHITE TRANSVERSE LINE
- (CVM) CHEVRON CROSSHATCH MAKING AT 20' SPACING. 8" WIDE YELLOW PER STD PLAN M-24.60-04

KEYED NOTES - SIGNING

- (NP/T) INSTALL NEW POST WITH BASE TYPE T (SB=STANDARD BASE, HD=HEAVY DUTY)
- (RP) REMOVE EXISTING SIGN POST AND BASE
- (SL) USE STREETLIGHT POLE AS SIGN MOUNT
- (NS/X) INSTALL NEW SIGN NO. X
- (PS/X) RETAIN AND PROTECT EXISTING SIGN NO. X. ADJUST AS REQUIRED
- (RS/X) REMOVE EXISTING SIGN NO. X
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- (GP/T) INSTALL FLEXIBLE GUIDE POST, SURFACE MOUNT WITH TYPE T REFLECTIVE SHEETING PER WSDOT STD PLAN M-40.10-03. (W=WHITE FACING TRAFFIC, WW=WHITE BOTH SIDES, Y=YELLOW FACING TRAFFIC, YY=YELLOW BOTH SIDES)



TRAFFIC SIGN PLACEMENT SCHEDULE

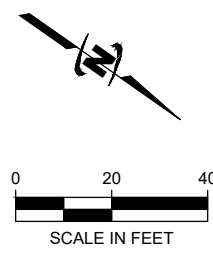
SIGN NO.	MUTCD DESCRIPTION	SIZE	DESCRIPTION
①	R3-17	24"x18"	BIKE LANE
②	R3-17bP	24"x8"	ENDS
③	R3-17aP	24"x8"	BEGINS
④	R3-7R	36"x36"	RIGHT LANE MUST TURN RIGHT
⑤	R9-6	12"x18"	BIKES YIELD TO PEDS
⑥	R9-3	18"x18"	NO PEDESTRIAN CROSSING
⑦	R9-3bL	18"x12"	USE CROSSWALK PLAQUE
⑧	R9-3bR	18"x12"	USE CROSSWALK PLAQUE
⑨	W11-2	30"x30"	PEDESTRIAN CROSSING
⑩	W16-7PL	24"x12"	DIAGONAL ARROW PLAQUE
⑪	R2-1 (35)	30"x36"	SPEED LIMIT - 35 MPH
⑫	R2-1 (30)	24"x30"	SPEED LIMIT - 30 MPH
⑬	W3-3	30"x30"	SIGNAL AHEAD
⑭	W16-8P	30"x8"	ADVANCED STREET NAME PLAQUE "Tapteal Dr"
⑮	R8-3	12"x12"	NO PARKING (SYMBOL)
⑯	W10-1	36" DIAM	AT GRADE CROSSING
⑰	W4-7	36"x36"	THRU TRAFFIC MERGE LEFT
⑱	R3-7bP	36"x8"	EXCEPT BICYCLES PLAQUE
⑲	R4-7	24"x30"	KEEP RIGHT
⑳	W10-12	36"x36"	SKEWED CROSSING
㉑			TOURIST DIRECTIONAL SIGN - HOLIDAY INN EXPRESS. EXISTING SIGN TO BE RELOCATED.
㉒	W8-15P	24"x18"	MOTORCYCLE (PLAQUE)
㉓	R15-1	48"x9"	GRADE CROSSING
㉔	R1-2	36"x36"	YIELD
㉕	R5-11	30"x24"	AUTHORIZED VEHICLES ONLY
㉖	R5-1	30"x30"	DO NOT ENTER

GENERAL NOTES:

- ALL SIGNS, INCLUDING CHEVRONS, RELATED TO THE NORTHBOUND RIGHT-TURN DROP LANE SHALL REMAIN IN PLACE UNTIL THE DROP LANE CONDITION IS ELIMINATED. THE STOP SIGN SHALL BE MAINTAINED AT TAPTEAL AS NECESSARY. RAILROAD ADVANCE SIGNAGE SHALL ALSO BE MAINTAINED AS NECESSARY DURING CONSTRUCTION.
- SIGNS THAT ARE CLEARLY IN THE DEMOLITION ZONE AND NOT TO BE REPLACED, INCLUDING SOME IN THE ABOVE NOTE MAY NOT BE CALLED OUT ON THE PLANS.
- NO WORK WITHIN 25' OF RAILROAD WITHOUT TRACK SAFETY. COORDINATE WITH THE PORT OF BENTON.

LEGEND

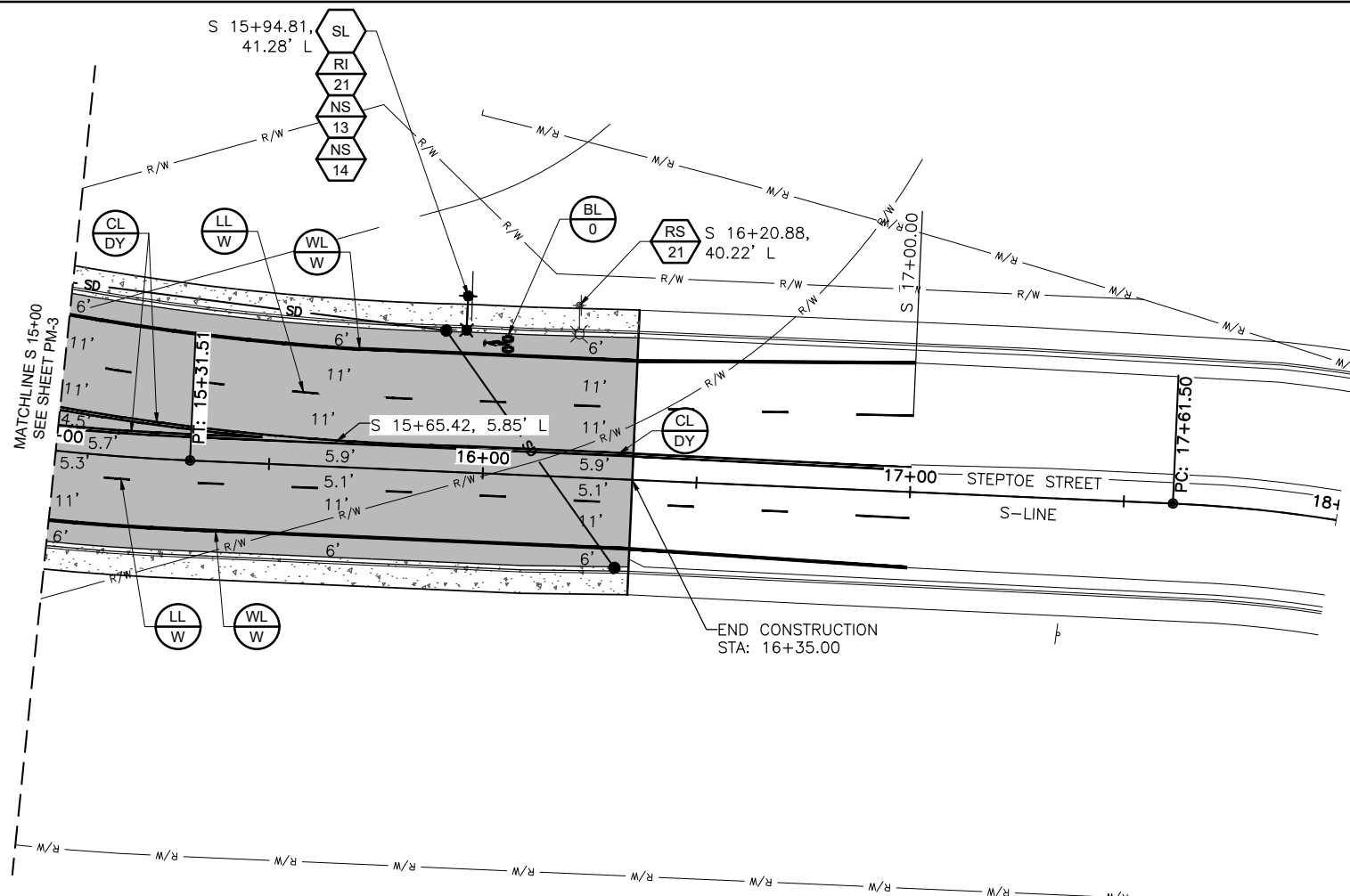
- PROPOSED HOT MIX ASPHALT (HMA)
- PROPOSED CONCRETE
- TACTILE DIRECTIONAL INDICATOR (TDI)



Know what's below.
Call before you dig.

CALL 2 BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES

Plot Date: 10/26/2023 11:14 AM, Plotted By: Mary H. Wilkinson
 Date Created: 7/26/2022, JUB.COM\CENTRAL\CAD\CLIENTS\WALYOUNG\ASSETMANAGEMENT\PROJECTS\07-21-030 - STEPTOE/TAPTEAL DESIGN\CAUS\PROJECTSHEET\07-21-030 - PM-3.DWG



TRAFFIC SIGN PLACEMENT SCHEDULE

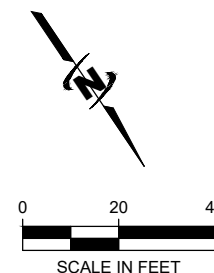
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⑦	R9-3bL	18"x12"	USE CROSSWALK PLAQUE
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LEGEND

- PROPOSED HOT MIX ASPHALT (HMA)
- PROPOSED CONCRETE
- TACTILE DIRECTIONAL INDICATOR (TDI)



KEYED NOTES - MARKINGS

- DOUBLE YELLOW CENTER LINE WITH 4" SEPARATION PER WSDOT STD PLAN M-20.10-04
- EDGE LINE WITH COLOR C (W=WHITE, Y=YELLOW) PER WSDOT STD PLAN M-20.10-04
- TRAFFIC ARROW FOR LOW SPEED ROADWAYS PER WSDOT STD PLAN M-24.40-02 WHERE T=TYPE
- 4" DOTTED LANE OR EXTENSION LINE WITH COLOR C (W=WHITE, Y=YELLOW) & SKIP PATTERN # (1=1' LINE AND 3' GAP, 2=2' LINE AND 6' GAP, 3=3' LINE AND 9' GAP) PER WSDOT STD PLAN M-20.10-04
- 8" DOTTED LANE OR EXTENSION LINE WITH COLOR C (W=WHITE, Y=YELLOW) & SKIP PATTERN # (1=1' LINE AND 3' GAP, 2=2' LINE AND 6' GAP, 3=3' LINE AND 9' GAP) PER WSDOT STD PLAN M-20.10-04
- LANE LINE PER WSDOT STD PLAN M-20.10-04
- 8" WIDE LANE LINE WITH COLOR C (W=WHITE, Y=YELLOW) PER WSDOT STD PLAN M-20.10-04
- CROSSWALK LINE (PLASTIC) PER WSDOT STD PLAN M-15.10-01
- STOP LINE PER WSDOT STD PLAN M-24.60-04
- BICYCLE LANE SYMBOL PER WSDOT STD PLAN M-9-50.02 WITH OPTIONAL ARROW A (0=NONE, 1=THRU, 2=RIGHT-TURN, 3=LEFT-TURN)
- TWO-WAY LEFT-TURN CENTER LINE PER WSDOT STD PLAN M-20.10-04
- YIELD LINE SYMBOL (SHARKS TEETH) PER WSDOT STD PLAN M-24.60
- WHITE LAYOUT AT GRADE RAILROAD CROSSING SYMBOL PER WSDOT STD PLAN M-11.10-04
- 24 IN. WHITE TRANSVERSE LINE
- CHEVRON CROSSHATCH MAKING AT 20' SPACING. 8" WIDE YELLOW PER STD PLAN M-24.60-04

KEYED NOTES - SIGNING

- INSTALL NEW POST WITH BASE TYPE T (SB=STANDARD BASE, HD=HEAVY DUTY)
- REMOVE EXISTING SIGN POST AND BASE
- USE STREETLIGHT POLE AS SIGN MOUNT
- INSTALL NEW SIGN NO. X
- RETAIN AND PROTECT EXISTING SIGN NO. X. ADJUST AS REQUIRED
- REMOVE EXISTING SIGN NO. X
- REINSTALL/RELOCATE EXISTING SIGN NO. X TO POSITION SHOWN
- INSTALL FLEXIBLE GUIDE POST, SURFACE MOUNT WITH TYPE T REFLECTIVE SHEETING PER WSDOT STD PLAN M-40.10-03. (W=WHITE FACING TRAFFIC, WW=WHITE BOTH SIDES, Y=YELLOW FACING TRAFFIC, YY=YELLOW BOTH SIDES)



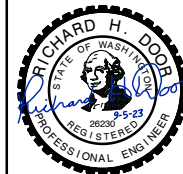
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J-U-B ENGINEERS, INC.

3611 S. Zintel Way
Kennewick, WA 99337
Phone: 509.783.2144
www.jub.com



NO.	REVISION	DESCRIPTION	BY	DATE

STEPTOE AND TAPTEAL INTERSECTION
YOUNG ASSET MANAGEMENT

PAVEMENT MARKINGS AND SIGNING PLAN
STA 15+00.00 TO STA 18+00.00

FILE: 07-21-030-PM-4
JUB PROJ. #: 07-21-030
DRAWN BY: WG
DESIGN BY: WG
CHECKED BY: RD
AT FULL SIZE, IF NOT ONE INCH, SCALE ACCORDINGLY
LAST UPDATED: 9/5/2023
SHEET NUMBER:
PM-4

NO.	REVISION	DESCRIPTION	BY	DATE

STEPTOE AND TAPTEAL INTERSECTION
YOUNG ASSET MANAGEMENT

PAVEMENT MARKINGS AND SIGNING PLAN
STA 36+00.00 TO STA 38+50.00

FILE: 07-21-030-PM-5
JUB PROJ. #: 07-21-030
DRAWN BY: WG
DESIGN BY: WG
CHECKED BY: RD

AT FULL SIZE, IF NOT ONE INCH, SCALE ACCORDINGLY
LAST UPDATED: 9/5/2023

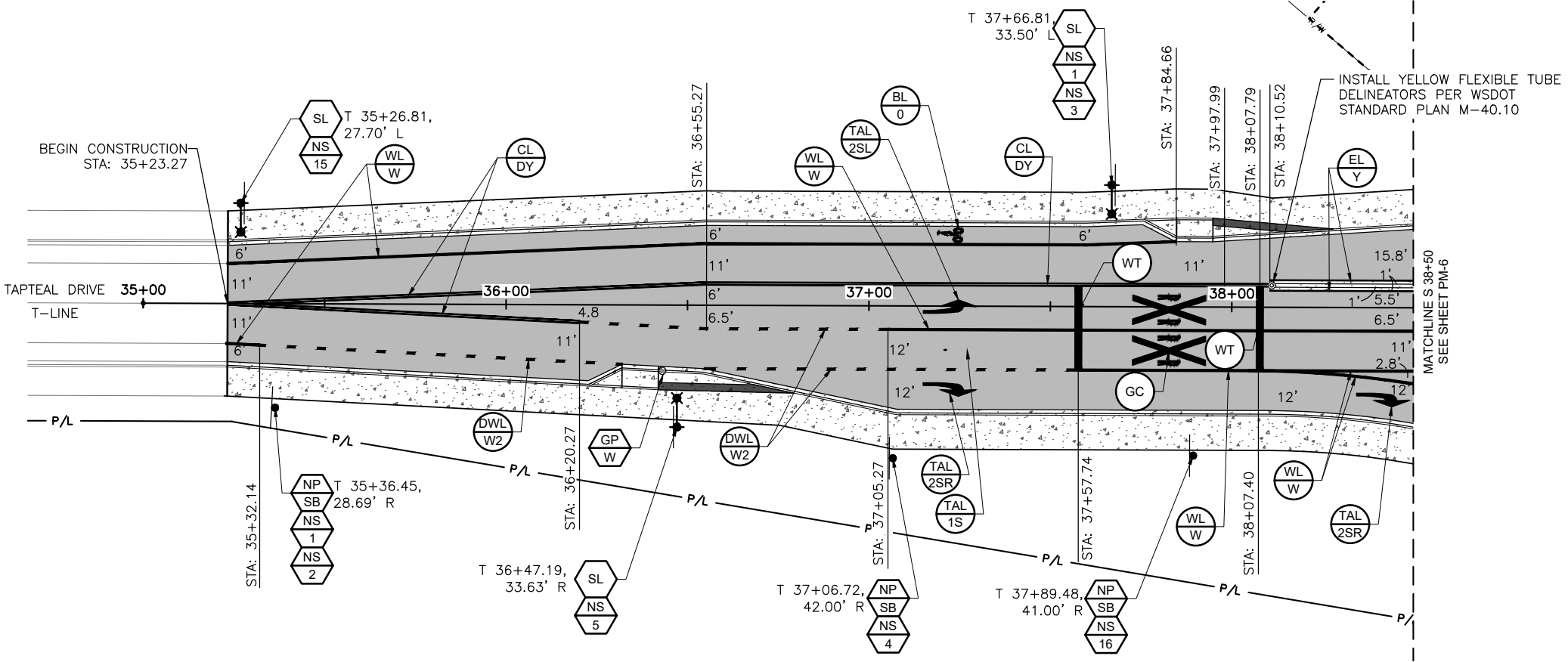
SHEET NUMBER:
PM-5

KEYED NOTES - MARKINGS

- (CL/DY) DOUBLE YELLOW CENTER LINE WITH 4" SEPARATION PER WSDOT STD PLAN M-20.10-04
- (EL/C) EDGE LINE WITH COLOR C (W=WHITE, Y=YELLOW) PER WSDOT STD PLAN M-20.10-04
- (TAL/T) TRAFFIC ARROW FOR LOW SPEED ROADWAYS PER WSDOT STD PLAN M-24.40-02 WHERE T=TYPE
- (DL/C#) 4" DOTTED LANE OR EXTENSION LINE WITH COLOR C (W=WHITE, Y=YELLOW) & SKIP PATTERN # (1=1' LINE AND 3' GAP, 2=2' LINE AND 6' GAP, 3=3' LINE AND 9' GAP) PER WSDOT STD PLAN M-20.10-04
- (DWL/C#) 8" DOTTED LANE OR EXTENSION LINE WITH COLOR C (W=WHITE, Y=YELLOW) & SKIP PATTERN # (1=1' LINE AND 3' GAP, 2=2' LINE AND 6' GAP, 3=3' LINE AND 9' GAP) PER WSDOT STD PLAN M-20.10-04
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- (XW) CROSSWALK LINE (PLASTIC) PER WSDOT STD PLAN M-15.10-01
- (SB) STOP LINE PER WSDOT STD PLAN M-24.60-04
- (BL/A) BICYCLE LANE SYMBOL PER WSDOT STD PLAN M-9-50.02 WITH OPTIONAL ARROW A (0=NONE, 1=THRU, 2=RIGHT-TURN, 3=LEFT-TURN)
- (TW/Y) TWO-WAY LEFT-TURN CENTER LINE PER WSDOT STD PLAN M-20.10-04
- (YL) YIELD LINE SYMBOL (SHARKS TEETH) PER WSDOT STD PLAN M-24.60
- (GC) WHITE LAYOUT AT GRADE RAILROAD CROSSING SYMBOL PER WSDOT STD PLAN M-11.10-04
- (WT) 24 IN. WHITE TRANSVERSE LINE
- (CVM) CHEVRON CROSSHATCH MAKING AT 20' SPACING. 8" WIDE YELLOW PER STD PLAN M-24.60-04

KEYED NOTES - SIGNING

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TRAFFIC SIGN PLACEMENT SCHEDULE

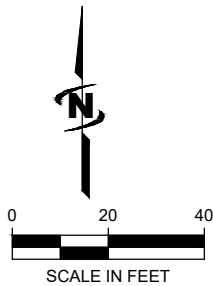
SIGN NO.	MUTCD DESCRIPTION	SIZE	DESCRIPTION
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②	R3-17bP	24"x8"	ENDS
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⑦	R9-3bL	18"x12"	USE CROSSWALK PLAQUE
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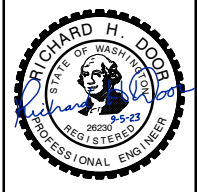
LEGEND

	PROPOSED HOT MIX ASPHALT (HMA)
	PROPOSED CONCRETE
	TACTILE DIRECTIONAL INDICATOR (TDI)



Know what's below.
Call 811 before you dig.

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NO.	REVISION	DESCRIPTION	BY	DATE

**STEPTOE AND TAPTEAL INTERSECTION
 YOUNG ASSET MANAGEMENT**

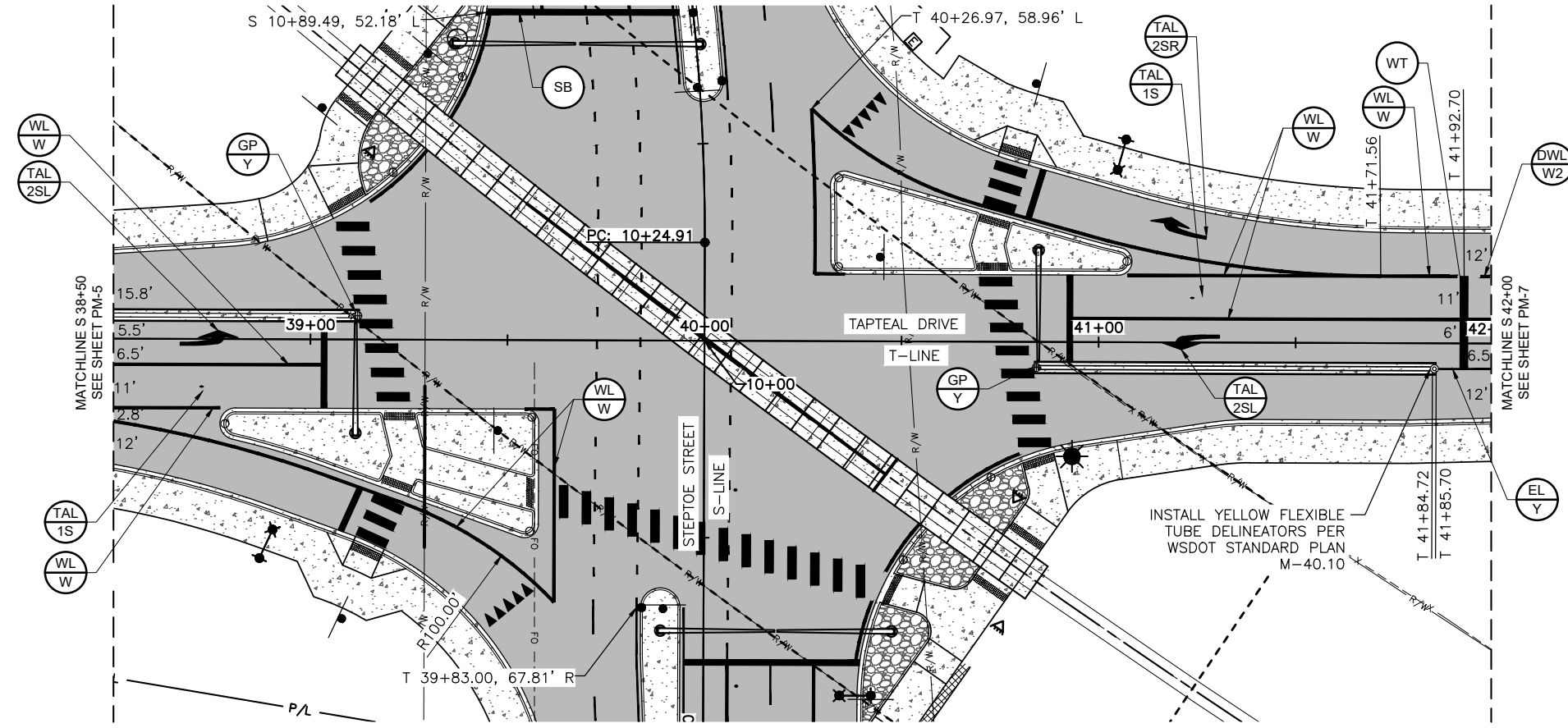
**PAVEMENT MARKINGS AND SIGNING PLAN
 STA 38+ 50.00 TO STA 42+ 00.00**

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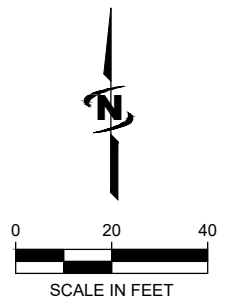
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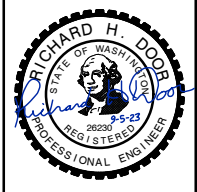
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Plot Date: 10/26/2023 11:15 AM, Plotted By: Mary H. Wilkinson
 Date Created: 07/28/23, JUB: C:\ENGINEERING\PROJECTS\07-21-030-STEPTOE/TAPTEAL\DESIGN\CAUS\07-21-030-PM-6.DWG



