NORTH BEND PARKS COMMISSION MEETING

January 22, 2025, 6:30pm
North Bend City Hall, 920 SE Cedar Falls Way, North Bend, WA

PLEASE NOTE: This meeting will be held in-person at City Hall.

A Teams meeting link may be set up, upon request, should a member of the public or Parks Commission wish to attend remotely. Contact Planning Manager Mike McCarty at planning@northbendwa.gov to request a Teams link to attend the meeting remotely.

AGENDA:

1. Call to order, opportunity for public comments
2. Minutes of November 21, 2024 Parks Commission meeting
3. Scoping for Bicycle Mobility Plan – Discussion (Caitlin Hepworth, Associate Planner)
4. Parks Commission review and comment for Bendigo Boulevard Multi-use trail and bridge over South Fork Snoqualmie River

Agenda sent to: Parks Commissioners, Mayor, City Administrator, City Clerk, CED Director, Principal Planner, Senior Planner, Public Works Parks Lead

Minutes of the North Bend Parks Commission Meeting of Nov. 21, 2024
Minutes are draft until approved at the following Parks Commission Meeting

The meeting was an in-person meeting at North Bend City Hall and was called to order at 6:33 p.m.

Attendance:

• Parks Commissioners in attendance: Tim Talevich, Kyle Braun, Brian Duncan and Minna Rudd. Absent: Eric Thompson, Ethan Eusebio and Matt Miller.
• Staff in attendance: Planning Manager Mike McCarty

Minutes of the October 23, 2024 Parks Commission Meeting

Commissioner Braun made a motion to approve the minutes without amendments; Commissioner Duncan seconded. The motion passed unanimously.

Update on images for downtown garbage and recycling cans

Commissioner Talevich reported that more local images had been sourced for consideration by the North Bend Downtown Foundation. Once the Foundation members have made their selections, Commissioners Braun and Talevich will work together on formatting the images and sending them to the company involved in the project.

Draft 2024 Annual Report of Parks Commission activities and tentative 2025 Parks Commission work program

A report is given each year to the City Council summarizing the activities, accomplishments and expenditures of the Parks Commission, along with a tentative work program for the next year, to hear feedback and any additional direction from the Council. Commission President Rudd will give the presentation to the Council at its Jan. 7, 2025 meeting. She inquired whether any photos were available for the presentation. All commissioners are invited to attend the presentation. The commission approved the 2024 list of activities without revision.

Regarding the tentative 2025 Parks Commission work program, the following items were suggested to include for further deliberation:

- Coordinating efforts by Si View Metro Parks and the North Bend Economic Development Commission on bike and pathway improvements. Both bodies are taking actions in this area.

- Continuing discussions on a proposed dog park at the Dahlgren park area. Pop-up dog parks should be added to that discussion.
- Considering crosswalk improvements at Meadowbrook and the golf course for safer access to the Snoqualmie Valley Trail.
- Formulating a plan for the rock wall at Torguson Park, which is failing in some areas.

Adjournment

The meeting was adjourned at 7:25 p.m.
Minutes prepared by Tim Talevich

To: Parks Commission
Date: January 22, 2025
Subject: Bike Plan- Draft Scope

Parks Commission,
At your January 22 meeting, we would like to discuss scoping with you for the content of the Bicycle Mobility Plan that the City will be preparing together with the Parks Commission and Economic Development Commission this year. Below are some topics for your discussion and consideration.

Proposed Bike Plan Goals:

1. **Compile Existing Efforts:** Bicycle infrastructure, initiatives, and amenities are described throughout a number of documents adopted by the city. Rolling in past coordination efforts into one uniform document creates a guidebook for how North Bend wants to support expanding the existing bike network.
    a. Compile existing work done on bike improvement planning:
        1. 2024 Comp Plan – Transportation, Economic Development, and Parks and Open Space Elements
        2. Economic Development Action Plan and Economic Strategic Plan
        3. Downtown Master Plan
        4. North Bend Complete Street Corridor Plan
    b. Determine the uniform vision for expansion of the bike network
    c. Confirm past and verify current community goals for bike infrastructure investment