NO.	REVISION	DESCRIPTION	DATE

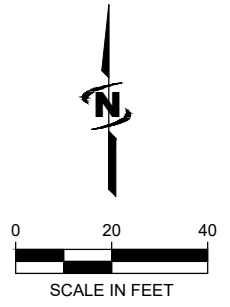
STEPTOE AND TAPTEAL INTERSECTION
YOUNG ASSET MANAGEMENT
 PAVEMENT MARKINGS AND SIGNING PLAN
 STA 42+00.00 TO STA 45+50.00

KEYED NOTES - MARKINGS

- (CL/DY) DOUBLE YELLOW CENTER LINE WITH 4" SEPARATION PER WSDOT STD PLAN M-20.10-04
- (EL/C) EDGE LINE WITH COLOR C (W=WHITE, Y=YELLOW) PER WSDOT STD PLAN M-20.10-04
- (TAL/T) TRAFFIC ARROW FOR LOW SPEED ROADWAYS PER WSDOT STD PLAN M-24.40-02 WHERE T=TYPE
- (DL/C#) 4" DOTTED LANE OR EXTENSION LINE WITH COLOR C (W=WHITE, Y=YELLOW) & SKIP PATTERN # (1=1' LINE AND 3' GAP, 2=2' LINE AND 6' GAP, 3=3' LINE AND 9' GAP) PER WSDOT STD PLAN M-20.10-04
- (DWL/C#) 8" DOTTED LANE OR EXTENSION LINE WITH COLOR C (W=WHITE, Y=YELLOW) & SKIP PATTERN # (1=1' LINE AND 3' GAP, 2=2' LINE AND 6' GAP, 3=3' LINE AND 9' GAP) PER WSDOT STD PLAN M-20.10-04
- (LL/W) LANE LINE PER WSDOT STD PLAN M-20.10-04
- (WL/C) 8" WIDE LANE LINE WITH COLOR C (W=WHITE, Y=YELLOW) PER WSDOT STD PLAN M-20.10-04
- (XW) CROSSWALK LINE (PLASTIC) PER WSDOT STD PLAN M-15.10-01
- (SB) STOP LINE PER WSDOT STD PLAN M-24.60-04
- (BL/A) BICYCLE LANE SYMBOL PER WSDOT STD PLAN M-9-50.02 WITH OPTIONAL ARROW A (0=NONE, 1=THRU, 2=RIGHT-TURN, 3=LEFT-TURN)
- (TW/Y) TWO-WAY LEFT-TURN CENTER LINE PER WSDOT STD PLAN M-20.10-04
- (YL) YIELD LINE SYMBOL (SHARKS TEETH) PER WSDOT STD PLAN M-24.60
- (GC) WHITE LAYOUT AT GRADE RAILROAD CROSSING SYMBOL PER WSDOT STD PLAN M-11.10-04
- (WT) 24 IN. WHITE TRANSVERSE LINE
- (CVM) CHEVRON CROSSHATCH MAKING AT 20' SPACING. 8" WIDE YELLOW PER STD PLAN M-24.60-04

KEYED NOTES - SIGNING

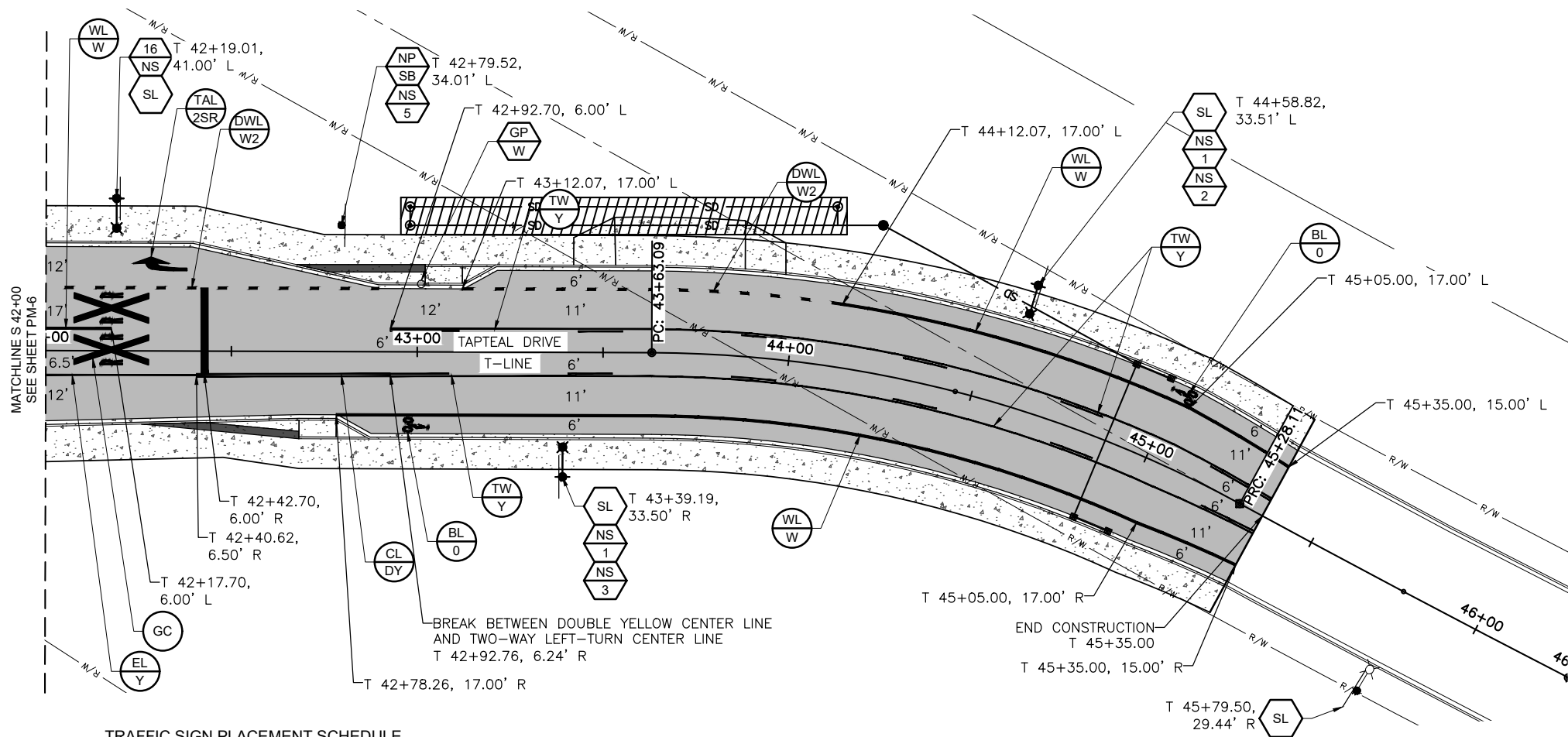
- (NP/T) INSTALL NEW POST WITH BASE TYPE T (SB=STANDARD BASE, HD=HEAVY DUTY)
- (RP) REMOVE EXISTING SIGN POST AND BASE
- (SL) USE STREETLIGHT POLE AS SIGN MOUNT
- (NS/X) INSTALL NEW SIGN NO. X
- (PS/X) RETAIN AND PROTECT EXISTING SIGN NO. X. ADJUST AS REQUIRED
- (RS/X) REMOVE EXISTING SIGN NO. X
- (RI/X) REINSTALL/RELOCATE EXISTING SIGN NO. X TO POSITION SHOWN
- (GP/T) INSTALL FLEXIBLE GUIDE POST, SURFACE MOUNT WITH TYPE T REFLECTIVE SHEETING PER WSDOT STD PLAN M-40.10-03. (W=WHITE FACING TRAFFIC, WW=WHITE BOTH SIDES, Y=YELLOW FACING TRAFFIC, YY=YELLOW BOTH SIDES)



LEGEND

	PROPOSED HOT MIX ASPHALT (HMA)
	PROPOSED CONCRETE
	TACTILE DIRECTIONAL INDICATOR (TDI)

- GENERAL NOTES:**
- ALL SIGNS, INCLUDING CHEVRONS, RELATED TO THE NORTHBOUND RIGHT-TURN DROP LANE SHALL REMAIN IN PLACE UNTIL THE DROP LANE CONDITION IS ELIMINATED. THE STOP SIGN SHALL BE MAINTAINED AT TAPTEAL AS NECESSARY. RAILROAD ADVANCE SIGNAGE SHALL ALSO BE MAINTAINED AS NECESSARY DURING CONSTRUCTION.
 - SIGNS THAT ARE CLEARLY IN THE DEMOLITION ZONE AND NOT TO BE REPLACED, INCLUDING SOME IN THE ABOVE NOTE MAY NOT BE CALLED OUT ON THE PLANS.
 - NO WORK WITHIN 25' OF RAILROAD WITHOUT TRACK SAFETY. COORDINATE WITH THE PORT OF BENTON.



TRAFFIC SIGN PLACEMENT SCHEDULE

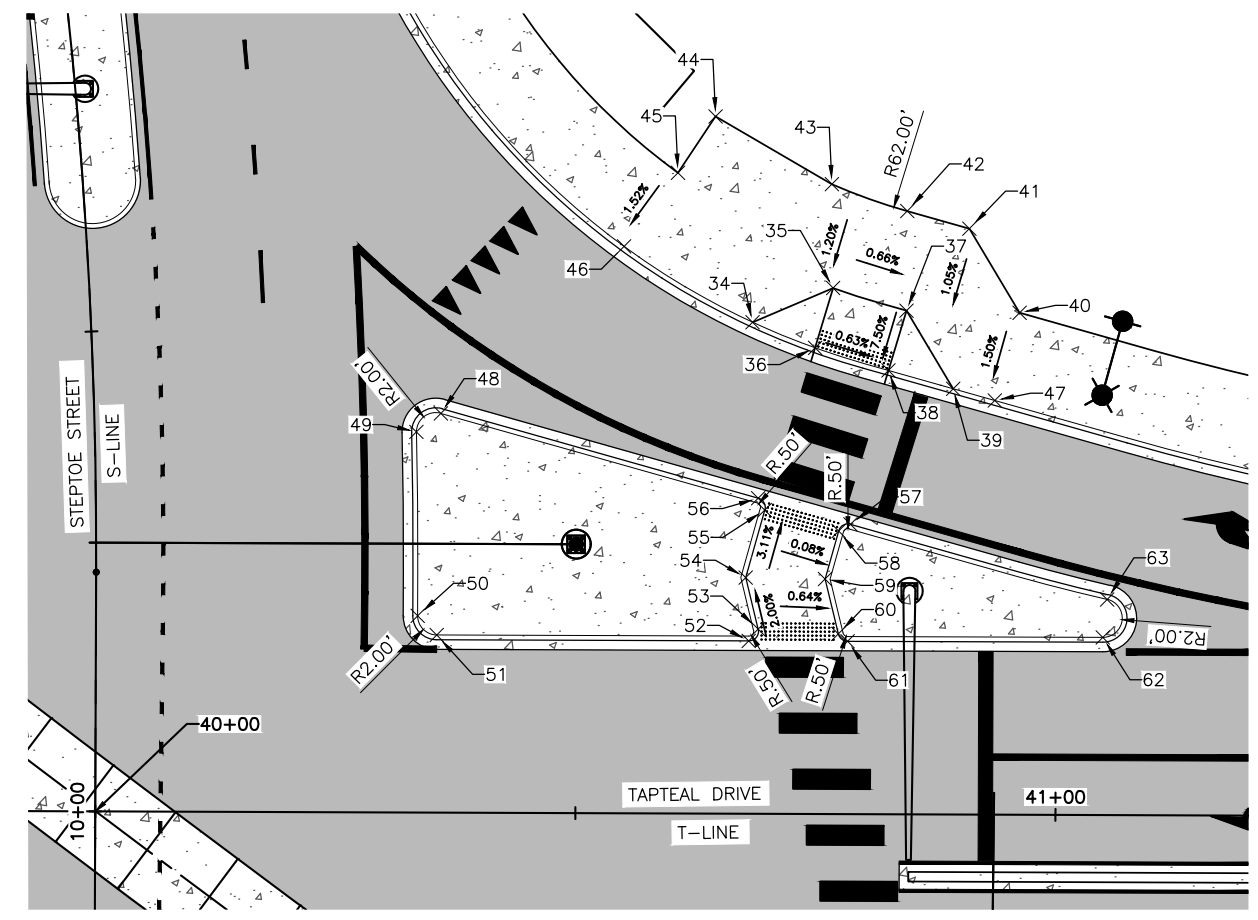
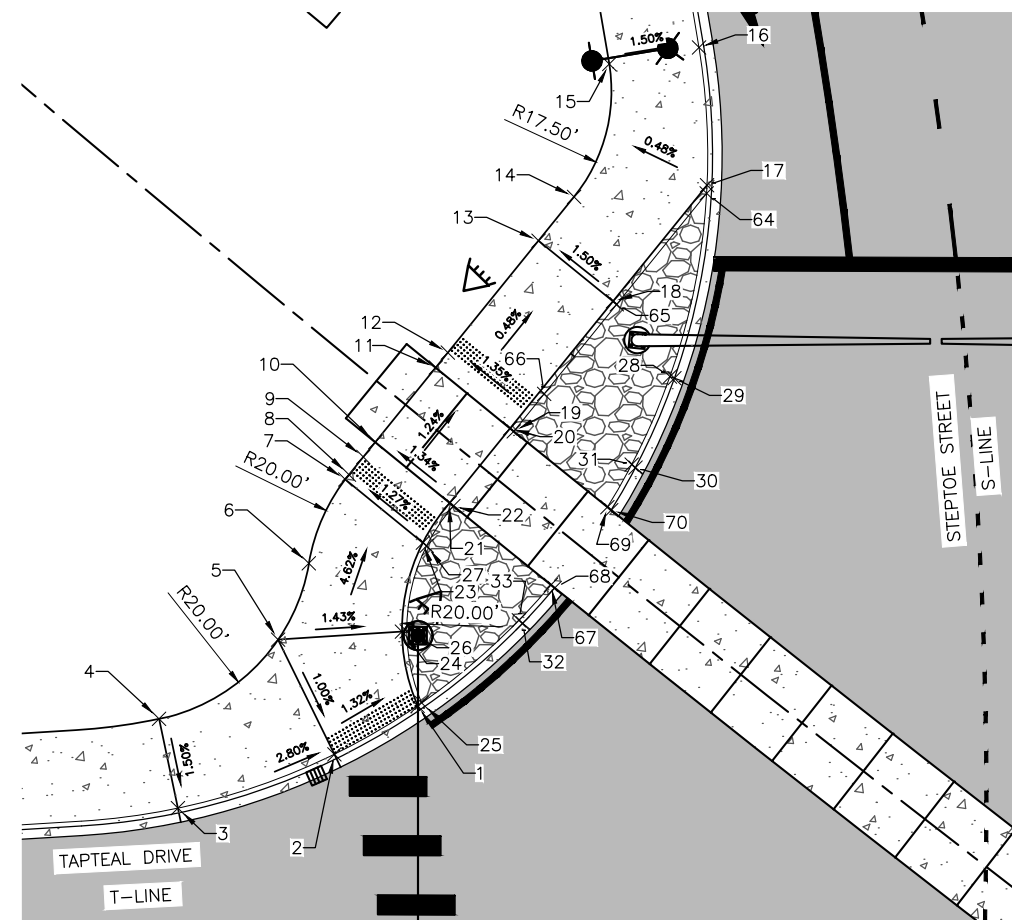
SIGN NO.	MUTCD DESCRIPTION	SIZE	DESCRIPTION
①	R3-17	24"x18"	BIKE LANE
②	R3-17bP	24"x8"	ENDS
③	R3-17aP	24"x8"	BEGINS
④	R3-7R	36"x36"	RIGHT LANE MUST TURN RIGHT
⑤	R9-6	12"x18"	BIKES YIELD TO PEDS
⑥	R9-3	18"x18"	NO PEDESTRIAN CROSSING
⑦	R9-3bL	18"x12"	USE CROSSWALK PLAQUE
⑧	R9-3bR	18"x12"	USE CROSSWALK PLAQUE
⑨	W11-2	30"x30"	PEDESTRIAN CROSSING
⑩	W16-7PL	24"x12"	DIAGONAL ARROW PLAQUE
⑪	R2-1 (35)	30"x36"	SPEED LIMIT - 35 MPH
⑫	R2-1 (30)	24"x30"	SPEED LIMIT - 30 MPH
⑬	W3-3	30"x30"	SIGNAL AHEAD
⑭	W16-8P	30"x8"	ADVANCED STREET NAME PLAQUE "Tapteal Dr"
⑮	R8-3	12"x12"	NO PARKING (SYMBOL)
⑯	W10-1	36" DIAM	AT GRADE CROSSING
⑰	W4-7	36"x36"	THRU TRAFFIC MERGE LEFT
⑱	R3-7bP	36"x8"	EXCEPT BICYCLES PLAQUE
⑲	R4-7	24"x30"	KEEP RIGHT
⑳	W10-12	36"x36"	SKEWED CROSSING
㉑			TOURIST DIRECTIONAL SIGN - HOLIDAY INN EXPRESS. EXISTING SIGN TO BE RELOCATED.
㉒	W8-15P	24"x18"	MOTORCYCLE (PLAQUE)
㉓	R15-1	48"x9"	GRADE CROSSING
㉔	R1-2	36"x36"	YIELD
㉕	R5-11	30"x24"	AUTHORIZED VEHICLES ONLY
㉖	R5-1	30"x30"	DO NOT ENTER

Plot Date: 10/20/2023 11:16 AM, Plotted By: Mary H. Wilkinson
 Date Created: 04/20/23, JUB: C:\MICHAEL\CLIENTS\WALYOUNG\ASSETMANAGEMENT\PROJECTS\07-21-030- STEPTOE/TAPTEAL\DESIGN\CADD\SHEET\07-21-030-PM-7.DWG



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NO.	REVISION	DESCRIPTION	BY	DATE



CURB RAMP DATA				
POINT #	STATION / REFERENCE			ELEVATION
1	T 39+13.72,	37.09' L	BFC	414.63
2	T 39+05.06,	32.00' L	TBC	414.76
3	T 38+88.78,	26.34' L	TBC	415.29
4	T 38+86.79,	35.63' L	BSW	415.43
5	T 38+99.15,	43.94' L	BSW	414.90
6	T 39+02.33,	51.89' L	BSW	414.52
7	T 39+06.09,	60.64' L	BSW	414.10
8	T 39+06.47,	61.14' L	BSW	414.09
9	T 39+07.96,	62.99' L	BSW	414.06
10	T 39+09.21,	64.55' L	BSW	414.03
11	S 10+80.95,	82.05' L	BSW	413.90
12	S 10+82.61,	80.64' L	BSW	413.89
13	S 10+94.80,	69.93' L	BSW	413.82
14	S 10+99.43,	65.68' L	BSW	413.52
15	S 11+14.31,	60.00' L	BSW	412.73
16	S 11+14.52,	50.50' L	TBC	412.57
17	S 10+98.72,	51.78' L	TBC	413.19
18	S 10+86.62,	62.98' L	BSW	413.97
19	S 10+72.72,	74.94' L	TBC	414.04
20	S 10+72.31,	74.58' L	BSW	414.04

CURB RAMP DATA				
POINT #	STATION / REFERENCE			ELEVATION
21	T 39+16.96,	58.23' L	BSW	414.16
22	T 39+17.37,	57.91' L	TBC	414.17
23	T 39+14.19,	54.08' L	BFC	414.24
24	T 39+12.05,	44.81' L	BFC	414.70
25	T 39+14.13,	37.40' L	TBC	415.11
26	T 39+12.55,	44.85' L	TBC	415.20
27	T 39+14.59,	53.76' L	TBC	414.24
28	S 10+77.15,	57.88' L	TBC	414.06
29	S 10+76.92,	57.42' L	TFC	413.56
30	S 10+66.86,	62.24' L	TFC	414.00
31	S 10+67.25,	62.62' L	TBC	414.03
32	T 39+24.62,	45.72' L	TFC	414.42
33	T 39+24.23,	46.03' L	TBC	414.45
64	T 39+43.62,	90.58' L	TFC	413.20
65	T 39+34.30,	78.99' L	TFC	414.47
66	T 39+26.78,	69.63' L	TFC	414.02
67	T 39+27.55,	49.73' L	TBC	414.34
68	T 39+27.94,	49.42' L	TFC	414.05
69	S 10+62.44,	65.45' L	TBC	414.21
70	S 10+62.05,	65.08' L	TFC	414.22

CURB RAMP DATA				
POINT #	STATION / REFERENCE			ELEVATION
34	T 40+68.27,	51.19' L	TBC	414.57
35	T 40+76.65,	54.79' L	TBR	414.55
36	T 40+74.79,	48.55' L	TBC	414.06
37	T 40+84.30,	52.46' L	TBR	414.49
38	T 40+82.45,	46.22' L	TBC	414.00
39	T 40+89.19,	44.34' L	TBC	414.42
40	T 40+96.08,	52.28' L	BSW	414.53
41	T 40+90.82,	61.02' L	BSW	414.60
42	T 40+84.34,	62.83' L	BSW	414.64
43	T 40+76.48,	65.60' L	BSW	414.69
44	T 40+64.34,	72.61' L	BSW	414.90
45	T 40+60.44,	66.72' L	BSW	414.81
46	T 40+54.86,	59.04' L	TBC	414.67
47	T 40+93.53,	43.13' L	TBC	414.39
48	T 40+35.84,	41.58' L	TBC	415.00
49	T 40+33.31,	39.65' L	TBC	415.04
50	T 40+33.50,	20.49' L	TBC	415.52

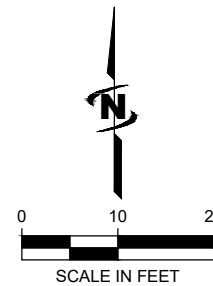
CURB RAMP DATA				
POINT #	STATION / REFERENCE			ELEVATION
51	T 40+35.50,	18.50' L	TBC	415.59
52	T 40+68.00,	18.00' L	TBC	414.84
53	T 40+68.97,	19.24' L	TBC	414.81
54	T 40+67.65,	24.60' L	TBC	414.70
55	T 40+69.61,	31.64' L	TBC	414.47
56	T 40+68.92,	32.87' L	TBC	414.45
57	T 40+78.55,	30.18' L	TBC	414.44
58	T 40+77.32,	29.49' L	TBC	414.45
59	T 40+75.91,	24.46' L	TBC	414.57
60	T 40+77.32,	18.76' L	TBC	414.75
61	T 40+78.29,	18.00' L	TBC	414.76
62	T 41+04.86,	18.50' L	TBC	415.06
63	T 41+05.31,	22.45' L	TBC	414.87

NOTES:

- ALL TBC ELEVATIONS ARE ADJUSTED FOR RAMPS
 - TDI SHALL BE 2' WIDTH WITH LINEAR TYPE TEXTURE PER CITY OF RICHLAND APPROVED MATERIAL LIST
- TBC - TOP BACK CURB
 - TFC - TOP FACE CURB
 - TBR - TOP BACK RAMP
 - TBS - TOP SIDEWALK
 - BSW - BACK SIDEWALK
 - BDW - BACK DRIVEWAY
 - BFC - BOTTOM FACE CURB
 - DETECTABLE WARNING PAD
 - TACTILE DIRECTIONAL INDICATOR (TDI)

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Plot Date: 10/20/2023 11:16 AM, Plotted By: Mary H. Wilkins
 Date Created: 10/16/2023 JUB: G:\CENTRAL\Clients\SWA\Young\ASSETMANAGEMENT\PROJECTS\07-21-030 - STEPTOE/TAPTEAL DESIGN\SHEET\07-21-030 - PD-1.DWG

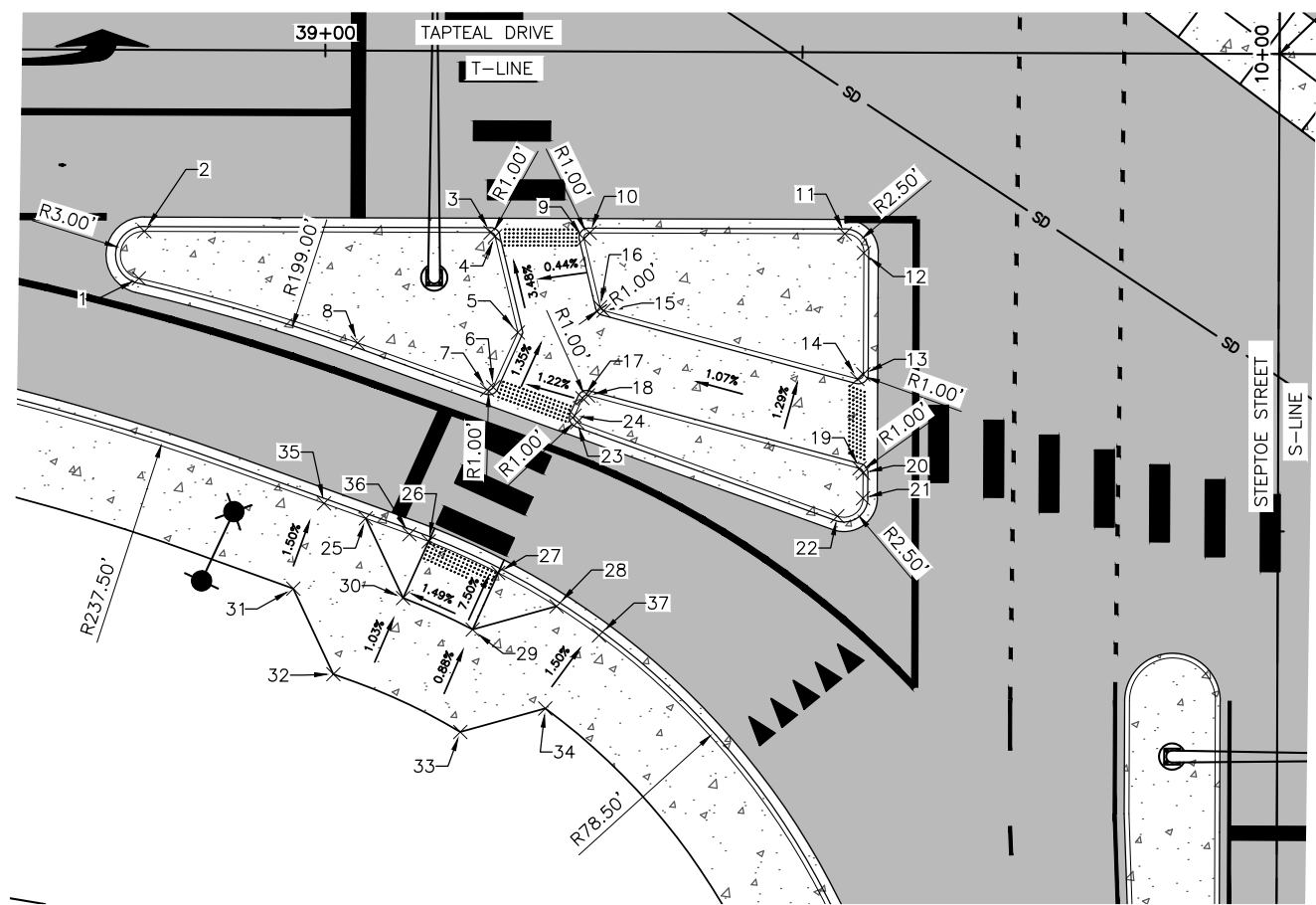
STEPTOE AND TAPTEAL INTERSECTION
 YOUNG ASSET MANAGEMENT

PAVING DETAILS



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NO.	REVISION	DESCRIPTION	BY	APR	DATE



CURB RAMP DATA				
POINT #	STATION / REFERENCE			ELEVATION
1	T 38+80.55, 23.94' R	TBC		416.30
2	T 38+81.10, 18.99' R	TBC		416.21
3	T 39+17.37, 19.00' R	TBC		416.40
4	T 39+17.85, 19.38' R	TBC		416.42
5	T 39+20.28, 29.45' R	TBC		416.79
6	T 39+17.71, 35.19' R	TBC		416.87
7	T 39+17.08, 35.46' R	TBC		416.87
8	T 39+03.49, 30.61' R	TBC		416.67
9	T 39+27.17, 19.62' R	TBC		416.49
10	T 39+27.78, 19.00' R	TBC		416.46
11	T 39+54.50, 19.00' R	TBC		416.57
12	T 39+56.50, 20.99' R	TBC		416.66
13	T 39+56.50, 33.71' R	TBC		417.11
14	T 39+55.87, 34.19' R	TBC		417.13
15	T 39+29.26, 27.14' R	TBC		416.82
16	T 39+28.88, 26.78' R	TBC		416.80
17	T 39+27.07, 36.31' R	TBC		416.94
18	T 39+27.65, 36.03' R	TBC		416.94
19	T 39+56.12, 43.57' R	TBC		417.26

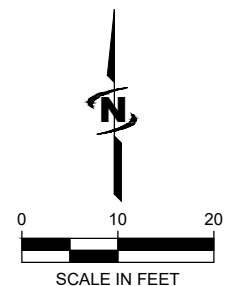
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POINT #	STATION / REFERENCE			ELEVATION
20	T 39+56.50, 44.05' R	TBC		417.28
21	T 39+56.49, 46.69' R	TBC		417.36
22	T 39+53.82, 48.57' R	TBC		417.40
23	T 39+26.53, 38.83' R	TBC		416.99
24	T 39+26.24, 38.15' R	TBC		416.98
25	T 39+04.41, 48.98' R	TBC		417.07
26	T 39+11.01, 51.37' R	TBC		416.76
27	T 39+18.31, 54.64' R	TBC		416.87
28	T 39+24.42, 58.12' R	TBC		417.41
29	T 39+15.65, 60.58' R	TBR		417.36
30	T 39+08.35, 57.31' R	TBR		417.24
31	T 38+96.84, 56.37' R	BSW		417.11
32	T 39+01.07, 65.31' R	BSW		417.30
33	T 39+14.39, 71.32' R	BSW		417.50
34	T 39+23.29, 68.82' R	BSW		417.67
35	T 38+89.93, 43.82' R	TBC		416.97
36	T 39+08.99, 50.62' R	TBC		416.83
37	T 39+28.89, 61.15' R	TBC		417.53

NOTES:
 1. ALL TBC ELEVATIONS ARE ADJUSTED FOR RAMPS
 2. TDI SHALL BE 2' WIDTH WITH LINEAR TYPE TEXTURE PER CITY OF RICHLAND APPROVED MATERIAL LIST

- TBC - TOP BACK CURB
- TFC - TOP FACE CURB
- TBR - TOP BACK RAMP
- BSW - BACK SIDEWALK
- BDW - BACK DRIVEWAY
- BFC - BOTTOM FACE CURB
- [Pattern] - DETECTABLE WARNING PAD
- [Symbol] - TACTILE DIRECTIONAL INDICATOR (TDI)

Plot Date: 10/20/2023 11:16 AM Plotted By: Mary H. Williams
 Date Created: 10/19/2023 JUB-GCM-CENTRAL-CITY-LEWIS-WAY-YOUNG-ASSET-MGMT-PROJECTS/07-21-030-STEPTOE/TAPTEAL/DESIGN/ASUS/SHEET/07-21-030-PD-2.DWG

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 MARKING OF UNDERGROUND MEMBER
 UTILITIES**



STEPTOE AND TAPTEAL INTERSECTION
 YOUNG ASSET MANAGEMENT

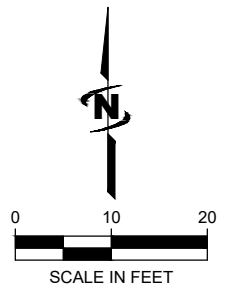
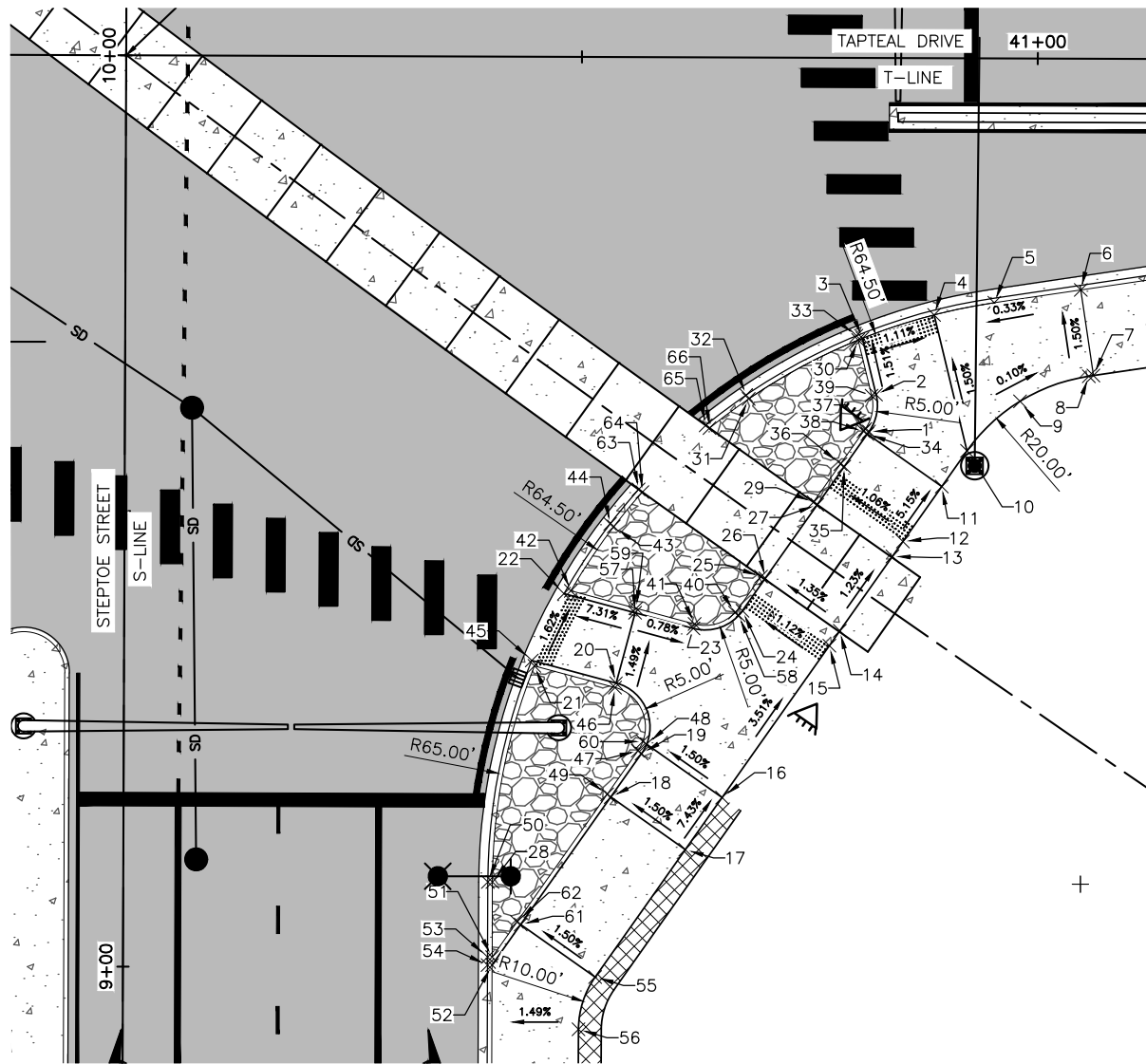
PAVING DETAILS

FILE: 07-21-030_PD-2
 JUB PROJ. #: 07-21-030
 DRAWN BY: WG
 DESIGN BY: WG
 CHECKED BY: RD
 AT FULL SIZE, IF NOT ONE INCH SCALE ACCORDINGLY
 LAST UPDATED: 10/19/2023
 SHEET NUMBER:
PD-2



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NO.	REVISION	DESCRIPTION	BY	DATE



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 UTILITIES**

CURB RAMP DATA				
POINT #	STATION / REFERENCE			ELEVATION
1	T 40+81.63, 41.00' R	BFC		416.23
2	T 40+82.39, 36.93' R	BFC		416.16
3	T 40+80.87, 30.76' R	BFC		416.07
4	T 40+88.73, 28.17' R	TBC		415.97
5	T 40+95.32, 26.81' R	TBC		415.99
6	T 41+04.80, 25.37' R	TBC		416.03
7	T 41+06.23, 34.76' R	BSW		416.17
8	T 41+05.72, 34.84' R	BSW		416.17
9	T 40+98.18, 37.61' R	BSW		416.19
10	T 40+92.39, 43.07' R	BSW		416.20
11	T 40+89.63, 47.00' R	BSW		416.27
12	T 40+85.40, 53.04' R	BSW		416.65
13	T 40+84.25, 54.68' R	BSW		416.76
14	S 9+37.14, 78.52' R	BSW		416.88
15	S 9+35.50, 77.37' R	BSW		416.95
16	S 9+18.79, 65.66' R	BSW		417.67
17	S 9+13.06, 61.64' R	BSW		418.19
18	S 9+18.80, 53.45' R	BFC		418.04
19	S 9+23.60, 56.81' R	BFC		417.60
20	S 9+31.30, 54.00' R	BFC		417.40

CURB RAMP DATA				
POINT #	STATION / REFERENCE			ELEVATION
21	S 9+33.16, 45.02' R	TBC		417.34
22	S 9+41.10, 48.24' R	BFC		416.69
23	S 9+37.34, 62.45' R	BFC		417.23
24	S 9+39.30, 67.82' R	BFC		416.95
25	S 9+43.05, 69.84' R	TBC		416.74
26	S 9+42.87, 70.32' R	BSW		416.75
27	T 40+76.05, 48.95' R	BSW		416.62
28	T 40+40.50, 90.58' R	TBC		418.38
29	T 40+75.58, 48.76' R	TBC		416.62
30	T 40+80.41, 30.95' R	TBC		416.56
31	T 40+68.42, 37.45' R	TBC		416.31
32	T 40+68.14, 37.04' R	TFC		416.28
33	T 40+80.22, 30.49' R	BFC		416.07
34	T 40+81.63, 41.00' R	BFC		416.23
35	T 40+78.92, 44.86' R	BFC		416.42
36	T 40+78.51, 44.57' R	TBC		416.42
37	T 40+81.22, 40.71' R	TBC		416.73
38	T 40+81.04, 40.97' R	TBC		416.73
39	T 40+81.90, 37.05' R	TBC		416.66
40	S 9+39.09, 67.00' R	TBC		416.98

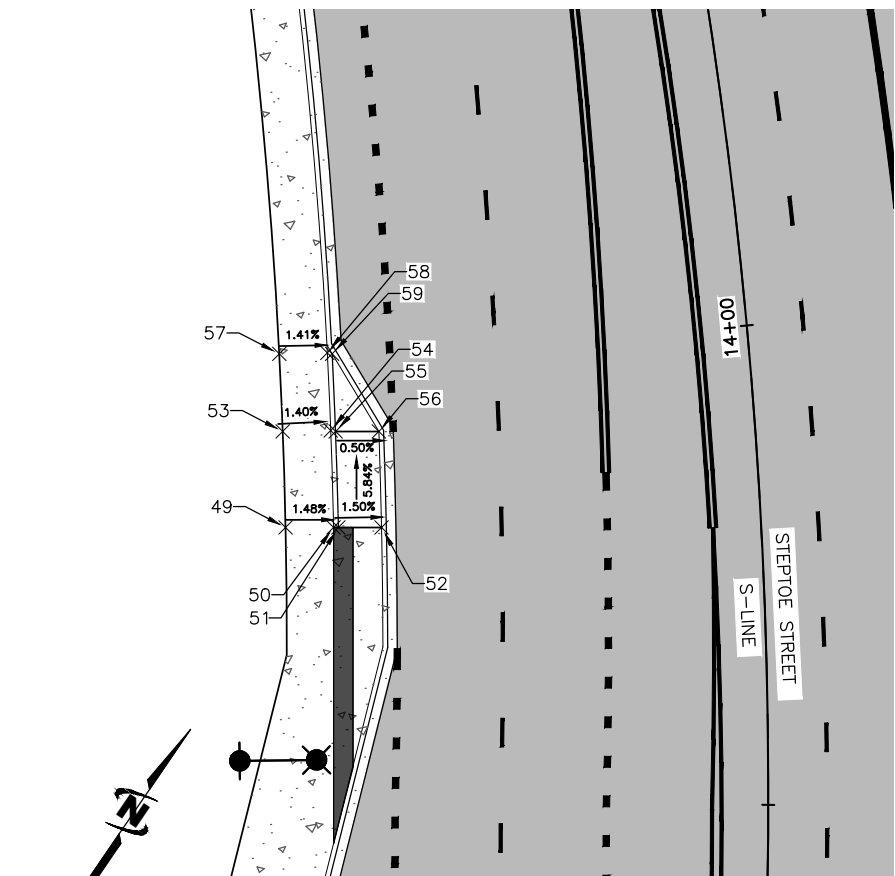
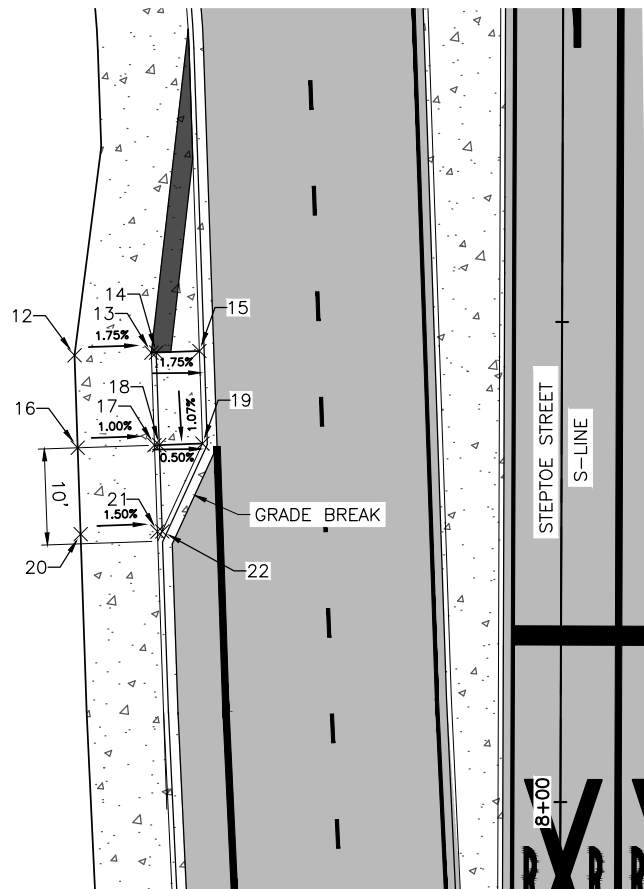
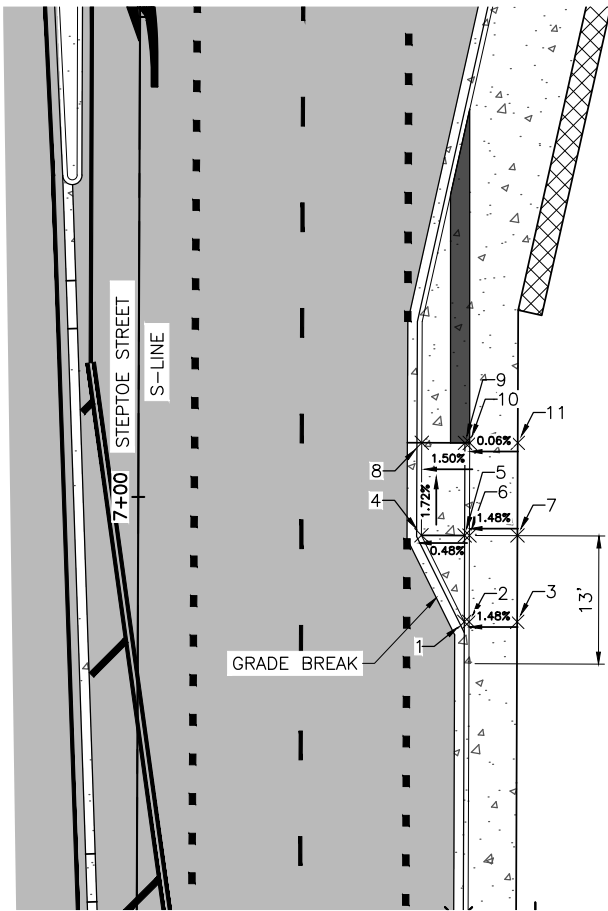
CURB RAMP DATA				
POINT #	STATION / REFERENCE			ELEVATION
41	S 9+37.82, 62.57' R	TBC		417.05
42	S 9+41.42, 48.99' R	TBC		417.24
43	S 9+48.49, 53.68' R	TBC		416.58
44	S 9+48.78, 53.27' R	TFC		416.56
45	S 9+33.75, 44.72' R	BFC		416.83
46	S 9+30.82, 53.87' R	TBC		417.90
47	S 9+23.88, 56.40' R	TBC		417.89
48	S 9+24.61, 57.36' R	BFC		417.51
49	S 9+19.09, 53.04' R	TBC		418.54
50	S 9+09.43, 40.00' R	BFC		417.88
51	S 9+01.19, 40.50' R	TBC		418.72
52	S 9+00.32, 40.50' R	TBC		418.76
53	S 9+01.19, 40.00' R	TFC		418.22
54	S 9+00.32, 40.00' R	TFC		418.26
55	S 8+99.03, 51.81' R	BSW		418.89
56	S 8+93.29, 50.00' R	BSW		419.20
57	S 9+39.03, 56.05' R	BFC		417.29
58	S 9+38.74, 67.35' R	BFC		416.98
59	S 9+39.52, 56.17' R	TBC		417.14
60	S 9+24.90, 56.94' R	TBC		418.03

CURB RAMP DATA				
POINT #	STATION / REFERENCE			ELEVATION
61	S 9+04.77, 43.62' R	BFC		418.74
62	S 9+05.06, 43.21' R	TBC		419.24
63	S 9+52.57, 56.38' R	TFC		416.52
64	S 9+52.28, 56.79' R	TBC		416.53
65	S 9+59.63, 63.71' R	TFC		416.43
66	S 9+59.33, 64.14' R	TBC		416.44

Plot Date: 10/20/2023 11:17 AM, Plotted By: Mary H. Wilkins
 Date Created: 07/20/2023, JUB: C:\CONCENTRAL\CALCULATIONS\YOUNG\ASSET\MANAGEMENT\SHEET\07-21-030_PD-3.DWG

STEPTOE AND TAPTEAL INTERSECTION
 YOUNG ASSET MANAGEMENT

PAVING DETAILS



CURB RAMP DATA			
POINT #	STATION / REFERENCE		ELEVATION
1	S 6+87.11, 34.00' R	BFC	428.91
2	S 6+87.11, 34.50' R	TBC	429.40
3	S 6+87.13, 39.50' R	BSW	429.47
4	S 6+96.11, 29.50' R	TBC	428.47
5	S 6+96.11, 34.00' R	TFC	428.49
6	S 6+96.11, 34.50' R	TBC	428.99
7	S 6+96.15, 39.50' R	BSW	429.06
8	S 7+05.76, 29.47' R	TBC	428.29
9	S 7+05.76, 34.00' R	TFC	428.36
10	S 7+05.76, 34.50' R	TBC	428.37
11	S 7+05.78, 39.50' R	BSW	428.37

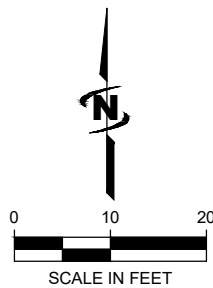
CURB RAMP DATA			
POINT #	STATION / REFERENCE		ELEVATION
12	S 8+46.36, 50.75' L	BSW	421.66
13	S 8+46.65, 42.76' L	TBC	421.52
14	S 8+46.67, 42.26' L	TFC	421.51
15	S 8+46.84, 37.76' L	TBC	421.43
16	S 8+36.72, 50.39' L	BSW	421.97
17	S 8+37.02, 42.39' L	TBC	421.89
18	S 8+37.03, 41.90' L	BFC	421.16
19	S 8+37.20, 37.40' L	TFC	421.37
20	S 8+27.72, 50.06' L	BSW	422.32
21	S 8+28.02, 42.06' L	TBC	422.21
22	S 8+28.04, 41.56' L	BFC	421.70