2. **Economic Development and Creatives:** A key component of the city's economic plans are reinforcing North Bend's image as a recreational economy.
    a. Develop partnerships with local businesses
        1. Promote recreational and bicycle-related tourism
        2. Opportunities for events
        3. Promote local businesses
        4. Marketing website advertising cycling tourism in North Bend
        5. Public outreach website promoting cycling as a viable local transportation choice
    b. Tie in Opportunities with the Creative Economy
        1. Signage
        2. Art along trails
        3. Opportunities to include art in other infrastructure/amenities/features
        4. Photography needs for the plan and website
    c. Collaborate with bicycle advocacy groups including the Evergreen Mountain Bike Alliance and Cascade Bicycle Club.
        1. Opportunities to educate new users to North Bend
        2. Create materials to support ridership on a public outreach website
    d. Determine missing amenities and linkages that would support users of the bike network.
        1. Affirm priority of improvement projects and programs
        2. Create signage that supports cyclists
        3. Working with local businesses to add supportive features
    e. Consider other ways to support cyclists

1. Education opportunities for new users
2. Adopt safety initiatives
3. Consider programs to support cycling long term

3. **Marketing our community:**
    a. Marketing North Bend's Bike System
        1. Website advertising bike path, trail, and mountain bike opportunities
        2. Bike friendly businesses and things to do in North Bend
        3. Inform the community and interested tourists in upcoming events, news, or city discussions on bike infrastructure
        4. Bike path map identify skill appropriate paths in the city
        5. Work to attain state and national recognition as a bike friendly community to encourage tourism and stay informed on emerging trends/topics
    b. Ideas to stand out and generate tourism
        1. Catchy slogan/logo
        2. Considering new trends in design of new or improved facilities
        3. Connection to Sno Vally and the Mountains to Sound Greenway
        4. Preparations for 2026 World Cup

Proposed Scope – Common Components of a Bike Plan

The following scope is a rough outline of what most bike plans include and opportunities to make the plan specific to North Bend's goals for the project:

1. Introduction
2. Existing Conditions Analysis
3. Engagement
4. Needs Assessment
5. Design Guidance
6. Economic Development and Marketing
7. Goals, Objectives, and Policies
8. Combined Capital Improvement Plan for Bike
9. Phasing, Implementation, and Funding
10. Appendices
    1. Definitions
    2. Works Cited
    3. Engagement Results and Summary
    4. LOS and Need Assessment Data

Timeline and Next Steps

1. **Timeline**
    a. The project is currently in the scoping and kickoff phase. Below is a rough, tentative schedule:
        i. A schedule and complete outline for the plan will be developed before the end of March 2025.
        ii. A plan is estimated to be drafted by September 2025.
        iii. A plan is estimated to be adopted by December 2025.

2. **Immediate Next Steps**

a. Staff is seeking immediate feedback from both the Parks Commission and the Economic Development Commission on draft scope and initial thoughts on components to include in a bike plan
b. Staff will begin putting a formal outline together of the bike plan and develop a rough schedule.
c. Staff will attend the next Parks Commission and Economic Development Commission meetings to host a brief presentation on the project and conduct a visioning exercise.
d. After visioning, staff will begin working to formally kickoff work on the plan:
    i. Begin a project webpage on the city's website
    ii. Draft a public engagement approach
    iii. Identify and begin early communication with key interest groups in North Bend and the Sno Valley region
e. Monthly updates will be provided to the Parks Commission at regular meetings

CITY OF NORTH BEND

KING COUNTY

WASHINGTON

SR 202 SHARED-USE TRAIL EXTENSION

FEDERAL AID PROJECT NO.: STBGUS-0202(065)

CITY OF NORTH BEND PERMIT # _____

THESE PLANS ARE APPROVED FOR CONFORMANCE WITH THE CITY OF NORTH BEND PUBLIC WORKS DEPARTMENT REQUIREMENTS TO THE BEST OF MY KNOWLEDGE.