CURB RAMP DATA			
POINT #	STATION / REFERENCE		ELEVATION
49	S 13+81.74, 49.46' L	BSW	408.87
50	S 13+81.43, 44.47' L	TBC	408.80
51	S 13+81.40, 43.97' L	TFC	408.79
52	S 13+81.12, 39.48' L	TBC	408.72
53	S 13+92.74, 49.08' L	BSW	408.77
54	S 13+92.43, 44.09' L	TBC	408.70
55	S 13+92.26, 43.59' L	BFC	408.21
56	S 13+91.92, 39.11' L	TBC	408.18
57	S 14+01.64, 48.75' L	BSW	408.50
58	S 14+01.24, 43.76' L	TBC	408.43
59	S 14+01.08, 43.26' L	BFC	407.95

NOTES:

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- TDI SHALL BE 2' WIDTH WITH LINEAR TYPE TEXTURE PER CITY OF RICHLAND APPROVED MATERIAL LIST

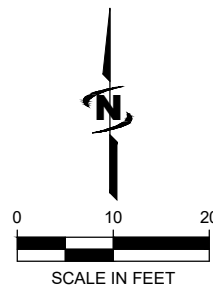
- TBC - TOP BACK CURB
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- [Pattern] TACTILE DIRECTIONAL INDICATOR (TDI)



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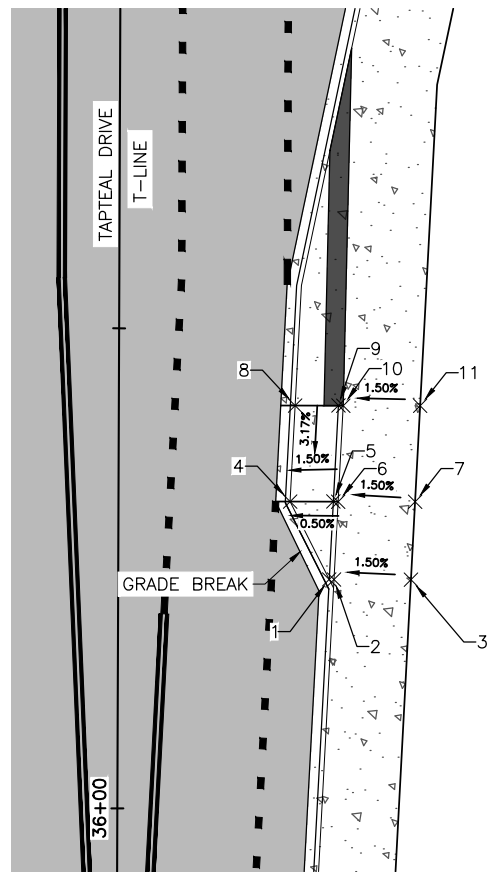
NO.	REVISION	DESCRIPTION	DATE

STEPTOE AND TAPTEAL INTERSECTION
YOUNG ASSET MANAGEMENT

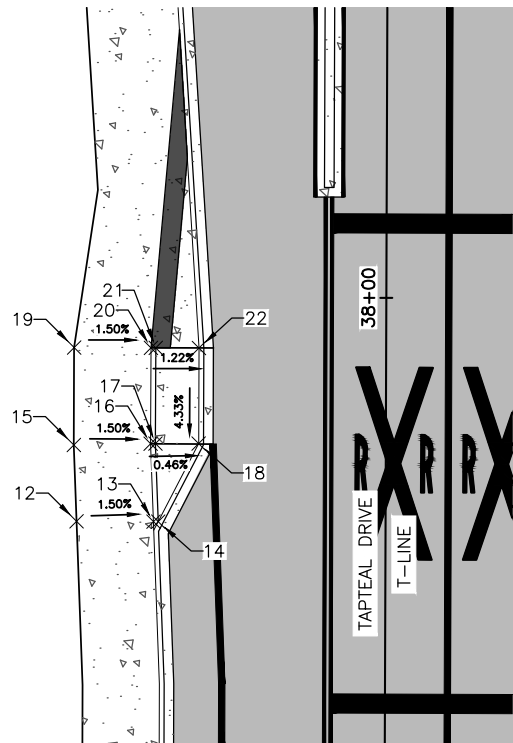
PAVING DETAILS

FILE : 07-21-030-PD-4
JUB PROJ. # : 07-21-030
DRAWN BY : WG
DESIGN BY : WG
CHECKED BY : RD
ONE INCH
AT FULL SIZE, IF NOT ONE INCH, SCALE ACCORDINGLY
LAST UPDATED: 10/19/2023

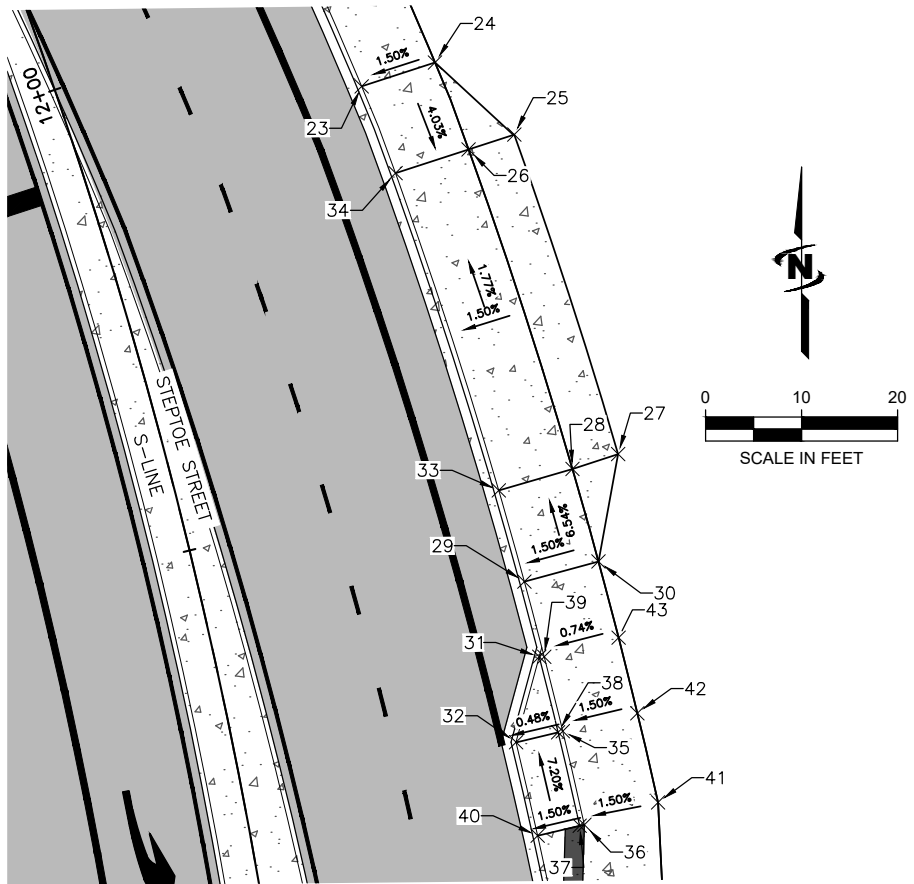
SHEET NUMBER:
PD-4



CURB RAMP DATA				
POINT #	STATION / REFERENCE			ELEVATION
1	T 36+23.92,	21.98' R	BFC	414.57
2	T 36+23.92,	22.48' R	TBC	415.07
3	T 36+23.92,	30.49' R	BSW	415.19
4	T 36+32.02,	17.87' R	TBC	414.61
5	T 36+32.02,	22.38' R	BFC	414.63
6	T 36+32.02,	22.88' R	TBC	415.13
7	T 36+32.05,	30.89' R	BSW	415.25
8	T 36+42.02,	18.36' R	TBC	415.01
9	T 36+42.02,	22.89' R	TFC	415.08
10	T 36+42.02,	23.37' R	TBC	415.09
11	T 36+42.05,	31.38' R	BSW	415.21



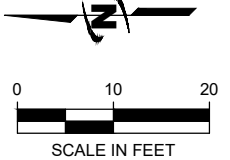
CURB RAMP DATA				
POINT #	STATION / REFERENCE			ELEVATION
12	T 37+76.62,	32.18' L	BSW	414.65
13	T 37+76.62,	24.18' L	TBC	414.55
14	T 37+76.62,	23.68' L	BFC	414.07
15	T 37+84.57,	32.50' L	BSW	414.80
16	T 37+84.73,	24.50' L	TBC	414.71
17	T 37+84.74,	24.00' L	BFC	414.22
18	T 37+84.77,	19.50' L	TBC	414.20
19	T 37+94.72,	32.50' L	BSW	414.85
20	T 37+94.72,	24.50' L	TBC	414.73
21	T 37+94.72,	24.00' L	TFC	414.72
22	T 37+94.72,	19.50' L	BSW	414.65



CURB RAMP DATA				
POINT #	STATION / REFERENCE			ELEVATION
23	S 11+90.50,	30.44' R	TBC	412.89
24	S 11+90.50,	38.48' R	BSW	413.01
25	S 11+81.55,	44.09' R	BDW	412.17
26	S 11+81.47,	39.09' R	BSW	412.67
27	S 11+49.27,	45.75' R	BDW	412.73
28	S 11+48.91,	40.76' R	BSW	413.23
29	S 11+39.27,	33.24' R	TBC	413.76
30	S 11+39.62,	41.23' R	BSW	413.88
31	S 11+31.76,	33.11' R	BFC	413.44
32	S 11+23.95,	28.99' R	TBC	413.42
33	S 11+48.56,	32.77' R	TBC	413.11
34	S 11+81.34,	31.09' R	TBC	412.55
35	S 11+24.14,	33.99' R	TBC	413.94
36	S 11+14.75,	34.44' R	TBC	414.20
37	S 11+14.73,	33.94' R	TFC	414.19
38	S 11+24.12,	33.49' R	BFC	413.44
39	S 11+31.66,	33.62' R	TBC	413.95
40	S 11+14.48,	29.45' R	TBC	414.12
41	S 11+15.65,	42.41' R	BSW	414.21
42	S 11+24.48,	41.98' R	BSW	414.06
43	S 11+32.00,	41.61' R	BSW	414.00

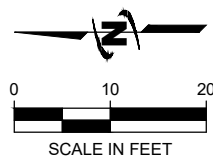
NOTES:
 1. ALL TBC ELEVATIONS ARE ADJUSTED FOR RAMPS
 2. TDI SHALL BE 2' WIDTH WITH LINEAR TYPE TEXTURE PER CITY OF RICHLAND APPROVED MATERIAL LIST

TBC - TOP BACK CURB
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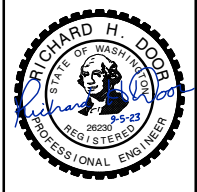
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**STEPTOE AND TAPTEAL INTERSECTION
 YOUNG ASSET MANAGEMENT**

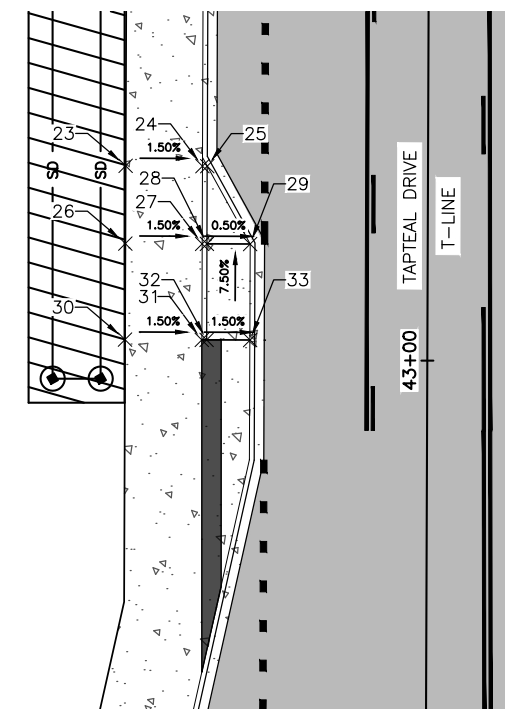
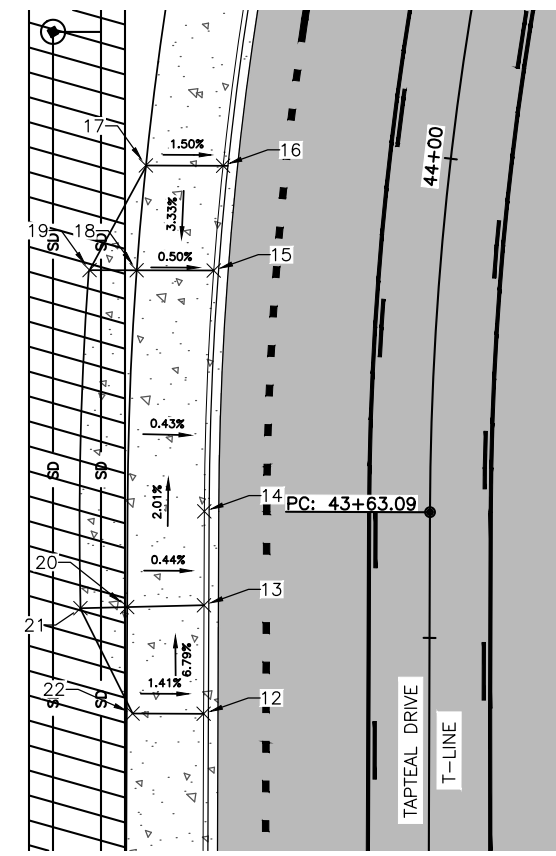
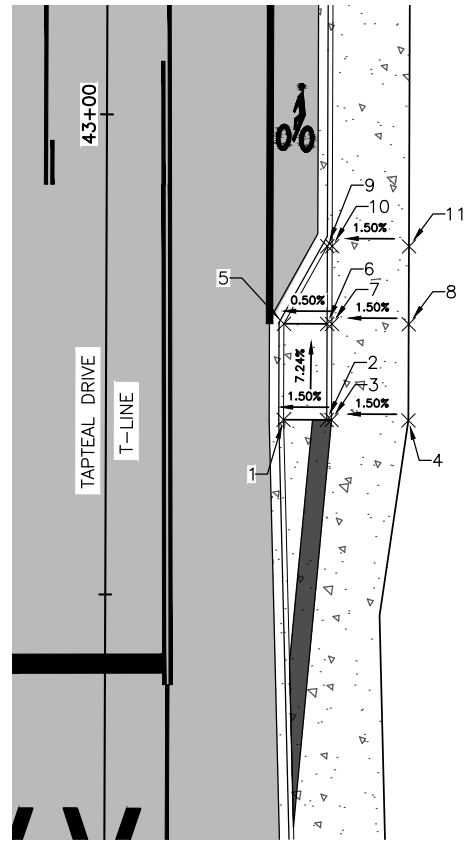
PAVING DETAILS

Plot Date: 10/20/2023 11:17 AM, Plotted By: Mary H. Wilkins
 Date Created: 10/20/23, JUB: C:\CENTRAL\Clients\SWA\Young\ASSET\TAPTEAL\PROJECTS\07-21-030 - STEPTOE/TAPTEAL\DESIGN\ASSETS\07-21-030_PD-5.DWG



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NO.	REVISION	DESCRIPTION	BY	DATE



CURB RAMP DATA				
POINT #	STATION / REFERENCE			ELEVATION
1	T 42+68.26, 18.50' R	TBC		412.26
2	T 42+68.27, 23.00' R	TFC		412.33
3	T 42+68.27, 23.50' R	TBC		412.34
4	T 42+68.26, 31.50' R	BSW		412.46
5	T 42+78.26, 18.50' R	TBC		411.58
6	T 42+78.26, 23.00' R	BFC		411.60
7	T 42+78.26, 23.50' R	TBC		412.10
8	T 42+78.26, 31.50' R	BSW		412.22
9	T 42+86.36, 23.00' R	BFC		411.33
10	T 42+86.36, 23.47' R	TBC		411.82
11	T 42+86.39, 31.50' R	BSW		411.94

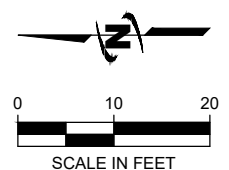
CURB RAMP DATA				
POINT #	STATION / REFERENCE			ELEVATION
12	T 43+42.01, 23.50' L	TBC		410.69
13	T 43+53.32, 23.50' L	TBC		409.96
14	T 43+63.09, 23.50' L	TBC		409.69
15	T 43+86.55, 23.50' L	TBC		409.29
16	T 43+96.79, 23.50' L	TBC		409.59
17	T 43+96.05, 31.50' L	BSW		409.71
18	T 43+86.04, 31.50' L	BSW		409.33
19	T 43+85.73, 36.39' L	BDW		408.85
20	T 43+53.10, 31.50' L	BSW		410.00
21	T 43+52.97, 36.36' L	BDW		409.52
22	T 43+42.01, 30.89' L	BSW		410.80

CURB RAMP DATA				
POINT #	STATION / REFERENCE			ELEVATION
23	T 43+20.17, 31.50' L	BSW		411.27
24	T 43+20.20, 23.53' L	TBC		411.15
25	T 43+20.17, 23.00' L	BFC		410.65
26	T 43+12.07, 31.50' L	BSW		411.55
27	T 43+12.07, 23.50' L	TBC		411.43
28	T 43+12.07, 22.97' L	BFC		410.93
29	T 43+12.07, 18.50' L	TBC		410.90
30	T 43+02.07, 31.50' L	BSW		411.78
31	T 43+02.07, 23.50' L	TBC		411.66
32	T 43+02.07, 23.00' L	TFC		411.65
33	T 43+02.07, 18.50' L	TBC		411.55

NOTES:

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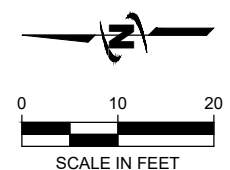
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 Date Created: 04/24/2023, JUB: G:\CENTRAL\Clients\SWA\Young\ASSET\TAPTEAL\PROJECTS\07-21-030 - STEPTOETAPTEAL\DESIGN\ASSET\SHEET\07-21-030 - PD-6.DWG

STEPTOE AND TAPTEAL INTERSECTION
 YOUNG ASSET MANAGEMENT

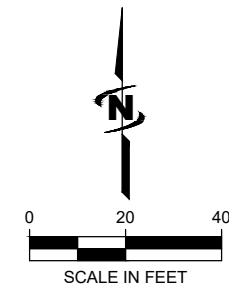
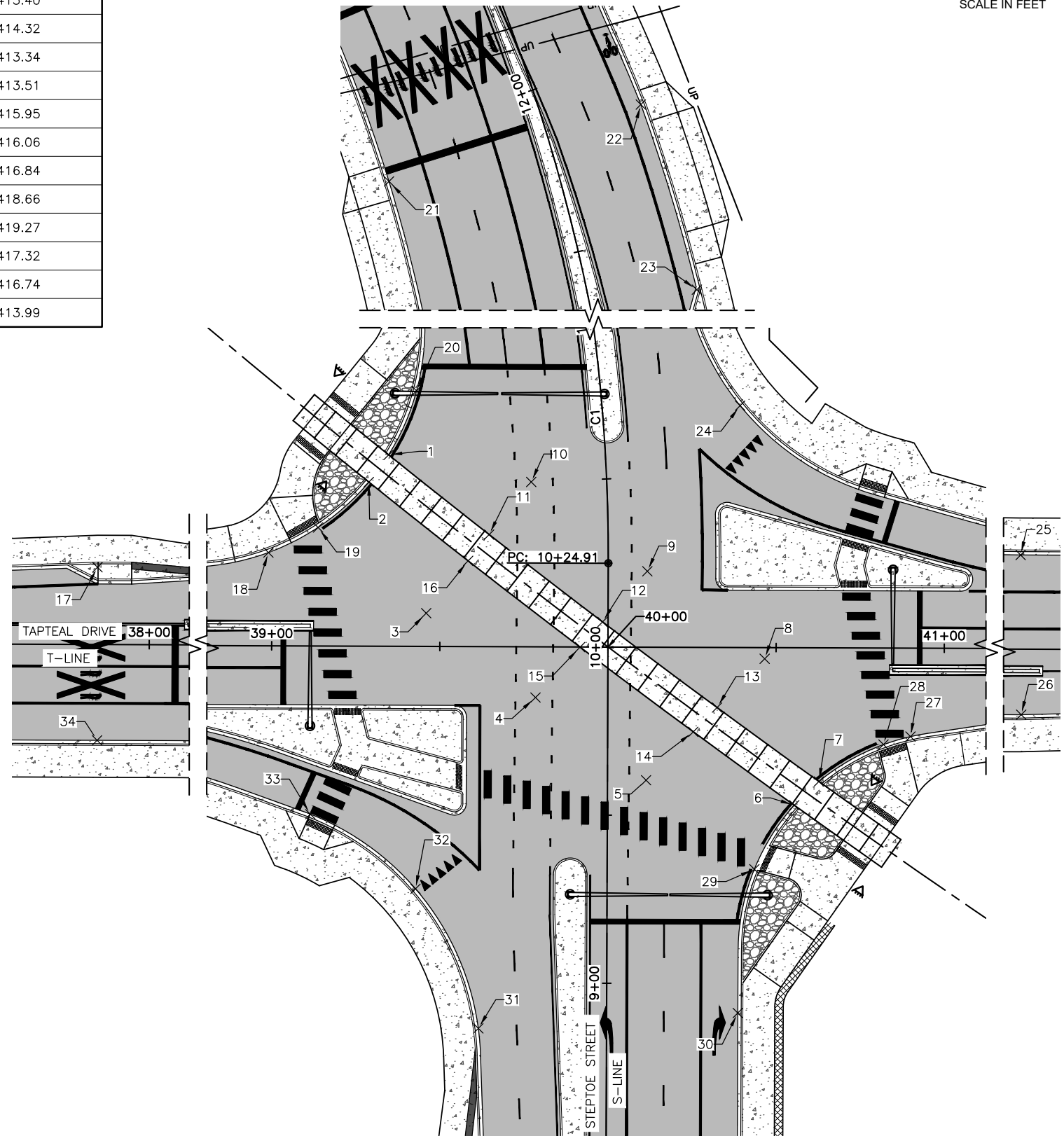
PAVING DETAILS

KEY ROADWAY POINT DATA

POINT #	STATION / REFERENCE	ELEVATION
1	T 39+34.58, 56.92' LT EP	414.23
2	T 39+28.72, 48.80' LT EP	414.36
3	T 39+45.91, 9.86' LT HMA	415.34
4	T 39+78.52, 15.09' RT HMA	416.08
5	T 40+11.47, 39.57' RT HMA	416.64
6	T 40+55.56, 46.85' RT EP	416.51
7	T 40+62.87, 39.78' RT EP	416.41
8	T 40+46.63, 3.34' RT HMA	415.65
9	T 40+11.62, 22.57' LT HMA	414.90
10	T 39+77.02, 49.01' LT HMA	414.20
11	T 39+64.55, 33.32' LT EP	414.75
12	T 39+98.34, 7.46' LT EP	415.33
13	T 40+32.51, 17.89' RT EP	415.90
14	T 40+25.47, 25.14' RT EP	416.01
15	T 39+91.72, 0.07' RT EP	415.43
16	T 39+58.33, 25.49' LT EP	414.87
17	T 37+84.55, 22.99' LT LIP	414.21

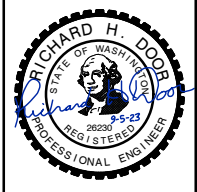
KEY ROADWAY POINT DATA

POINT #	STATION / REFERENCE	ELEVATION
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19	T 39+13.67, 35.27' LT LIP	414.65
20	T 39+42.82, 75.98' LT LIP	413.36
21	T 39+29.20, 169.58' LT LIP	409.36
22	T 40+04.00, 192.70' LT LIP	412.48
23	T 40+20.86, 137.70' LT LIP	413.40
24	T 40+39.05, 71.93' LT LIP	414.32
25	T 41+79.03, 28.00' LT LIP	413.34
26	T 41+79.36, 19.49' RT LIP	413.51
27	T 40+90.04, 26.30' RT LIP	415.95
28	T 40+82.03, 28.70' RT LIP	416.06
29	T 40+43.77, 65.92' RT LIP	416.84
30	T 40+39.00, 108.72' RT LIP	418.66
31	T 39+61.85, 113.56' RT LIP	419.27
32	T 39+43.02, 72.12' RT LIP	417.32
33	T 39+11.68, 50.03' RT LIP	416.74
34	T 37+84.61, 28.50' RT LIP	413.99



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J-U-B ENGINEERS, INC.

J-U-B ENGINEERS, INC.
3611 S. Zintel Way
Kennewick, WA 99337
Phone: 509.783.2144
www.jub.com



REUSE OF DRAWINGS
JUB SHALL RETAIN ALL COMMON LAW STATUTORY, COPYRIGHT AND OTHER RIGHTS IN ALL DRAWINGS AND SHALL NOT BE REUSED WITHOUT WRITTEN CONSENT. ANY REUSE WITHOUT WRITTEN CONSENT BY JUB WILL BE AT CLIENT'S SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO JUB.

NO.	REVISION	DESCRIPTION	BY	DATE

**STEPTOE AND TAPTEAL INTERSECTION
YOUNG ASSET MANAGEMENT**

PAVING DETAILS

FILE: 07-21-030-PD-7
JUB PROJ. #: 07-21-030
DRAWN BY: WG
DESIGN BY: WG
CHECKED BY: RD

ONE INCH
AT FULL SIZE, IF NOT ONE
INCH, SCALE ACCORDINGLY
LAST UPDATED: 8/4/2023

SHEET NUMBER:
PD-7

Plot Date: 10/20/2023 11:18 AM, Plotted By: Mary H. Wilkins
 Date Created: 04/24/2023, JUB: C:\MICENTRAL\CLIENTS\WIA\YOUNG\ASSET\TAPTEAL\PROJECTS\07-21-030_STEP\TAPTEAL\DESIGN\CAD\SHEET\07-21-030_PD-7.DWG

NOTES:

LIP - GUTTER LIP LINE
EP - EDGE OF PAVEMENT
HMA - ASPHALT



811
Know what's below.
Call before you dig.

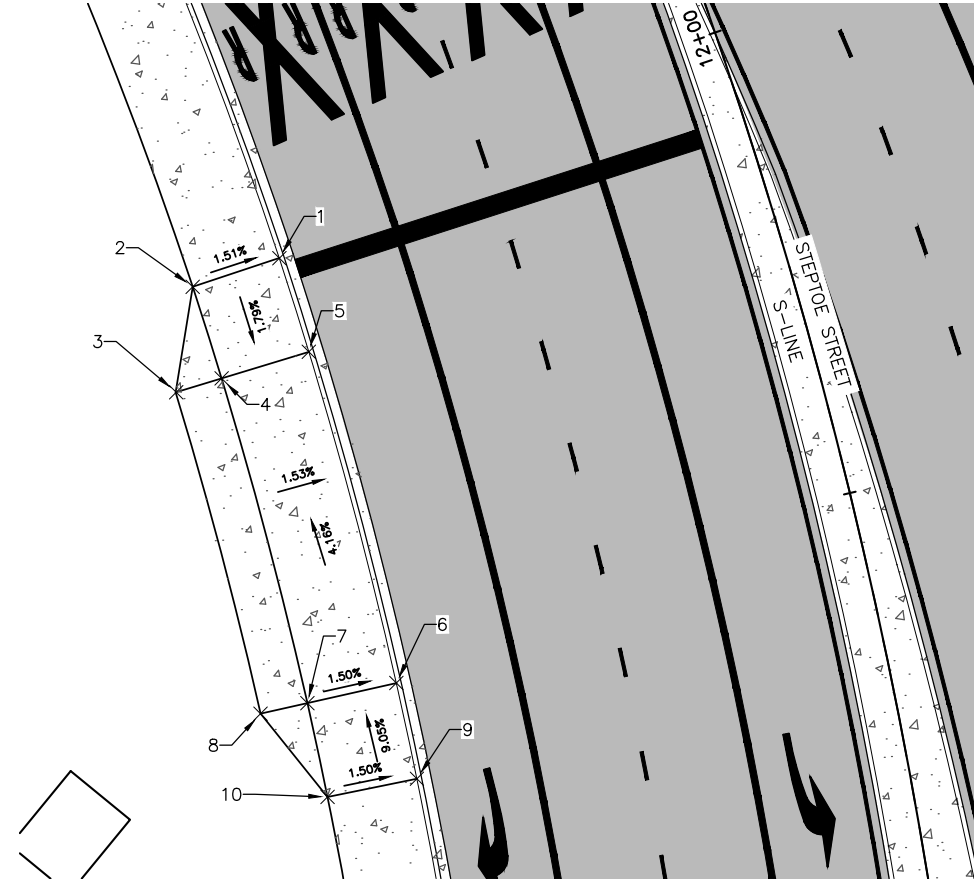
**CALL 2 BUSINESS DAYS IN ADVANCE BEFORE
YOU DIG, GRADE, OR EXCAVATE FOR THE
MARKING OF UNDERGROUND MEMBER
UTILITIES**

Plot Date: 10/20/2023 11:18 AM Plotted By: Mary H. Williams
 Date Created: 11/28/23 JUB-GCM-CENTRAL-CULVERT-SW-WALKWAY-ASSET-MGMT-PROJECTS/07-21-030-STEPTOE/TAPTEAL/DESIGN/ASUS/SHEET/07-21-030-PD-8.DWG

NOTES:

1. ALL TBC ELEVATIONS ARE ADJUSTED FOR RAMP
2. TDI SHALL BE 2' WIDTH WITH LINEAR TYPE TEXTURE PER CITY OF RICHLAND APPROVED MATERIAL LIST

- TBC - TOP BACK CURB
- TFC - TOP FACE CURB
- TBR - TOP BACK RAMP
- BSW - BACK SIDEWALK
- BDW - BACK DRIVEWAY
- BFC - BOTTOM FACE CURB
-  DETECTABLE WARNING PAD
-  TACTILE DIRECTIONAL INDICATOR (TDI)



CURB RAMP DATA				
POINT #	STATION / REFERENCE			ELEVATION
1	S 11+91.77,	50.51' L	TBC	409.76
2	S 11+91.71,	60.00' L	BSW	409.90
3	S 11+80.41,	65.00' L	BDW	410.46
4	S 11+80.46,	60.00' L	BSW	409.72
5	S 11+80.46,	50.50' L	TBC	409.58
6	S 11+41.09,	50.50' L	TBC	411.08
7	S 11+41.09,	60.00' L	BSW	411.22
8	S 11+41.09,	65.00' L	BDW	411.13
9	S 11+29.84,	50.50' L	BTC	411.99
10	S 11+29.84,	60.00' L	BSW	412.14



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NO.	REVISION	DESCRIPTION	BY	DATE

STEPTOE AND TAPTEAL INTERSECTION
 YOUNG ASSET MANAGEMENT

PAVING DETAILS

FILE : 07-21-030-PD-8
 JUB PROJ. # : 07-21-030
 DRAWN BY: WG
 DESIGN BY: WG
 CHECKED BY: RD
 ONE INCH
 AT FULL SIZE, IF NOT ONE
 INCH, SCALE ACCORDINGLY
 LAST UPDATED: 10/19/2023
 SHEET NUMBER:
PD-8

INDEX

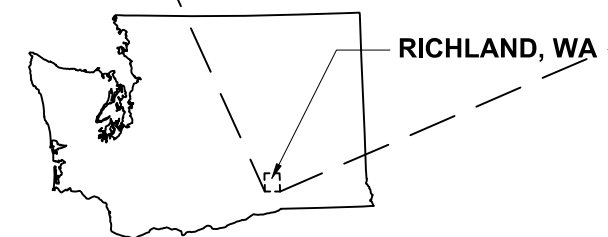
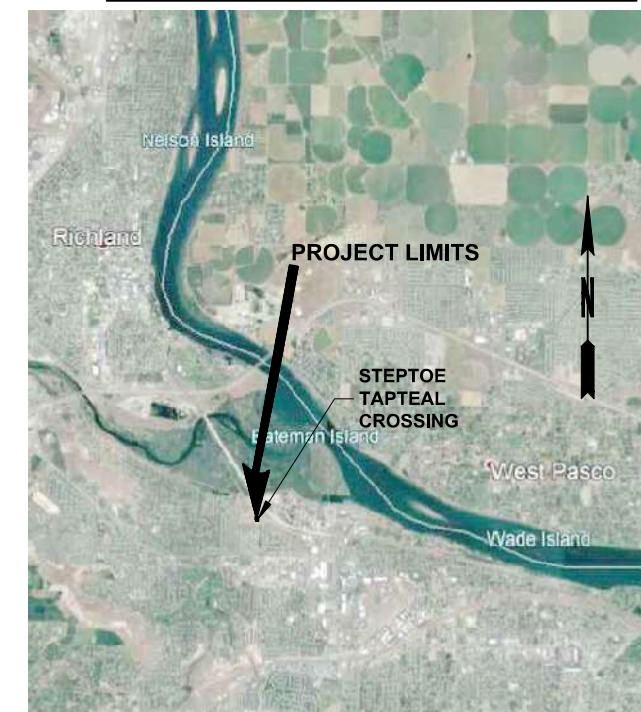
SHEET NO.	PLAN REFERENCE NO.	TITLE
1	IN1	COVER SHEET / INDEX
2	GEN1	GENERAL NOTES, LEGEND, & SYMBOLOGY
3	KEY	KEY MAP & CONTRACTOR STAGING AREAS
4	SQ1	SUMMARY OF QUANTITIES
5	QT1	QUANTITY TABULATIONS
6	AL1	TRACK ALIGNMENT TABLE
7	DEMO1	DEMOLITION PLAN
8	RV1	RAIL VICINITY MAP
9 - 10	RD1 - RD2	RAIL DETAIL PLAN
11 - 12	TYP1 - TYP2	TYPICAL SECTIONS
13	SG01	CROSSING TRACK PLAN, MP 19.63, GENERAL NOTES
14	SG02	CROSSING CIRCUIT PLAN, MP 19.63
15	SG03	CROSSING CABLE LAYOUT, MP 19.63
16	SG04	RAILROAD SIGNAL CONDUIT SCHEMATIC, STEPTOE TAPTEAL GRADE CROSSING
17	SG05	CROSSING SIGNAL PHYSICAL ARRANGEMENT PLAN

Contract Plans For YOUNG ASSET MANAGEMENT STEPTOE TAPTEAL INTERSECTION CROSSING RECONSTRUCTION

POB MP 19.61-19.75

November 29, 2023

LOCATION MAP



PLAN REFERENCE NO.
SHEET OF SHEETS

NOTE: ALL SHEET REFERENCES, MATCH LINE SHEET REFERENCES, ETC. THROUGHOUT THE PLANS REFER TO THE ENTRY IN THE PLAN REFERENCE NUMBER BOX.

FILE NAME	C:\pwworking\west01\d3360535\01_POB_INDEX_SHEET.dwg				REGION NO.	STATE			Digitally signed by Folwell, Matthew R Date: 2023.11.29 14:23:58-08'00'		YOUNG ASSET MANAGEMENT STEPTOE TAPTEAL INTERSECTION CROSSING RECONSTRUCTION	Plot 1
TIME	8:56:26 AM				WA	PLAN REF NO						IN1
DATE	11/29/2023				JOB NUMBER							SHEET 1 OF 17 SHEETS
PLOTTED BY	N. SHRESTHA				CONTRACT NO.							COVER SHEET / INDEX
DESIGNED BY	P. WEBER											
ENTERED BY	N. SHRESTHA											
CHECKED BY												
PROJ. ENGR.												
PROJ. MNGR.	P. WEBER				REVISION		DATE		BY			

GENERAL

- SEE YOUNG ASSET MANAGEMENT STEPTOE AND TAPTEAL INTERSECTION PLANS, BY JOB ENGINEERS, FOR GENERAL CIVIL, ROADWAY, ILLUMINATION, TRAFFIC SIGNAL, PAVEMENT MARKING/SIGNING, CONSTRUCTION PHASING, TRAFFIC CONTROL, ETC.
- GRADING, PLACEMENT OF SUBBALLAST, CONSTRUCTION OF ROADWAY AND TRACK, INSTALLATION OF RAILROAD GRADE CROSSING SIGNAL SYSTEM, AND REHABILITATION OF TRACK ARE INCLUDED IN THIS CONTRACT.
- EXCAVATED MATERIAL SHALL BE STOCKPILED AT YOUNG ASSET MANAGEMENT'S PROPERTY SOUTHWEST OF STEPTOE TAPTEAL GRADE CROSSING (SEE KEYMAP SHEET).
- SEE SPECIAL PROVISIONS FOR REMOVED MATERIALS AND SIGNAL EQUIPMENT TO BE RETAINED BY PORT OF BENTON. THESE DESIGNATED ITEMS SHALL BE STOCKPILED 3/4 MILES NORTH OF 2579 STEVENS DR, RICHLAND, WA. (COORDINATES 46.3368 N, 119.2891 W.)
- MILEPOST INDICATION FOR CROSSING ON SG SHEETS IS BASED ON CURRENT UNITED STATES DEPARTMENT OF TRANSPORTATION CROSSING DATABASE. PROJECT LIMITS INDICATED ON COVER SHEET OF THESE PLANS ARE BASED ON PHYSICAL MILEPOST LOCATIONS (THESE DIFFER BY APPROXIMATELY 0.05 MILES).
- CONTRACTORS SHALL FAMILIARIZE THEMSELVES WITH THE SITE AND SHALL BRING ANY DISCREPANCIES TO THE ATTENTION OF THE ENGINEER PRIOR TO UNDERTAKING THE AFFECTED WORK.
- ANY DISCREPANCIES IN THESE DRAWINGS, SPECIFICATIONS, THESE NOTES AND SITE CONDITIONS SHALL BE REPORTED TO THE ENGINEER, WHO SHALL CORRECT SUCH DISCREPANCY IN WRITING AFTER REVIEWING ANY CHANGES. ANY WORK PERFORMED BY THE CONTRACTOR AFTER THE DISCOVERY OF SUCH DISCREPANCY SHALL BE PERFORMED AT THE CONTRACTOR'S OWN RISK. THE CONTRACTOR SHALL VERIFY AND COORDINATE THE DIMENSIONS AMONG ALL DRAWINGS PRIOR TO PROCEEDING WITH ANY WORK.
- NO FIELD CHANGES WILL BE PERMITTED WITHOUT DIRECT WRITTEN AUTHORIZATION FROM THE PORT OR ITS DESIGNEE.
- ALL MATERIALS AND WORKMANSHIP SHALL BE IN CONFORMANCE WITH THE PROJECT SPECIAL PROVISIONS; THE 2023 EDITION OF THE STATE OF WASHINGTON STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION; AND WSDOT STANDARD PLANS AND DETAILS. IN THE EVENT OF A CONFLICT, THE MOST RESTRICTIVE OF THESE PROVISIONS SHALL APPLY.
- THE CONTRACTOR AND ALL SUBCONTRACTORS SHALL BE LICENSED AND BONDED TO DO WORK IN THE PUBLIC RIGHT-OF-WAY AND HAVE A CURRENT CITY OF RICHLAND BUSINESS LICENSE.

UTILITIES

- ALL EXISTING UTILITIES SHOWN IN THESE PLANS ARE BASED ON APPROXIMATE SURVEY INFORMATION ONLY. THE CONTRACTOR IS FULLY RESPONSIBLE FOR VERIFYING THE LOCATION, DEPTH, ETC. OF ALL UTILITIES.
- ALL UTILITIES MUST BE VERIFIED PRIOR TO CONSTRUCTION. PRIOR TO ANY EXCAVATION, THE CONTRACTOR IS REQUIRED TO CALL THE UNDERGROUND ALERT CENTER AT 811 AT LEAST 2 BUSINESS DAYS PRIOR TO STARTING SUCH EXCAVATION.
- ALL UNDERGROUND UTILITY CROSSINGS ARE SUBJECT TO DIG AND VERIFY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE ALL UTILITY ACCOMMODATIONS WITH THE INDIVIDUAL UTILITY PURVEYORS.
- IT SHALL BE THE CONTRACTOR'S OWN RESPONSIBILITY TO PROTECT, IN PLACE, ALL UTILITIES AND/OR THEIR STRUCTURES WHETHER OR NOT THEY ARE SHOWN ON THE PLANS. DAMAGE DUE TO THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE TO CURRENT AGENCY STANDARDS.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR WHEN IN THE VICINITY OF ANY UTILITY LINES TO NOTIFY ALL UTILITIES/AGENCIES WHEN CONSTRUCTION WORK BEGINS AND TO ARRANGE FOR A REPRESENTATIVE OF THE UTILITY/AGENCY TO BE PRESENT. THE CONTRACTOR SHALL COORDINATE ITS ACTIVITIES WITH ALL UTILITIES/AGENCIES.

MISCELLANEOUS

- THE CONTRACTOR SHALL ONLY USE THOSE HYDRANTS BY THE AGENCY IN CHARGE OF THE WATER DISTRIBUTION AND IN STRICT ACCORDANCE WITH ITS REQUIREMENTS FOR HYDRANT USE. WATER APPLIED BY THE CONTRACTOR SHALL NOT BE FROM RESIDENTIAL SOURCES.

SURVEY AND STATIONING

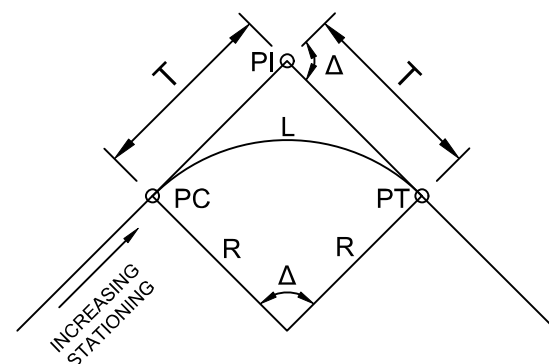
- BASIS OF BEARING: NAD83 (2011) WASHINGTON STATE PLANE COORDINATE SYSTEM, SOUTH ZONE.
- UNITS OF MEASURE: US SURVEY FEET GRID DISTANCES.
- VERTICAL DATUM: NAVD88 CITY OF RICHLAND CONTROL.
- SEE STEPTOE AND TAPTEAL INTERSECTION PLANS, BY JOB ENGINEERS, SHEET G-003 FOR SURVEY CONTROL POINTS.
- THE CONTRACTOR IS RESPONSIBLE FOR THE PRESERVATION OF ALL SURVEY CONTROL MONUMENTS. IN THE EVENT MONUMENTS ARE DAMAGED OR DESTROYED BY THE CONTRACTOR, THE ENGINEER WILL REPLACE THE MONUMENT SOLELY AT THE CONTRACTOR'S EXPENSE.

MONUMENT REMOVAL AND PERMIT PROCESS

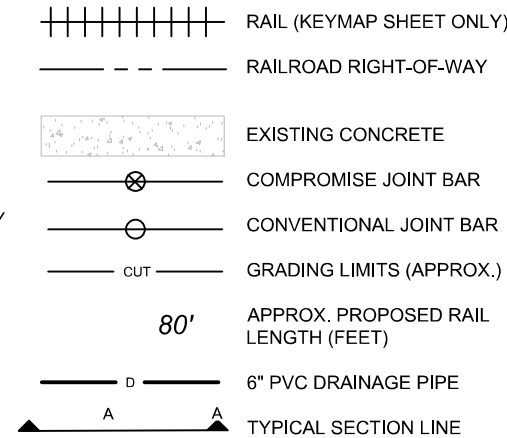
- "NO SURVEY MONUMENT SHALL BE REMOVED OR DESTROYED (THE PHYSICAL DISTURBANCE OR COVERING OF A MONUMENT SUCH THAT THE SURVEY POINT IS NO LONGER VISIBLE OR READILY ACCESSIBLE) BEFORE A PERMIT IS OBTAINED FROM THE DEPARTMENT OF NATURAL RESOURCES (DNR)". WAC 332-120-D30(2) STATES "IT SHALL BE THE RESPONSIBILITY OF <THOSE> PERFORMING CONSTRUCTION WORK OR OTHER ACTIVITY (INCLUDING ROAD AND STREET RESURFACING PROJECTS) TO ADEQUATELY SEARCH THE RECORDS AND THE PHYSICAL AREA OF THE PROPOSED CONSTRUCTION WORK OR OTHER ACTIVITY FOR THE PURPOSE OF LOCATING AND REFERENCING ANY KNOWN OR EXISTING SURVEY MONUMENTS". CONSTRUCTION SHALL NOT COMMENCE UNTIL WAS OUTLINED IN CHAPTER 332-120 IS COMPLIED WITH.

CIRCULAR CURVE DEFINITIONS

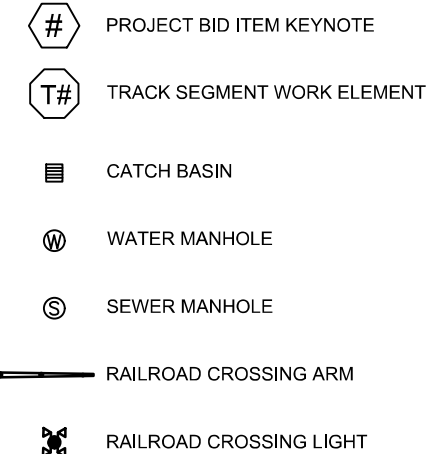
R = RADIUS OF CIRCULAR CURVATURE
 Δ = CENTRAL ANGLE OF CIRCULAR CURVE
 $T = R \tan \frac{\Delta}{2}$
 $L = \frac{\Delta}{D} \times 100$
 $D = 2 \sin \left(\frac{\Delta}{2} \right) = \text{DEGREE OF CURVATURE (CHORD DEFINITION)}$



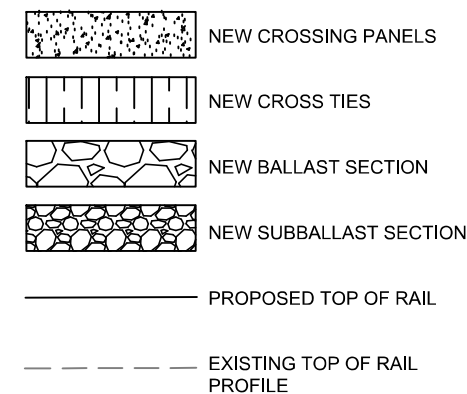
LEGEND



SYMBOLGY

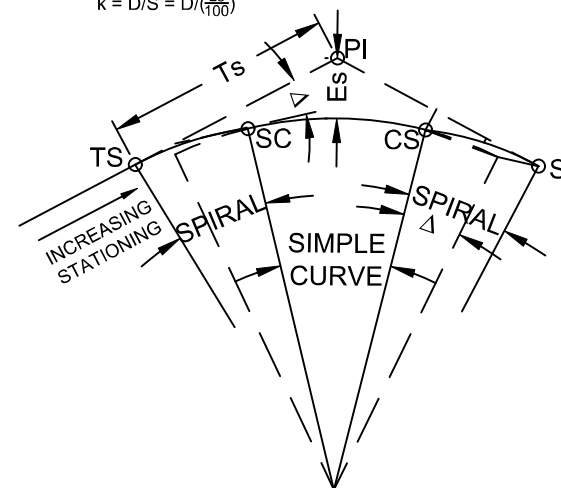


LEGEND (PROFILE VIEW)



SPIRAL DEFINITIONS

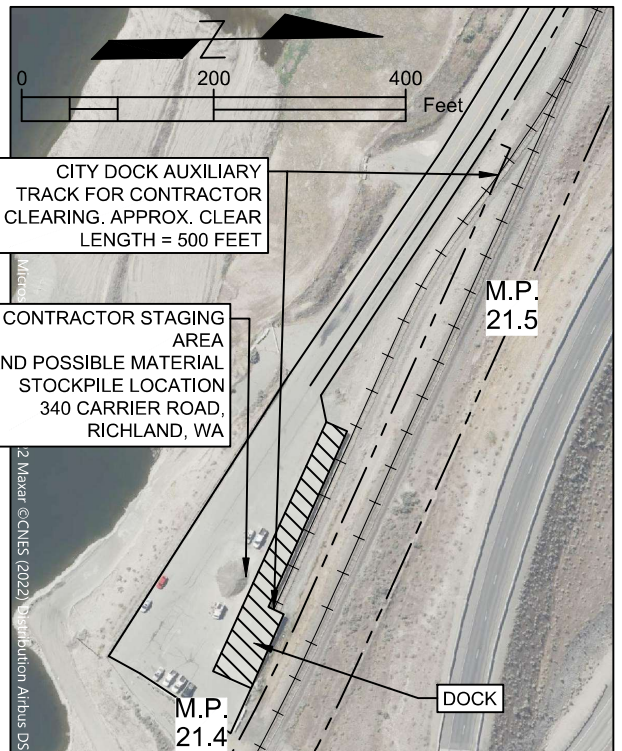
D = DEGREE OF SIMPLE CURVE
k = RATE OF CHANGE IN DEGREE OF SPIRAL PER STATION
S = LENGTH OF SPIRAL IN 100 FT STATIONS
 L_s = LENGTH OF SPIRAL IN FEET
a = SPIRAL DEFLECTION
 $a = \left(\frac{D}{100} \right) k S^2$
 $D = k S = k \frac{L_s}{100}$
 $k = D/S = D \left(\frac{100}{L_s} \right)$