_____ _____

CITY ENGINEER OR PUBLIC WORKS DIRECTOR DATE

NORTH BEND

easy to reach. . .hard to leave

G&O PROJECT NUMBER
24421.00

CITY OFFICIALS

MARY MILLER
MAYOR

CHRISTINA RUSTIK **ALAN GOTHELF** **HEATHER KOELLEN**
CITY COUNCIL

ERROL TREMOLADA **BRENDEN ELWOOD** **MARK JOSELYN** **SUZAN TORGUSON**
CITY COUNCIL

MARK RIGOS, P.E.
PUBLIC WORKS DIRECTOR

DAVE MILLER
CITY ADMINISTRATOR

DONALD DEBERG, P.E.
CITY ENGINEER

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DECEMBER 2024

ABBREVIATIONS

AC	ASBESTOS CEMENT PIPE
ADJ	ADJUST
ALT	ALTERNATE
ALUM	ALUMINUM
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
AP	ANGLE POINT
ASPH	ASPHALT
ASSY	ASSEMBLY
ASTM	AMERICAN SOCIETY OF TESTING AND MATERIALS
AVE	AVENUE
BF	BLIND FLANGE
BLDG	BUILDING
BLK	BLOCK
BO	BLOW OFF
BOP	BEGINNING OF PROJECT
BVCE	BEGIN VERTICAL CURVE ELEVATION
BVCS	BEGIN VERTICAL CURVE STATION
C	CONDUIT
CAP	CORRUGATED ALUMINUM PIPE
CB	CATCH BASIN
CF	CUBIC FEET
CFS	CUBIC FEET PER SECOND
CICL	CAST IRON CLASS
CLR	CLEARANCE
CMP	CORRUGATED METAL PIPE
CO	CLEANOUT
CONC	CONCRETE
CONN	CONNECTION
CONT	CONTINUED/CONTINUOUS
CPEP	CORRUGATED POLYETHYLENE PIPE
CPLG	COUPLING
CTR	CENTER
CY	CUBIC YARD
℄	CENTER LINE
D	DRAIN
DC	DEGREE OF CURVATURE
DI	DUCTILE IRON
DIA	DIAMETER
DIM	DIMENSION
DOT	DEPARTMENT OF TRANSPORTATION
DWGS	DRAWING(S)
E	EAST
EA	EACH
EL	ELEVATION
ELEC	ELECTRICAL
EOA	EDGE OF ASPHALT
EOP	END OF PROJECT
EVCE	END VERTICAL CURVE ELEVATION
EVCS	END VERTICAL CURVE STATION
EXIST	EXISTING
FIG	FIGURE
FIN	FINISHED
FL	FLANGE
FT	FEET
GA	GAUGE
GALV	GALVANIZED
GI	GALVANIZED IRON
GV	GATE VALVE
HDPE	HIGH DENSITY POLYETHYLENE PIPE
ID	INSIDE DIAMETER
IE	INVERT ELEVATION
IN	INCH
INV	INVERT
L	LENGTH
LB	POUND
LF	LINEAR FEET
MAX	MAXIMUM
MFR	MANUFACTURER
MH	MANHOLE
MIN	MINIMUM
MISC	MISCELLANEOUS
MJ	MECHANICAL JOINT
N	NORTH
NO	NUMBER
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
PC	POINT OF CURVATURE
PE	PLAIN END
PERF	PERFORATED
PI	POINT OF INTERSECTION
PP	POWER POLE
PT	POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE
PVI	POINT OF VERTICAL INTERSECTION
PVMT	PAVEMENT
PVT	POINT OF VERTICAL TANGENT
QTY	QUANTITY
R	RADIUS
R/W	RIGHT-OF-WAY
RED	REDUCER
REINF	REINFORCE
REQD	REQUIRED
RET	RETAINING
RR	RAILROAD
S	SOUTH
SCH	SCHEDULE
SF	SQUARE FEET
SHT	SHEET
SL	SLOPE
SPECS	SPECIFICATIONS
SQ	SQUARE
STA	STATION
STD	STANDARD
TB	THRUST BLOCK
TC	TOP OF CURB
TEL	TELEPHONE
TESC	TEMPORARY EROSION AND SEDIMENT CONTROL
THRD	THREADED
THRU	THROUGH
TYP	TYPICAL
VERT	VERTICAL
W	WEST
W/	WITH
W/O	WITHOUT
WSDOT	WASHINGTON STATE DEPARTMENT OF TRANSPORTATION