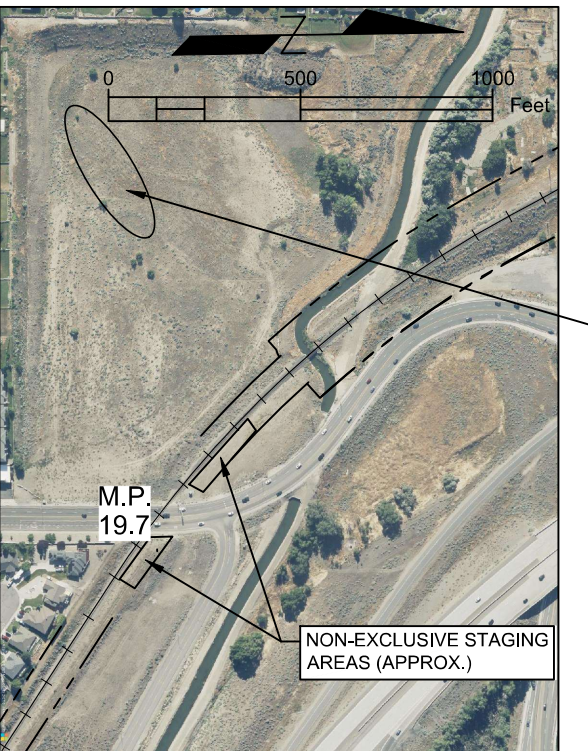
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TIME	3:59:13 PM			WA	PLAN REF NO					
DATE	11/28/2023			JOB NUMBER					GENERAL NOTES, LEGEND, & SYMBOLGY	SHEET
PLOTTED BY	N. SHRESTHA			CONTRACT NO.						2
DESIGNED BY	P. WEBER									OF
ENTERED BY	N. SHRESTHA									17
CHECKED BY										SHEETS
PROJ. ENGR.										
PROJ. MNGR.	P. WEBER			REVISION	DATE	BY				



LEGEND	
	PORT OF BENTON RAILROAD TRACK
	RAILROAD RIGHT-OF-WAY



INSET VIEW #1 - CITY DOCK AUXILIARY TRACK



INSET VIEW #2 - STEPTOE TAPTEAL INTERSECTION GRADE CROSSING

FILE NAME	C:\pwworking\west01\d3360535\03 POB Key Map.dwg		
TIME	7:41:01 AM		
DATE	11/29/2023		
PLOTTED BY	N. SHRESTHA		
DESIGNED BY	P. WEBER		
ENTERED BY	N. SHRESTHA		
CHECKED BY			
PROJ. ENGR.			
PROJ. MNGR.	P. WEBER	REVISION	DATE BY

811
Know what's below.
Call before you dig.

Digitally signed by
Folwell, Matthew R
Date: 2023.11.29
14:23:59-08'00'

P.E. STAMP BOX



YOUNG ASSET MANAGEMENT
STEPTOE TAPTEAL INTERSECTION
CROSSING RECONSTRUCTION

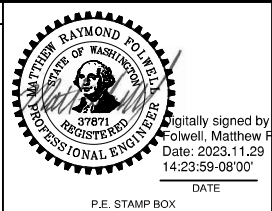
KEY MAP & CONTRACTOR STAGING AREAS

Plot 1
PLAN REF NO
KEY
SHEET 3 OF 17 SHEETS

ITEM NO.	TOTAL QUANTITY	SUB-TOTAL **	STD. ITEM NO.	UNIT	ITEM	RAIL ITEMS
		SECTION 1- 07.2(2) OF STANDARD SPECS				YOUNG ASSET MGMT.
					PREPARATION	
1	0	0			(NOT USED)	0
2	0	0			(NOT USED)	0
3	0	0			(NOT USED)	0
4	0	0			(NOT USED)	0
5	0	0			(NOT USED)	0
					OTHER ITEMS	
6	279.38	279.38		TF	REMOVE TRACK	279
7	114.00	114.00		TF	REMOVE AND DISPOSE CONCRETE CROSSING PANELS	114
8	507.00	507.00	0310	CY	ROADWAY EXCAVATION INCL. HAUL	507
9	607.00	607.00	7530	SY	CONSTRUCTION GEOTEXTILE FOR SEPARATION	607
10	70.00	70.00		CY	FURNISH AND INSTALL SUBBALLAST	70
11	44.00	44.00		TF	136 LB TRACK WITH 8.5' TIES	44
12	235.38	235.38		TF	136 LB TRACK WITH 10' TIES	235
13	230.00	230.00		TF	REPLACE RAIL AND OTM - 136 LB	230
14	2.00	2.00		PAIR	COMPROMISE JOINT BARS	2
15	345.00	345.00		TON	BALLAST DISTRIBUTION	345
16	200.00	200.00		TF	SURFACE, LINE, AND DRESS	200
17	421.00	421.00		TF	SLD TO PRESCRIBED ALIGNMENT & PROFILE	421
18	219.00	219.00		TF	FURNISH AND INSTALL CROSSING PANELS FOR 136 LB RAIL	219
19	95.00	95.00		EA	REPLACE CROSS TIES	95
20	439.00	439.00		LF	6" PVC PERF. PIPE	439
21	21.00	21.00		LF	6" PVC DRAIN PIPE	21
22	LUMP SUM	LUMP SUM		L.S.	RAILROAD GRADE CROSSING SIGNAL SYSTEM	LUMP SUM

FILE NAME	C:\pwworking\west01d3360535\04-05 SQ QT.dwg		
TIME	1:24:13 PM		
DATE	11/29/2023		
PLOTTED BY	N. SHRESTHA		
DESIGNED BY	P. WEBER		
ENTERED BY	N. SHRESTHA		
CHECKED BY			
PROJ. ENGR.			
PROJ. MNGR.	P. WEBER	REVISION	DATE BY

REGION NO.	STATE
	WA
JOB NUMBER	
CONTRACT NO.	



P.E. STAMP BOX DATE



YOUNG ASSET MANAGEMENT
STEPTOE TAPTEAL INTERSECTION
CROSSING RECONSTRUCTION

SUMMARY OF QUANTITIES


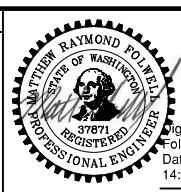
Plot 1
PLAN REF NO
SQ1
SHEET
4
OF
17
SHEETS

TRACK SEGMENT WORK ELEMENT #	STATION LIMITS			PLAN SHEET	MEASURED LENGTH	REMOVE TRACK	REMOVE AND DISPOSE CONCRETE CROSSING PANELS	ROADWAY EXCAVATION INCL. HAUL	CONSTRUCTION GEOTEXTILE FOR SEPARATION	FURNISH AND INSTALL SUBBALLAST	136 LB TRACK WITH 8.5' TIES	136 LB TRACK WITH 10' TIES	REPLACE RAIL AND OTM - 136 LB	COMPROMISE JOINT BARS	BALLAST DISTRIBUTION	SURFACE, LINE, AND DRESS	SLD TO PRESCRIBED ALIGNMENT & PROFILE	FURNISH AND INSTALL CROSSING PANELS FOR 136 LB RAIL	REPLACE CROSS TIES	6" PVC PERF. PIPE	6" PVC DRAIN PIPE	RAILROAD GRADE CROSSING SIGNAL SYSTEM
UNIT OF MEASURE ->					TF	TF	TF	CY	SY	CY	TF	TF	TF	PAIR	TON	TF	TF	TF	EA	LF	LF	L.S.
T1	43+60.00	-	44+60.00	RV1	100										10	100			15			
T2	44+60.00	-	47+01.29	RV1	241									2	36		241		35			
T3	47+01.29	-	47+16.29	RV1	15	15					15		192		2				2			
T4	47+16.29	-	47+31.29	RV1	15	15			40	7	7	8			18							1
T5	47+31.29	-	49+50.66	RV1	219	219	114	507	527	57		219			217		219			439		
T6	49+50.66	-	49+65.66	RV1	15	15			40	6	7	8			18						21	
T7	49+65.66	-	49+80.66	RV1	15	15					15		38		2				2			
T8	49+80.66	-	51+60.66	RV1	180										27		180		26			
T9	51+60.66	-	52+60.66	RV1	100										15	100			15			
Steptoe Tapteal Totals						279	114	507	607	70	44	235	230	2	345	200	421	219	95	439	21	1

FILE NAME	C:\pwworking\west01\d3360535\04-05 SQ QT.dwg
TIME	1:24:35 PM
DATE	11/29/2023
PLOTTED BY	N. SHRESTHA
DESIGNED BY	P. WEBER
ENTERED BY	N. SHRESTHA
CHECKED BY	
PROJ. ENGR.	
PROJ. MNGR.	P. WEBER

REVISION	DATE	BY

REGION NO.	STATE
	WA
JOB NUMBER	
CONTRACT NO.	

Digitally signed by Folwell, Matthew R
Date: 2023.11.29 14:24:00-08'00'

P.E. STAMP BOX	DATE



YOUNG ASSET MANAGEMENT STEPTOE TAPTEAL INTERSECTION CROSSING RECONSTRUCTION
QUANTITY TABULATIONS

ALIGNMENT TABLES: Steptoe Tapteal Crossing Design Rail Centerline Alignment

CURVE/SPIRAL NO.	POINT	STATION	NORTHING	EASTING	DIRECTION	LENGTH	RADIUS	DEGREE	CHORD LENGTH	DELTA ANGLE	EXTERNAL TANGENT	k
	POB	44+60.00	331332.95'	1958608.54'	N 57° 07' 08.54" W	101.405'						
	TS	45+61.41	331388.00'	1958523.38'		122.972'				1° 13' 0.84"		1.609
S-1	SC	46+84.38	331455.49'	1958420.59'		476.288'	2895.037'	1° 58' 45.12"	475.774'	9° 25' 36.1"		
C-1	POE	51+60.66	331753.68'	1958049.85'								



GENERAL NOTES

1. PROTECT IN PLACE ALL EXISTING BOOT LEGS AND RAIL TAP WIRES DURING INITIAL PHASE OF GRADE CROSSING RECONSTRUCTION (PRIOR TO WIDENING OF ROAD AT GRADE CROSSING) TO ALLOW EXISTING CROSSING SIGNAL SYSTEM TO REMAIN IN OPERATION AND FUNCTIONING PROPERLY. SEE PROJECT SPECIFICATIONS FOR DETAILS ON ORDER OF WORK, ETC.
2. RAIL REMOVAL ASSOCIATED WITH "REPLACE RAIL AND OTM" ITEMS NOT SHOWN ON THIS SHEET. SEE SHEETS RD1 AND RD2.
3. SEE SHEETS RD1 AND RD2 FOR FINAL RAIL JOINT LOCATIONS.
4. SEE STEPTOE AND TAPTEAL INTERSECTION PLANS, BY JUB ENGINEERS, FOR ALL SITE PREPARATION/DEMOLITION WORK NOT SHOWN IN THESE PLANS.

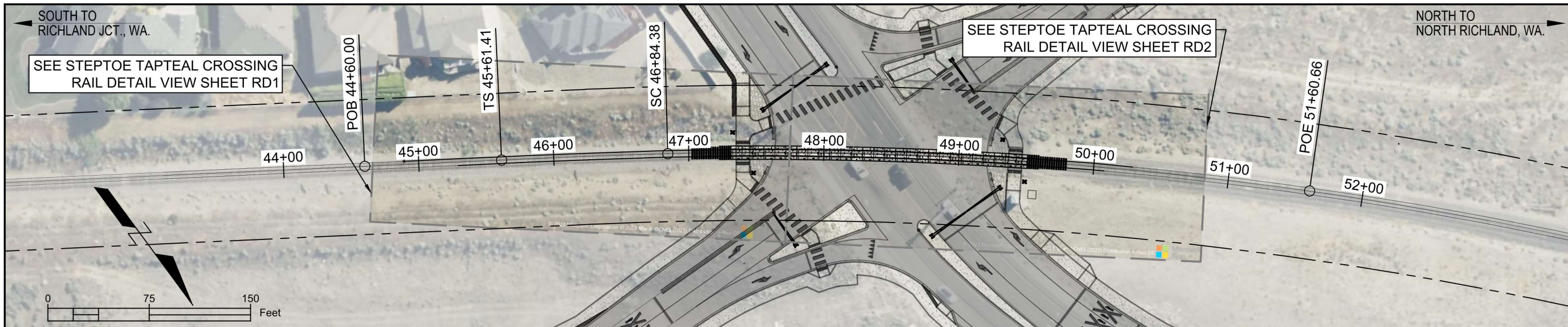
BID ITEM KEYNOTES

- 6 REMOVE TRACK
STA 47+01.29 - 49+81.66
- 7 REMOVE AND DISPOSE CONCRETE CROSSING PANELS
STA 47+78.34 - 48+92.43
- 22 RAILROAD GRADE CROSSING SIGNAL SYSTEM
REMOVE EXISTING SIGNAL HOUSE
REMOVE EXISTING CANTILEVER SIGNAL MASTS
REMOVE EXISTING GATE MECHANISMS

LEGEND

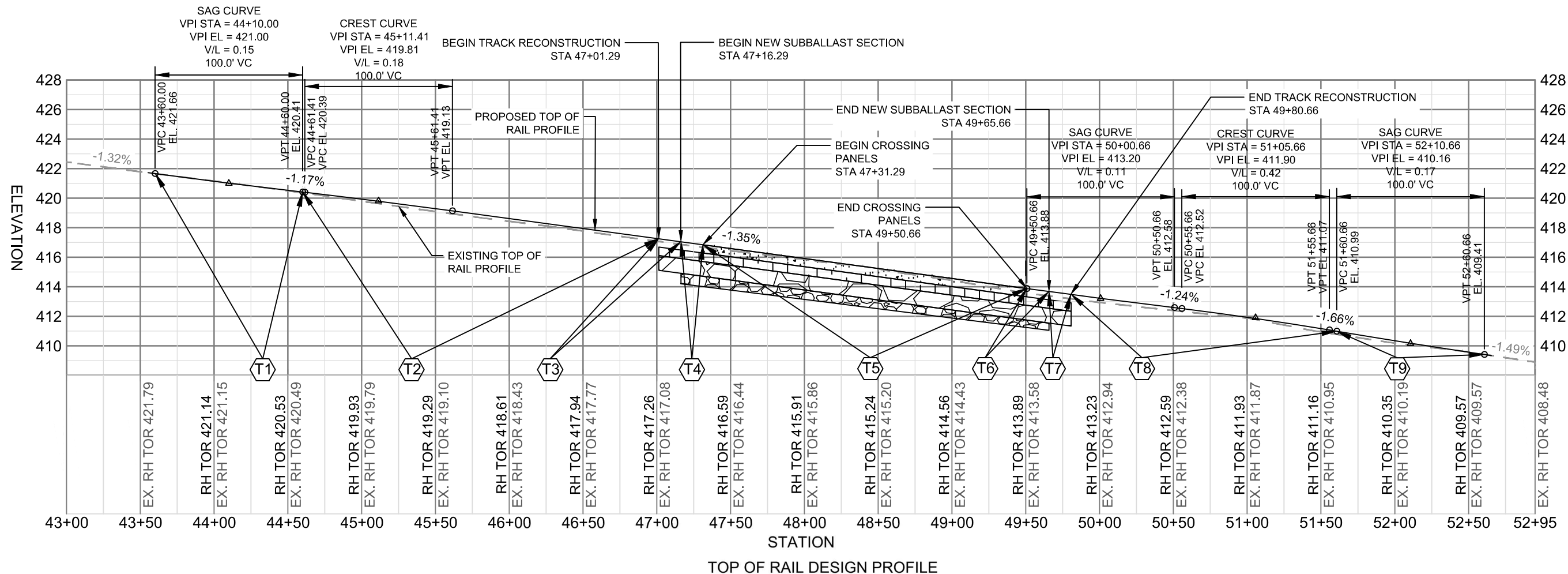
- REMOVE TRACK LIMITS
- CROSSING GATE SIGNAL MAST
- CROSSING GATE MECH.
- ELECTRICAL JUNCTION BOX
- LIGHT POLE
- ELECTRICAL METER
- SEWER MANHOLE
- CATCH BASIN

FILE NAME: C:\pwworking\west01\d3360535\07 POB_STEPTOE TAPTEAL_DEMO_SHEET.dwg		REGION NO.		STATE: WA					YOUNG ASSET MANAGEMENT STEPTOE TAPTEAL INTERSECTION CROSSING RECONSTRUCTION		Plot 1
TIME: 10:17:26 AM	DATE: 11/29/2023	JOB NUMBER		CONTRACT NO.					DEMOLITION PLAN		PLAN REF NO DEMO1
DESIGNED BY: N. SHRESTHA	CHECKED BY: P. WEBER	REVISION	DATE	BY							SHEET 7 OF 17 SHEETS

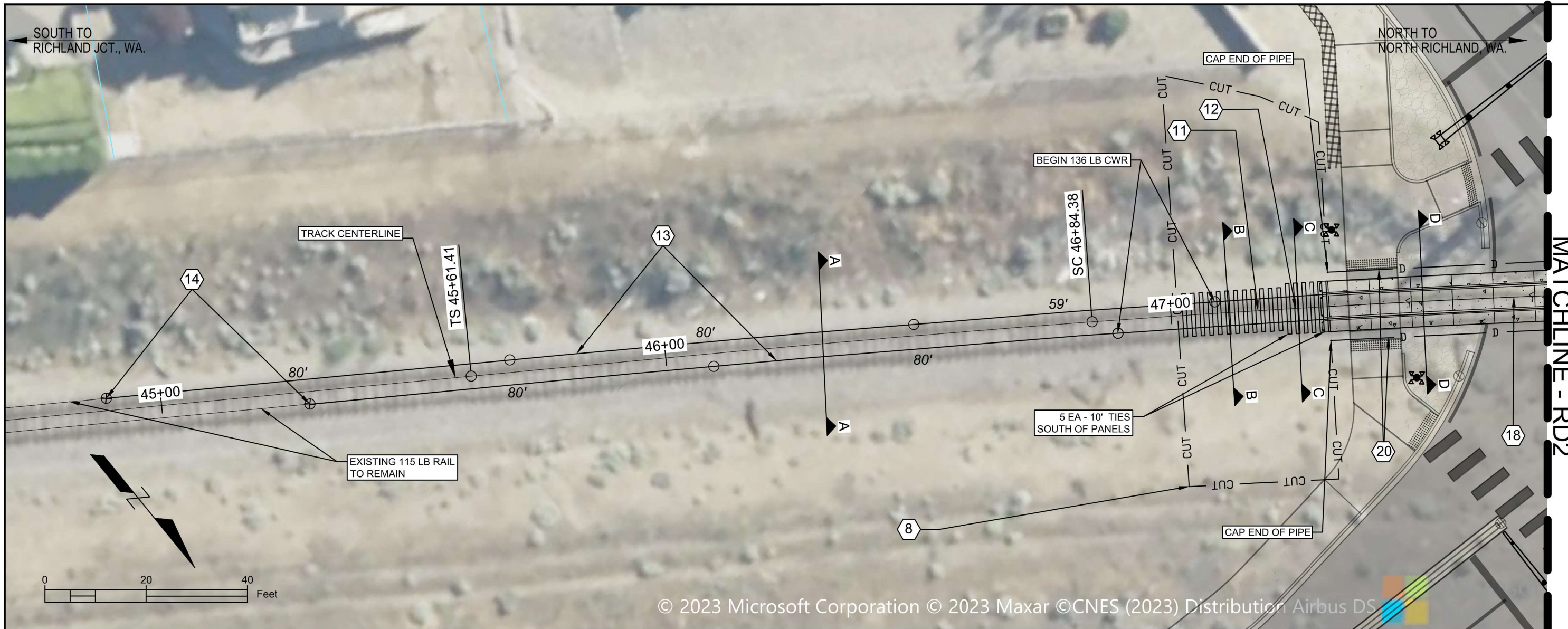


GENERAL NOTES

- SEE SHEETS RD1 & RD2 FOR ADDITIONAL DETAILS ON WORK WITHIN PROXIMITY OF STEPTOE TAPTEAL GRADE CROSSING.
- EXCAVATED MATERIAL SHALL BE STOCKPILED AT YOUNG ASSET MANAGEMENT'S PROPERTY SOUTHWEST OF STEPTOE TAPTEAL GRADE CROSSING (SEE KEYMAP SHEET).
- EXISTING AND PROPOSED TOP OF RAIL PROFILES SHOWN BELOW ARE FOR LOW (RIGHT HAND) RAIL.



FILE NAME	C:\pwworking\west01\d3360535\08-10 POB_STEPTOE TAPTEAL_RAIL_SHEETS.dwg						YOUNG ASSET MANAGEMENT STEPTOE TAPTEAL INTERSECTION CROSSING RECONSTRUCTION	Plot 1
TIME	1:36:50 PM							PLAN REF NO
DATE	11/29/2023			REGION NO.	STATE	REGION NO. WA JOB NUMBER CONTRACT NO.	RAIL VICINITY MAP	SHEET 8 OF 17 SHEETS
PLOTTED BY	N. SHRESTHA			DATE	DATE			
DESIGNED BY	P. WEBER			DATE	DATE	REVISION	DATE	BY
ENTERED BY	N. SHRESTHA							
CHECKED BY								
PROJ. ENGR.								
PROJ. MNGR.	P. WEBER							



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GENERAL NOTES

1. CONCRETE CROSSING PANELS SHALL BE INSTALLED TO THE STATIONING INDICATED IN THE PLANS. ANY NECESSARY ADJUSTMENTS TO TIE SPACING SHALL BE MADE WITHIN THE LIMITS OF 8.5' TIES ONLY.
2. SEE SHEET RV1 FOR SURFACING, TIE REPLACEMENT, AND/OR MISC. REHABILITATION WORK.
3. COMPROMISE JOINT LOCATIONS SHOWN ARE APPROXIMATE AND MAY BE ADJUSTED AS NECESSARY TO OBTAIN SUSPENDED JOINT CONFIGURATION.
4. PROTECT IN PLACE ALL EXISTING BOOT LEGS AND RAIL TAP WIRES DURING INITIAL PHASE OF GRADE CROSSING RECONSTRUCTION (PRIOR TO WIDENING OF ROAD AT GRADE CROSSING) TO ALLOW EXISTING CROSSING SIGNAL SYSTEM TO REMAIN IN OPERATION AND FUNCTIONING PROPERLY. SEE PROJECT SPECIFICATIONS FOR DETAILS ON ORDER OF WORK AND CONSTRUCTION PHASING.

5. GRADING LIMIT LINE WITHIN CROSSING PANEL LIMITS NOT SHOWN FOR CLARITY.

BID ITEM KEYNOTES

- 8 ROADWAY EXCAVATION INCL. HAUL
- 11 136 LB TRACK WITH 8.5' TIES
STA 47+01.29 - 47+23.29
- 12 136 LB TRACK WITH 10' TIES
STA 47+23.29 - 47+74.41
- 13 REPLACE RAIL AND OTM - 136 LB
LH RAIL STA 44+89.26 - 47+01.29
RH RAIL STA 45+29.24 - 47+01.29
- 14 COMPROMISE JOINT BARS
115/136 LB: LH RAIL STA 44+89.26
115/136 LB: RH RAIL STA 45+29.24
- 18 FURNISH AND INSTALL CROSSING PANELS FOR 136 LB RAIL
STA 47+31.29 - 47+74.41
- 20 6" PVC PERF. PIPE
STA 47+31.28, 6.75' RT - 47+74.41, 6.75' RT
STA 47+31.37, 6.75' LT - 47+74.41, 6.75' LT

LEGEND

- ⊗ COMPROMISE JOINT BAR
- CONVENTIONAL JOINT BAR
- # PROJECT BID ITEM KEYNOTE
- ⌞ 6" PVC PERFORATED PIPE
- 80' APPROX. PROPOSED RAIL LENGTH (FEET)
- CUT - GRADING LIMITS (APPROX.)