LINETYPES

EXISTING	PROPOSED	DESCRIPTION
SURFACE FEATURES		
		CURB (TYPE AS NOTED)
		CURB & GUTTER
		ASPHALT PAVEMENT
		GRAVEL SURFACING
		CONCRETE SURFACING
		CEMENT CONC. SIDEWALK
		GUARD RAIL
X X	X X	FENCE/RAILING (TYPE AS NOTED)
X X	X X	FENCE WITH GATE
		SHRUB/TREE/VEGETATION LINE
		EDGE OF LANDSCAPING
		CLEARING LIMITS
SURVEY		
		RIGHT-OF-WAY LINE
		CENTERLINE OF CONSTRUCTION
		PROPERTY LINE
10		CONTOUR LINE
C C	C C	APPROXIMATE TOP OF CUT
F F	F F	APPROXIMATE TOE OF FILL
		SAWCUT LINE (APPROXIMATE LOCATION)
UTILITIES		
OH		OVERHEAD UTILITIES
E	E	BURIED ELECTRICAL
T		BURIED TELEPHONE/COMMUNICATIONS
COM COM		BURIED COMMUNICATIONS
TV		BURIED CABLE TELEVISION
FO		BURIED FIBER-OPTIC LINE
G		GAS MAIN (SIZE AS NOTED)
W		WATER MAIN (SIZE AS NOTED)
S	S	SANITARY SEWER MAIN (SIZE AS NOTED)
FM	FM	SANITARY SEWER FORCE MAIN (SIZE AS NOTED)
D	D D	STORM DRAIN (SIZE AS NOTED)
D	D D	CULVERT (SIZE & TYPE AS NOTED)
		DITCH CENTERLINE/THALWEG

SURFACE FEATURES/LANDSCAPING

EXISTING	PROPOSED	DESCRIPTION
		BUILDING
BUS	BUS	BUS STOP
		MAIL BOX (NOTED)
		SIGN
		TREE STUMP
		RIP RAP
		ROCK WALL
		MODULAR BLOCK WALL
		SHRUB
NOTED		TREE (CONIFER)
NOTED		TREE (DECIDUOUS)
		WETLAND
		EDGE OF CREEK/STREAM OR OHWM

WATER SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
		THRUST BLOCK
		WATER METER
FIRE HYDRANT		
		FIRE HYDRANT (3-NOZZLE)
VALVES		
		GATE VALVE

SANITARY/STORM SEWER SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
Ⓓ	Ⓓ	STORM DRAIN MANHOLE/TYPE 2 CATCH BASIN (ACTUAL DIMENSION SHOWN FOR PROPOSED)
□	■	STORM DRAIN CATCH BASIN, CONCRETE INLET, OR YARD/AREA DRAIN (ACTUAL DIMENSION SHOWN FOR PROPOSED)
Ⓢ	Ⓢ	SANITARY SEWER MANHOLE (ACTUAL DIMENSION SHOWN FOR PROPOSED)
○		CLEAN OUT (SAN. SEWER OR STORM)

ILLUMINATION SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
		JUNCTION BOX (TYPE I, II, VIII)
		ELECTRIC SERVICE AND CABINET
		LIGHT/LUMINAIRE POLE W/ARM
		POLE MOUNTED LIGHT

GAS/POWER/TELEPHONE SYMBOLS

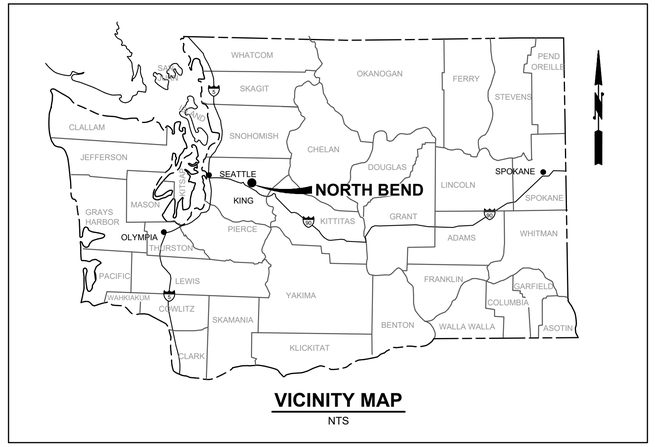
EXISTING	PROPOSED	DESCRIPTION
		GAS METER
		GAS VALVE
		PAD MOUNT TRANSFORMER
P		POWER VAULT (SIZE VARIES)
		TRANSMISSION TOWER
		UTILITY POLE
		UTILITY POLE ANCHOR
		UTILITY PEDESTAL
T		TELEPHONE VAULT (SIZE VARIES)
FO		FIBER OPTIC MANHOLE