FILE NAME	C:\pwworking\west01\d3360535\08-10 POB_STEPTOE TAPTEAL_RAIL_SHEETS.dwg		
TIME	10:15:11 AM		
DATE	11/29/2023		
PLOTTED BY	N. SHRESTHA		
DESIGNED BY	P. WEBER		
ENTERED BY	N. SHRESTHA		
CHECKED BY			
PROJ. ENGR.			
PROJ. MNGR.	P. WEBER		
REVISION	DATE	BY	

REGION NO.	STATE
	WA
JOB NUMBER	
CONTRACT NO.	

811
Know what's below.
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Digitally signed by
Matthew Raymond Folwell, Matthew R
Date: 2023.11.29
14:24:02-08'00'

DATE

P.E. STAMP BOX

DATE

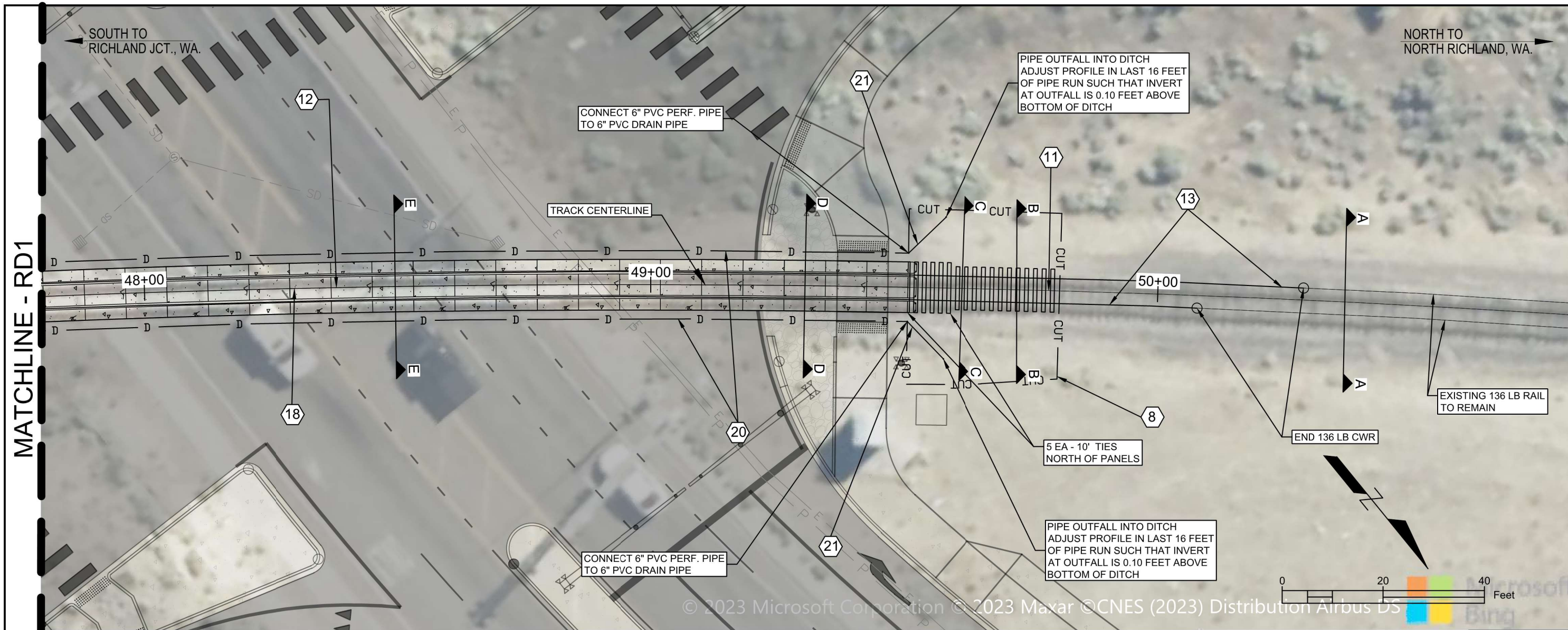
P.E. STAMP BOX



YOUNG ASSET MANAGEMENT
STEPTOE TAPTEAL INTERSECTION
CROSSING RECONSTRUCTION

RAIL DETAIL PLAN
(1 OF 2)

Plot 1
PLAN REF NO
RD1
SHEET
9
OF
17
SHEETS



GENERAL NOTES

- CONCRETE CROSSING PANELS SHALL BE INSTALLED TO THE STATIONING INDICATED IN THE PLANS. ANY NECESSARY ADJUSTMENTS TO TIE SPACING SHALL BE MADE WITHIN THE LIMITS OF 8.5' TIES ONLY.
- SEE SHEET RV1 FOR SURFACING, TIE REPLACEMENT, AND/OR MISC. REHABILITATION WORK.
- COMPROMISE JOINT LOCATIONS SHOWN ARE APPROXIMATE AND MAY BE ADJUSTED AS NECESSARY TO OBTAIN SUSPENDED JOINT CONFIGURATION.
- PROTECT IN PLACE ALL EXISTING BOOT LEGS AND RAIL TAP WIRES DURING INITIAL PHASE OF GRADE CROSSING RECONSTRUCTION (PRIOR TO WIDENING OF ROAD AT GRADE CROSSING) TO ALLOW EXISTING CROSSING SIGNAL SYSTEM TO REMAIN IN OPERATION AND FUNCTIONING PROPERLY. SEE PROJECT SPECIFICATIONS FOR DETAILS ON ORDER OF WORK AND CONSTRUCTION PHASING.
- GRADING LIMIT LINE WITHIN CROSSING PANEL LIMITS NOT SHOWN FOR CLARITY.

BID ITEM KEYNOTES

- 8 ROADWAY EXCAVATION INCL. HAUL
- 11 136 LB TRACK WITH 8.5' TIES
STA 49+58.66 - 49+80.66
- 12 136 LB TRACK WITH 10' TIES
STA 47+74.41 - 49+58.66
- 13 REPLACE RAIL AND OTM - 136 LB
LH RAIL STA 49+80.66 - 50+28.65
RH RAIL STA 49+80.66 - 50+07.82
- 18 FURNISH AND INSTALL CROSSING PANELS FOR 136 LB RAIL
STA 47+74.41 - 49+50.66
- 20 6" PVC PERF. PIPE
STA 47+74.41, 6.75' RT - 49+50.67, 6.75' RT
STA 47+74.41, 6.75' LT - 49+50.69, 6.75' LT
- 21 6" PVC DRAIN PIPE
STA 49+50.67, 6.75' RT - 49+57.96, 14.00' RT
STA 49+50.69, 6.75' LT - 49+57.90, 14.00' LT

LEGEND

- COMPROMISE JOINT BAR
- CONVENTIONAL JOINT BAR
- GRADING LIMITS (APPROX.)
- PROJECT BID ITEM KEYNOTE
- 6" PVC PERFORATED PIPE
- 80' APPROX. PROPOSED RAIL LENGTH (FEET)
- EXISTING SEWER MANHOLE
- EXISTING CATCH BASIN

FILE NAME: C:\pwworking\west01\d3360535\08-10 POB_STEPTOE TAPTEAL_RAIL_SHEETS.dwg		REGION NO.	STATE: WA				YOUNG ASSET MANAGEMENT STEPTOE TAPTEAL INTERSECTION CROSSING RECONSTRUCTION	Plot 1
TIME: 10:15:22 AM	DATE: 11/29/2023	JOB NUMBER	CONTRACT NO.					PLAN REF NO: RD2
DESIGNED BY: N. SHRESTHA	CHECKED BY: P. WEBER	DATE	BY	REVISION	DATE	DATE	RAIL DETAIL PLAN (2 OF 2)	SHEET 10 OF 17 SHEETS

BID ITEM KEYNOTES

- 8 ROADWAY EXCAVATION INCL. HAUL
- 9 CONSTRUCTION GEOTEXTILE FOR SEPARATION
- 10 FURNISH AND INSTALL SUBBALLAST
- 15 BALLAST DISTRIBUTION
- 16 SURFACE, LINE, AND DRESS *
- 17 SLD TO PRESCRIBED ALIGNMENT & PROFILE *
- 19 REPLACE CROSS TIES

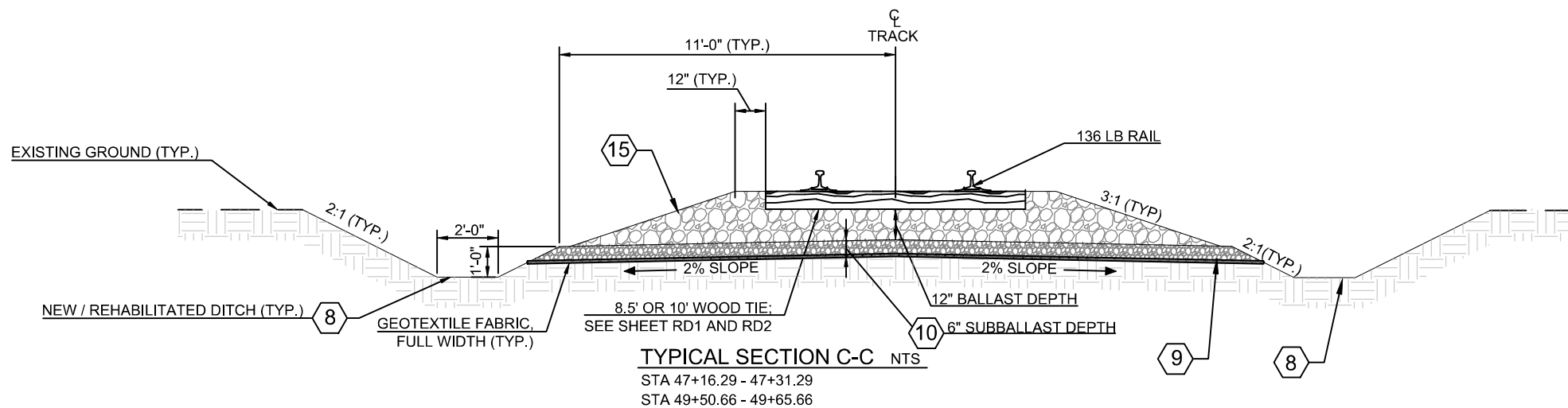
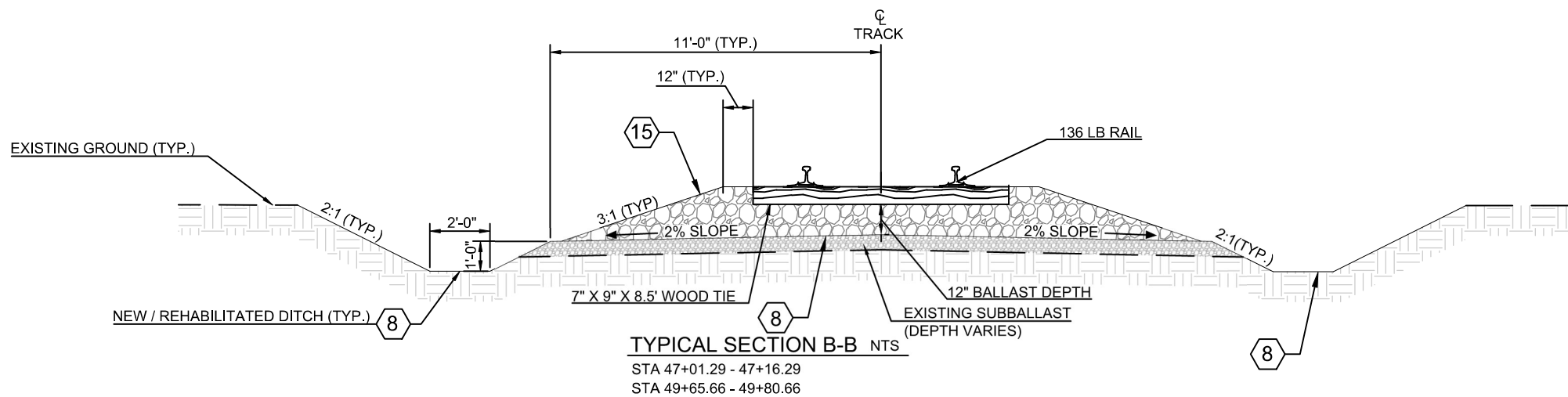
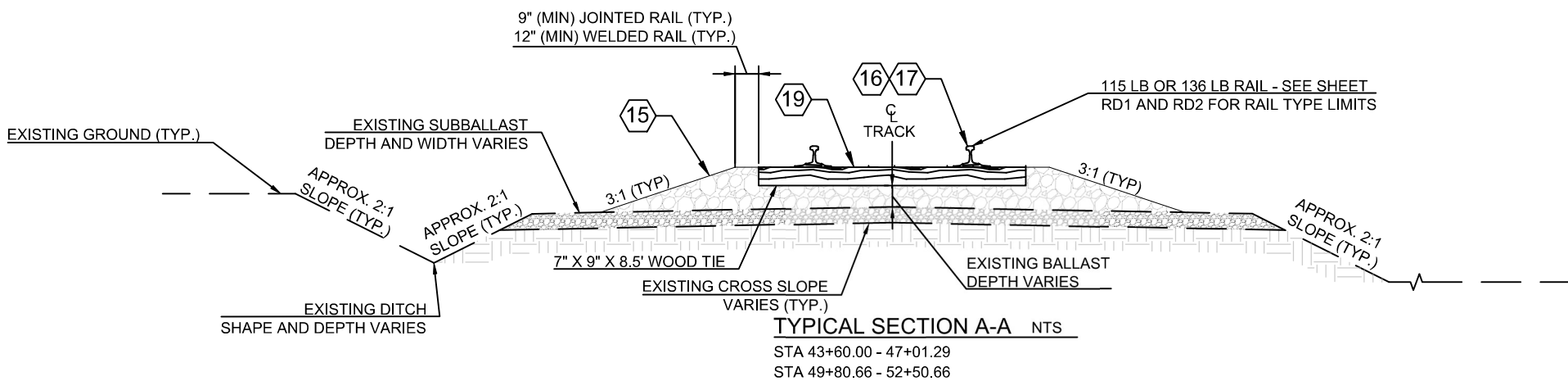
* SEE RV SHEET FOR STATION RANGES ON SURFACING ITEMS.

GENERAL NOTES

1. NEW TRACK, RAIL REPLACEMENT, AND CONCRETE CROSSING PANEL BID ITEM KEYNOTES NOT SHOWN FOR CLARITY. SEE RD SHEETS FOR STATION RANGES ON THESE ITEMS.
2. ALL TRANSITIONS BETWEEN TYPICAL SECTIONS AND AT ENDS OF GRADING LIMITS SHALL INCORPORATE SLOPES NO STEEPER THAN 2:1 ON ANY EXPOSED SURFACES.

LEGEND

- # PROJECT BID ITEM KEYNOTE
- EXISTING SUBGRADE
- EXISTING BALLAST (TO REMAIN)
- EXISTING SUBBALLAST (TO REMAIN)
- NEW BALLAST SECTION
- NEW SUBBALLAST SECTION
- GEOTEXTILE FABRIC LAYER



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DATE	11/29/2023			
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DESIGNED BY	P. WEBER			
ENTERED BY	N. SHRESTHA			
CHECKED BY				
PROJ. ENGR.				
PROJ. MNGR.	P. WEBER	REVISION	DATE	BY

REGION NO. STATE
 WA

JOB NUMBER

CONTRACT NO.

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 Colwell, Matthew R
 Date: 2023.11.29
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P.E. STAMP BOX

P.E. STAMP BOX



YOUNG ASSET MANAGEMENT
 STEPTOE TAPTEAL INTERSECTION
 CROSSING RECONSTRUCTION

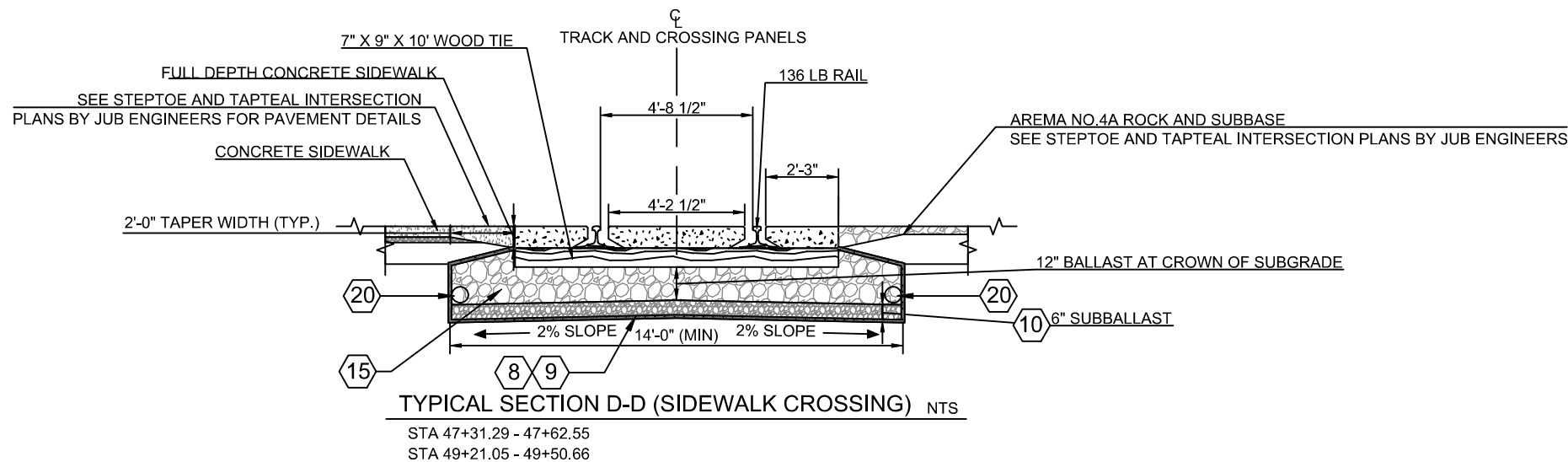
TYPICAL SECTIONS
 (1 OF 2)

Plot 1
 PLAN REF NO
 TYP1

SHEET
 11
 OF
 17
 SHEETS

BID ITEM KEYNOTES

- 8 ROADWAY EXCAVATION INCL. HAUL
- 9 CONSTRUCTION GEOTEXTILE FOR SEPARATION
- 10 FURNISH AND INSTALL SUBBALLAST
- 15 BALLAST DISTRIBUTION
- 20 6" PVC PERF. PIPE

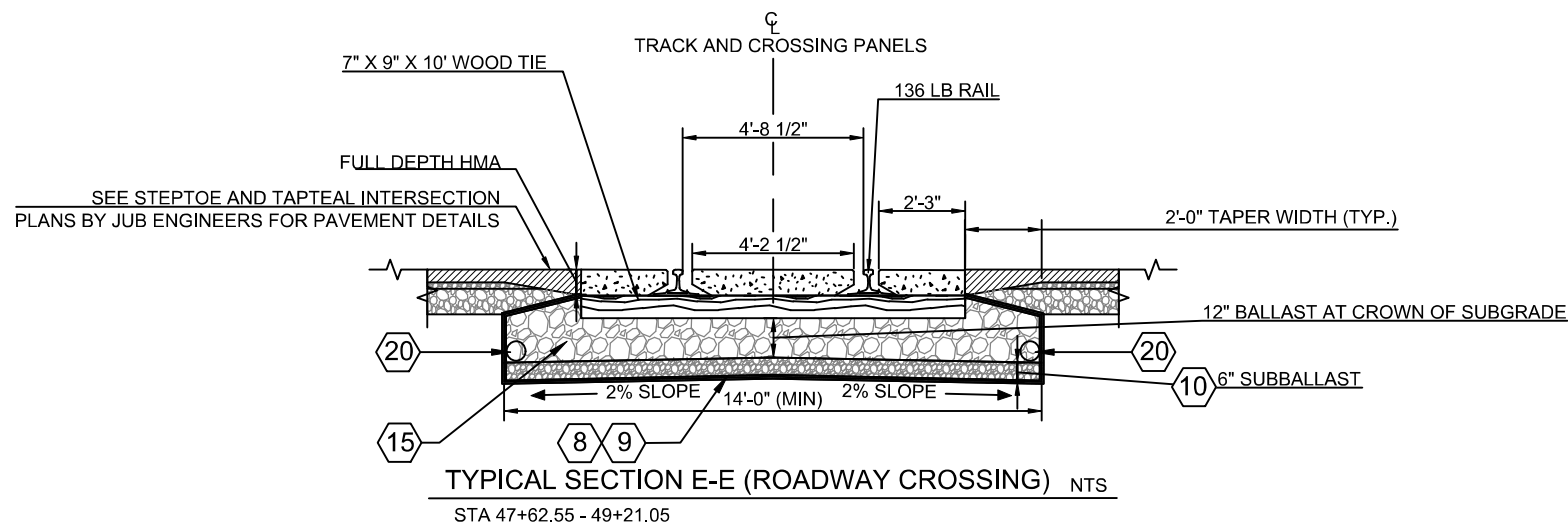


GENERAL NOTES

1. NEW TRACK, RAIL REPLACEMENT, AND CONCRETE CROSSING PANEL BID ITEM KEYNOTES NOT SHOWN FOR CLARITY. SEE RD SHEETS FOR STATION RANGES ON THESE ITEMS.
2. ALL TRANSITIONS BETWEEN TYPICAL SECTIONS AND AT ENDS OF GRADING LIMITS SHALL INCORPORATE SLOPES NO STEEPER THAN 2:1 ON ANY EXPOSED SURFACES.
3. PROFILE OF 6" PERF. PIPE AT LOCATION SHOWN SHALL FOLLOW TRACK PROFILE.

LEGEND

- # PROJECT BID ITEM KEYNOTE
- EXISTING SUBGRADE
- EXISTING BALLAST (TO REMAIN)
- EXISTING SUBBALLAST (TO REMAIN)
- NEW BALLAST SECTION
- NEW SUBBALLAST OR AGGREGATE SECTION
- GEOTEXTILE FABRIC LAYER
- NEW HMA PAVEMENT SECTION



FILE NAME C:\pwworking\west01\d3360535\11-12 POB Typical_Sections.dwg		REGION NO.		STATE	 811 Know what's below. Call before you dig.	 Digitally signed by Colwell, Matthew R. Date: 2023.11.29 14:24:04-08'00'		YOUNG ASSET MANAGEMENT STEPTOE TAPTEAL INTERSECTION CROSSING RECONSTRUCTION		Plot 1
TIME 1:16:22 PM	DATE 11/29/2023	WA	PLAN REF NO							
PLOTTED BY N. SHRESTHA	DESIGNED BY P. WEBER	JOB NUMBER	TYP2							
ENTERED BY N. SHRESTHA	CHECKED BY	CONTRACT NO.	SHEET 12 OF 17 SHEETS							
PROJ. ENGR.	PROJ. MNGR. P. WEBER	REVISION	DATE	BY				TYPICAL SECTIONS (2 OF 2)		

NOTES:

1. THE CONTRACTOR SHALL DESIGN, FURNISH, INSTALL, TEST, AND CERTIFY THE NEW HIGHWAY-GRADE CROSSING WARNING SYSTEMS FOR STEPTOE STREET. THE CONTRACTOR IS RESPONSIBLE FOR ALL DESIGN, CONSTRUCTION, AND TESTING FOR THE CROSSING SYSTEMS. THE CONTRACTOR SHALL PROVIDE A COMPLETE OPERATING SYSTEM; THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL APPLICATION LOGIC, SOFTWARE, CAD FILES, ETC. ALL CAD FILES, AS-BUILTS, MANUALS, SPARES AS LISTED, AND APPLICATION LOGIC SHALL BE DELIVERED TO THE PORT OF BENTON RAILROAD UPON COMPLETION AND CUTOVER OF THE CROSSING SYSTEM.
2. THE CONTRACTOR SHALL DETERMINE THE APPROACH AND WARNING TIME CALCULATION FOR STEPTOE STREET. THE CONTRACTOR SHALL COORDINATE WITH THE TRAFFIC SIGNAL ENGINEER ON REQUIRED CALCULATIONS, REQUIREMENTS, AND CLEARING PHASES. THE CONTRACTOR SHALL DETERMINE THE APPROPRIATE FREQUENCY FOR THE APPROACH CIRCUIT FOLLOWING ALSTOM XP-4 APPLICATION GUIDELINES.
3. SIGNAL HOUSE SHALL BE A MINIMUM OF 8' X 10' ALUMINUM HOUSE WITH HEATER, AC UNIT, RECEPTACLES, HOUSE LIGHTING, RACKS, AND BACKBOARDS.
4. GATES SHALL BE SIEMENS S-60 GATES WITH ALUMINUM MASTS, DOUBLE JUNCTION BOXES, COMPLETE WITH DOUBLE COUNTERWEIGHT ARMS, AND STAINLESS STEEL HARDWARE.
5. ALL LAMPS SHALL BE 12" LED LAMPS WITH 24" FLAT BLACK ALUMINUM BACKGROUNDS AND HOODS. EACH CROSSARM SHALL HAVE STAINLESS STEEL HARDWARE.
6. BELLS SHALL BE ELECTRONIC, AS SHOWN.
7. THE CONSTANT WARNING TIME UNIT SHALL BE ALSTOM XP-4 WITH NORMAL AND STANDBY MODULES, IXC MODULES, 2-XPI SURGE PANELS, MDSA TRACK SURGE PANELS, AND ALL RELATED WIRING HARNESSSES AS RECOMMENDED BY ALSTOM APPLICATION GUIDELINES.
8. ALL RELAYS SHALL BE ALSTOM B1 PLUG-IN RELAYS, EXCEPT FOR NON-VITAL POWER-OFF CIRCUITS.
9. THE CONTRACTOR SHALL FURNISH AN EXTERNAL DATA RECORDER; THE DATA RECORDER SHALL BE NAS MDA-II RECORDER WITH BATTERY MONITOR, 8 ANALOG INPUTS, 16 DIGITAL INPUTS, POWER OUTPUTS, CURRENT SENSORS, DTMF FUNCTIONS, AND GPS.
10. THE CONTRACTOR SHALL COORDINATE WITH THE DEVELOPER'S TRAFFIC SIGNAL ENGINEER ON TRAFFIC SIGNAL INTERCONNECT AND FUNCTIONALITY. FUNCTIONALITY SHALL PROVIDE PCR, TCR, XR, GD-ISL, HEALTHR CIRCUITS, AND ALL INTERCONNECT CIRCUITS SHALL HAVE VITAL RELAYS. TRAFFIC PREEMPTION SHALL MEET MINIMUM FRA, MUTCD, WSDOT, AREMA, AND CITY OF RICHLAND STANDARDS.
11. THE CONTRACTOR SHALL REUSE THE EXISTING METER AT STEPTOE. SIZE AND INSTALL APPROPRIATE BREAKERS BASED ON CALCULATIONS. THE CONTRACTOR SHALL DETERMINE ALL LOADS AND CIRCUITS FOR THE CROSSING WARNING SYSTEM.
12. THE CONTRACTOR SHALL SIZE THE STANDBY BATTERY SYSTEM AND CHARGING SYSTEM BASED ON THE NUMBER OF LAMPS, GATES, BELLS, ETC. THE CONTRACTOR SHALL PROVIDE NRS HF-MAX BATTERY CHARGERS AND ELM LEAD ACID WET CELLS AS APPROPRIATELY SIZED BY THE CONTRACTOR.
13. THE CONTRACTOR SHALL DESIGN AND FURNISH CONDUIT DUCT BANK AND PULL BOXES FOR EACH TRACK CONNECTION, WARNING DEVICE, TRAFFIC SIGNAL INTERCONNECT, AND AC POWER CABLE. UNDER TRACK AND ROADWAY CONDUITS SHALL BE A MINIMUM OF 4" PVC SCHEDULE 80. PULL BOXES SHALL HAVE METAL COVERS WITH A 20K RATING AND AN IDENTIFICATION PLATE "PORT OF BENTON RR SIGNAL" ON EACH LID/COVER.
14. THE CONTRACTOR SHALL VERIFY APPROACH OVERLAPS WITH ADJACENT CROSSINGS AND FREQUENCY COMPATIBILITY IF AN OVERLAP WILL BE REQUIRED. THE CONTRACTOR SHALL MODIFY THE ADJACENT APPROACHES AND INSTALL THE APPROPRIATE NARROW BAND SHUNTS AT THE ADJACENT CROSSINGS. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE RECALIBRATION, SETUP, AND TEST OF THE ADJACENT CROSSINGS.
15. THE CONTRACTOR SHALL PROVIDE THE TRAFFIC SIGNAL INTERCONNECT CABLE AND INSTALL IN CONDUIT TO THE NORTHEAST QUADRANT OF THE STEPTOE TAPTEAL INTERSECTION ADJACENT TO THE TRAFFIC SIGNAL CONTROLLER. SEE TRAFFIC SIGNAL PLAN SHEET TS-3A IN THE J-U-B ENGINEERS PLAN SET.


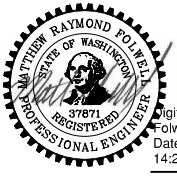

SPARE EQUIPMENT:

THE CONTRACTOR SHALL PROVIDE THE FOLLOWING SPARE EQUIPMENT:

(1) ONE COMPLETE WARNING DEVICE WITH WIRING HARNESSSES, S-60 GATE, 2-WAY FLASHERS, BELL, WIND GUARD, BASE, MAST, AND SIGNS (EQUIVALENT TO GATE #1 AS SHOWN ON THE DRAWINGS), WARNING DEVICE SHALL BE CONSTRUCTED AND CREATED COMPLETE.

(1) COMPLETE ALSTOM B1 RELAY WITH B1 PLUGBOARD KIT, AND (12) CRIMP TERMINALS

SPARE EQUIPMENT SHALL BE DELIVERED TO PORT OF BENTON RAILROAD, 3250 PORT OF BENTON BLVD, RICHLAND, WA 9935 (PHONE: (509) 375-3060), PRIOR TO CUT-OVER AND COMMISSIONING OF STEPTOE STREET WARNING SYSTEM.

FILE NAME C:\pwworking\west01\3360535\13 POB Crossing Track Plan_General Notes.dwg				REGION NO.	STATE			Digitally signed by Folwell, Matthew R Date: 2023.11.29 14:24:04-08'00' DATE _____ P.E. STAMP BOX		YOUNG ASSET MANAGEMENT STEPTOE TAPTEAL INTERSECTION CROSSING RECONSTRUCTION		Plot 1 PLAN REF NO SG01	
TIME	8:56:37 AM			WA									
DATE	11/29/2023												
PLOTTED BY	N. SHRESTHA												
DESIGNED BY	C. BAKER												
ENTERED BY	S. STEFAN												
CHECKED BY													
PROJ. ENGR.													
PROJ. MNGR.	P. WEBER												
		REVISION		DATE	BY								
										CROSSING TRACK PLAN MP 19.63 GENERAL NOTES		SHEET 13 OF 17 SHEETS	



FSS-1/2 XXXHZ (SEE NOTE 1)
TURNOUT (SEE NOTE 2)

FSS-1/2 XXXHZ (SEE NOTE 1)

STEPTOE STREET
MP 19.63
DOT # 310-397T

WARNING!

HIGHWAY-RAIL GRADE CROSSING
WARNING SYSTEM AND HIGHWAY
TRAFFIC SIGNALS ARE
INTERCONNECTED.

BEFORE MODIFICATION is made to any operation which connects to or controls the timing of an active railroad warning system and/or timing and phasing of a traffic signal the appropriate party(ies) shall be notified and, if necessary a joint inspection conducted.

NOTES:

1. THE CONTRACTOR SHALL DETERMINE THE APPROACH AND WARNING TIME CALCULATION FOR STEPTOE STREET. THE CONTRACTOR SHALL COORDINATE WITH THE TRAFFIC SIGNAL ENGINEER ON REQUIRED CALCULATION, REQUIREMENTS, AND CLEARING PHASES. THE CONTRACTOR SHALL DETERMINE THE APPROPRIATE FREQUENCY FOR THE APPROACH CIRCUIT FOLLOWING ALSTOM XP-4 APPLICATION GUIDELINES. THE CONTRACTOR SHALL VERIFY APPROACH OVERLAPS WITH ADJACENT CROSSINGS AND FREQUENCY COMPATIBILITY IF AN OVERLAP WILL BE REQUIRED. THE CONTRACTOR SHALL MODIFY THE ADJACENT APPROACHES AND INSTALL THE APPROPRIATE NARROW BAND SHUNTS AT THE ADJACENT CROSSING.
2. THE CONTRACTOR SHALL DETERMINE IF TURNOUT WILL BE IN THE APPROACH CIRCUIT AFTER WARNING TIME AND TRAFFIC PREEMPTION ARE CALCULATED. THE CONTRACTOR SHALL INSTALL INSULATED SWITCH ROD IN THE TURNOUT AND FOULING INSULATED JOINTS IF REQUIRED.

APPROACH AND WARNING TIME CALCULATION	TRACK 1
MINIMUM WARNING TIME	* SEC
PLUS CLEARANCE TIME	* SEC
PLUS ADDITIONAL GATE DISPLAY	* SEC
PLUS BUFFER TIME	* SEC
TOTAL WARNING TIME	* SEC
TOTAL WARNING TIME	* SEC
PED CLEAROUT	* SEC
PLUS ADVANCE PREEMPT	* SEC
TOTAL APPROACH TIME	* SEC
MAXIMUM TRAIN SPEED	25 MPH
TIMES RATIO OF FT/SEC TO MPH	*
TOTAL APPROACH DISTANCE	*

*SEE NOTE 1

FILE NAME	C:\pwworking\west01\d3360535\14 POB Crossing Track Plan_Sheet 1 of 2.dwg			
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DATE	11/29/2023			
PLOTTED BY	N. SHRESTHA			
DESIGNED BY	C. BAKER			
ENTERED BY	S. STEFAN			
CHECKED BY				
PROJ. ENGR.				
PROJ. MNGR.	P. WEBER			
	REVISION	DATE	BY	

Digitally signed by Folwell, Matthew R
Date: 2023.11.29 14:24:05-08'00'

P.E. STAMP BOX DATE



YOUNG ASSET MANAGEMENT
STEPTOE TAPTEAL INTERSECTION
CROSSING RECONSTRUCTION

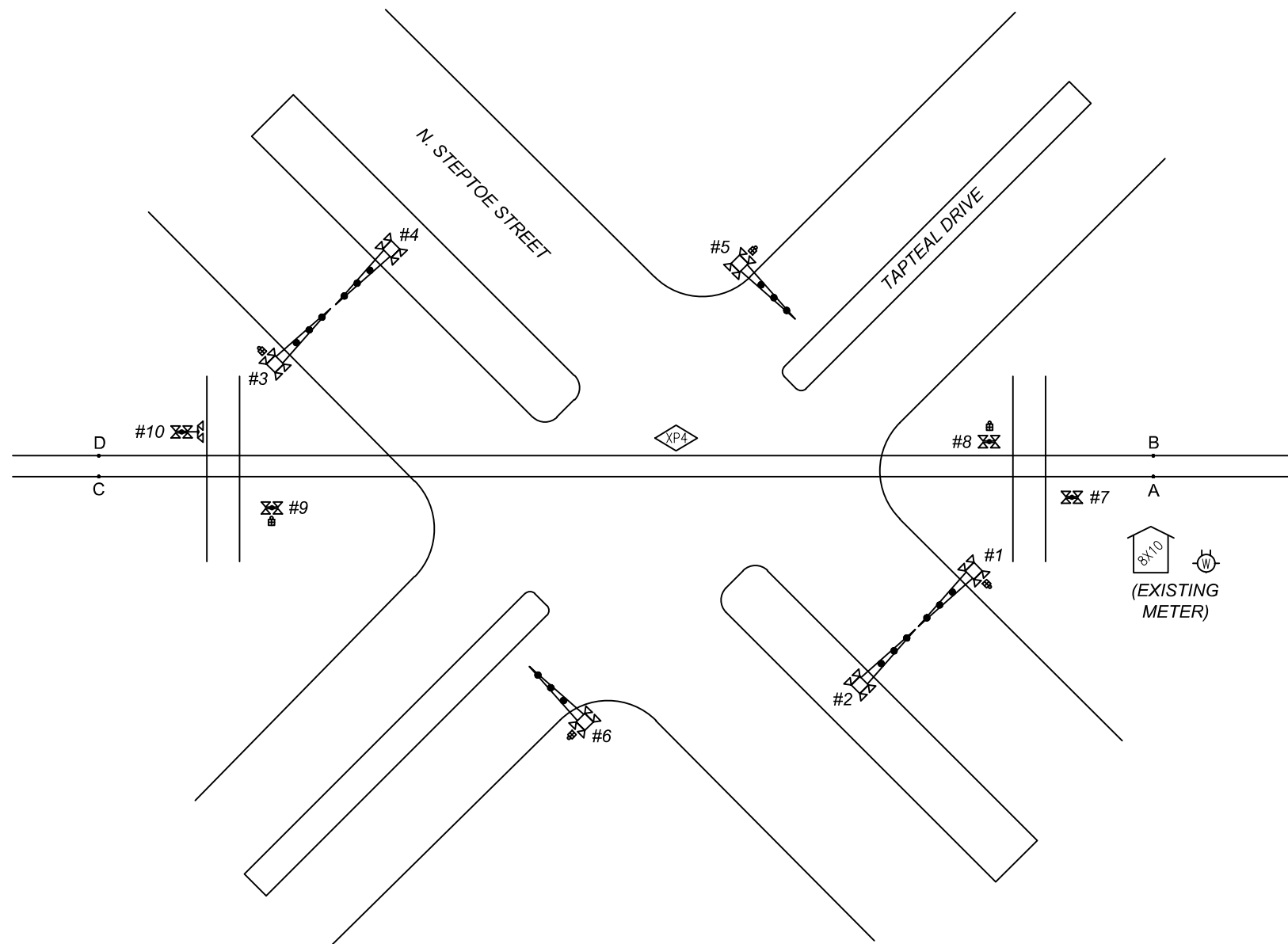
CROSSING CIRCUIT PLAN
MP 19.63

Plot 1
PLAN REF NO
SG02

SHEET
14
OF
17
SHEETS

SOUTH TO
RICHLAND JCT., WA.

NORTH TO
NORTH RICHLAND, WA.

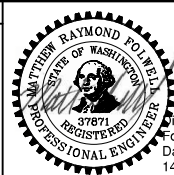


SIGNAL HOUSE

(GATE 3)	7C #14 U.G., 7C #6 U.G. & 3C #9 U.G.	7C #14 U.G., 7C #6 U.G. & 3C #9 U.G.	(GATE 1)
(GATE 4)	7C #14 U.G., 7C #6 U.G. & 3C #9 U.G.	7C #14 U.G., 7C #6 U.G. & 3C #9 U.G.	(GATE 2)
(GATE 6)	7C #14 U.G., 7C #6 U.G. & 3C #9 U.G.	7C #14 U.G., 7C #6 U.G. & 3C #9 U.G.	(GATE 5)
(FLSHR 9)	7C #6 U.G.	7C #6 U.G.	(FLSHR 7)
(FLSHR 10)	7C #6 U.G.	7C #6 U.G.	(FLSHR 8)
(RCVR TRK)	2C #6 TW	2C #6 TW	(XMTR TRK)
(AC POWER)	3C #2 W/GROUND	12 PAIR #14	(TRAFFIC SIGNAL CABINET)

FILE NAME	C:\pwworking\west011d3360535\15 POB Crossing Track Plan_Sheet 2 of 2.dwg		
TIME	8:56:57 AM		
DATE	11/29/2023		
PLOTTED BY	N. SHRESTHA		
DESIGNED BY	C. BAKER		
ENTERED BY	S. STEFAN		
CHECKED BY			
PROJ. ENGR.			
PROJ. MNGR.	P. WEBER	REVISION	DATE BY

REGION NO.	STATE
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JOB NUMBER	
CONTRACT NO.	



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Folwell, Matthew R
Date: 2023.11.29
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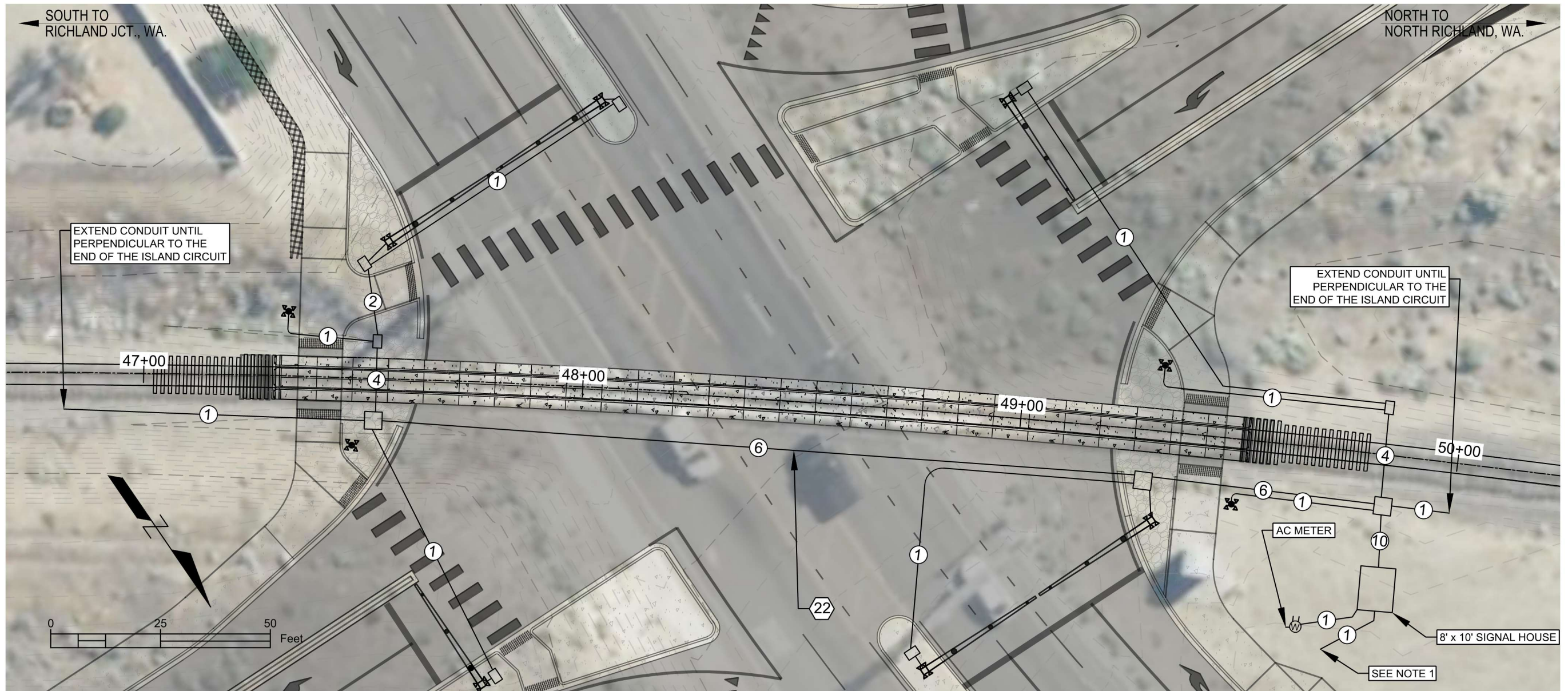


YOUNG ASSET MANAGEMENT
STEPTOE TAPTEAL INTERSECTION
CROSSING RECONSTRUCTION

CROSSING
CABLE LAYOUT MP 19.63

Plot 1
PLAN REF NO
SG03

SHEET
15
OF
17
SHEETS



LEGEND

- CONDUIT
- 4' X 4' VAULT
- 3' X 2' PULL BOX
- Ⓝ # OF CONDUITS (4" PVC)

GENERAL NOTES

1. CONDUIT BETWEEN RAILROAD SIGNAL HOUSE AND TRAFFIC SIGNAL CONTROLLER CABINET NOT SHOWN. SEE STEPTOE AND TAPTEAL INTERSECTION PLANS, BY JUB ENGINEERS, FOR DETAILS.
2. THE INTENT FOR THESE PLANS IS TO ASSIST THE CONTRACTOR WITH DETERMINING THE PULL BOX AND CONDUIT REQUIREMENTS FOR THIS PROJECT. CONTRACTOR SHALL USE THESE PLANS AS A GUIDE FOR INSTALLING UNDERGROUND FACILITIES FOR PORT OF BENTON RAILROAD CROSSING SIGNAL SYSTEM.
3. THESE PLANS ARE NOT COMPLETE UNTIL THE CONTRACTOR HAS COMPLETED THE DETAILED DESIGN, REVIEWED THEM FOR ACCURACY, CONSTRUCTABILITY, AND SUFFICIENCY TO SUPPORT ALL REQUIRED PORT OF BENTON RAILROAD CROSSING SIGNAL SYSTEMS FOR THIS PROJECT.
4. PRIOR TO CONSTRUCTING ANY UNDERGROUND FACILITIES, CONTRACTOR SHALL MAKE CHANGES AND CORRECTIONS AS NECESSARY AND SUBMIT TO THE RESIDENT ENGINEER FOR APPROVAL.
5. CONTRACTOR SHALL NEATLY ARRANGE CABLES IN PULLBOXES AND VAULTS IN AN EFFORT TO PROVIDE EASY ACCESS FOR MAINTENANCE PURPOSES.

BID ITEM KEYNOTES

- Ⓝ RAILROAD GRADE CROSSING SIGNAL SYSTEM

FILE NAME	C:\pwworking\west01\d3360535\16-17 POB_STEPTOE_TAPTEAL_RR_SIGNAL_GATE_CONDUIT_SHEETS.dwg		
TIME	8:37:17 AM		
DATE	11/29/2023		
PLOTTED BY	N. SHRESTHA		
DESIGNED BY	P. WEBER		
ENTERED BY	N. SHRESTHA		
CHECKED BY			
PROJ. ENGR.			
PROJ. MNGR.	P. WEBER		
REVISION	DATE	BY	

REGION NO. STATE WA
JOB NUMBER
CONTRACT NO.

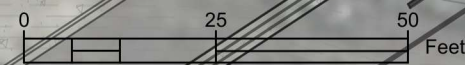
Digitally signed by Folwell, Matthew R
Date: 2023.11.29 14:24:06-08'00'

DATE



DATE



YOUNG ASSET MANAGEMENT STEPTOE TAPTEAL INTERSECTION CROSSING RECONSTRUCTION	Plot 1 PLAN REF NO SG04
RAILROAD SIGNAL CONDUIT SCHEMATIC, STEPTOE TAPTEAL GRADE CROSSING	SHEET 16 OF 17 SHEETS



LEGEND

-  CROSSING SIGNAL MAST
-  CROSSING GATE

GENERAL NOTES

1. STATIONING AND OFFSETS IN THE ABOVE PLAN INDICATE THE POSITION OF THE CENTER OF SIGNAL MASTS. ALL OFFSETS ARE MEASURED PERPENDICULAR TO TRACK.
2. ALL COMPONENTS OF CROSSING WARNING DEVICES - INCLUDING MASTS, LIGHTS, AND GATES - SHALL MEET UNION PACIFIC RAILROAD STANDARDS. SIGNAL MAST BASE ELEVATIONS AND ANY OTHER HORIZONTAL OR VERTICAL ARRANGEMENT DETAILS NOT SHOWN IN THESE PLANS SHALL ALSO MEET UPRR STANDARDS.


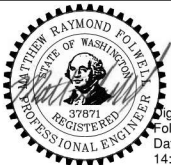
3. SIGNAL MASTS FOR ROADWAY SHALL BE LOCATED 4'-6" MIN. FROM EDGE OF CURB TO CENTER OF MAST.
4. SIGNAL MASTS FOR SIDEWALKS SHALL BE LOCATED 4'-6" MIN. FROM EDGE OF SIDEWALK TO CENTER OF MAST.

BID ITEM KEYNOTES

-  RAILROAD GRADE CROSSING SIGNAL SYSTEM

FILE NAME	C:\pwworking\west01\d3360535\16-17 POB_STEPTOE_TAPTEAL_RR_SIGNAL_GATE_CONDUIT_SHEETS.dwg		
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DATE	11/29/2023		
PLOTTED BY	N. SHRESTHA		
DESIGNED BY	P. WEBER		
ENTERED BY	N. SHRESTHA		
CHECKED BY			
PROJ. ENGR.			
PROJ. MNGR.	P. WEBER		
REVISION	DATE	BY	

REGION NO.	STATE
	WA
JOB NUMBER	
CONTRACT NO.	

Digitally signed by Folwell, Matthew R
Date: 2023.11.29 14:24:07-08'00'

DATE

P.E. STAMP BOX

DATE

P.E. STAMP BOX



YOUNG ASSET MANAGEMENT
STEPTOE TAPTEAL INTERSECTION
CROSSING RECONSTRUCTION

CROSSING SIGNAL PHYSICAL
ARRANGEMENT PLAN

Plot 1
PLAN REF NO
SG05

SHEET
17
OF
17
SHEETS