SURVEY SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
△		CONTROL POINT
		MONUMENT (IN CASE)
		MONUMENT (SURFACE)
		BENCH MARK BOUNDARY/PROPERTY CORNER
○		IRON PIPE
		SOIL BORING/TEST PIT

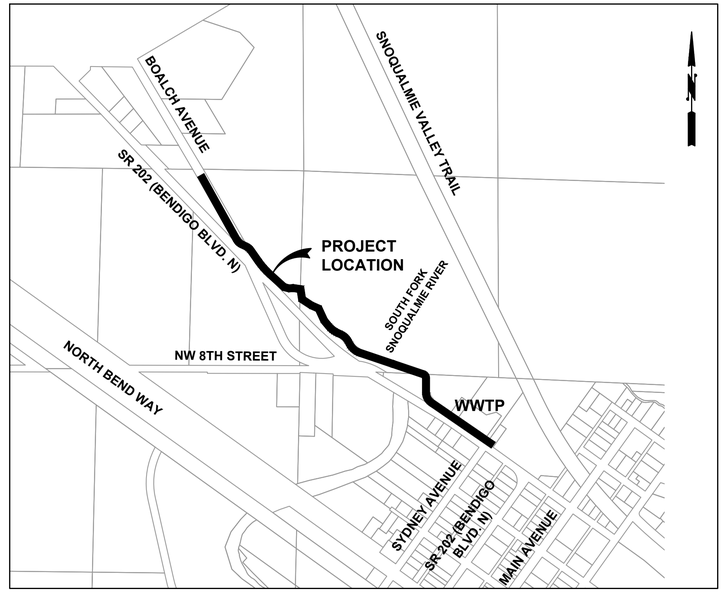
GENERAL NOTES:

1. ALL MATERIALS AND WORKMANSHIP SHALL BE FURNISHED AND SUPPLIED IN ACCORDANCE WITH THE 2025 WASHINGTON STATE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION AND CITY OF MEDINA PUBLIC WORKS STANDARDS, AND THESE CONTRACT DOCUMENTS UNLESS OTHERWISE SPECIFICALLY NOTED.
2. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTACT AND COORDINATE WITH ALL UTILITY COMPANIES IN ORDER TO ASSURE THAT ALL LINES, PIPES, POLES AND OTHER APPURTENANCES ARE PROPERLY LOCATED, SECURED, AND/OR PROTECTED. BURIED UTILITIES (WHERE KNOWN) ARE SHOWN IN THEIR APPROXIMATE LOCATION. THE CONTRACTOR SHALL HAVE UTILITIES VERIFIED ON THE GROUND PRIOR TO ANY CONSTRUCTION. NOTIFY THE UNDERGROUND UTILITIES LOCATE CENTER: CALL #811.
3. THE CONTRACTOR SHALL HAVE A COPY OF THESE PLANS, ANY ADDENDA, CHANGE ORDERS AND THE CONTRACT SPECIFICATIONS ON THE JOB SITE WHENEVER CONSTRUCTION IS IN PROGRESS.
4. THE CONTRACTOR SHALL PROMPTLY NOTIFY THE ENGINEER IN THE EVENT OR DISCOVERY OF UNSUITABLE SOILS OR HIGH GROUND WATER CONDITIONS OR DISCREPANCIES FROM THE PLANS.
5. WHEREVER PLANS REFER TO "SAWCUT" OF ASPHALT CONCRETE PAVEMENT OR OIL MAT, OR CONCRETE SURFACE, THE CONTRACTOR SHALL PERFORM A "NEAT LINE CUT" PER SPECIFICATIONS.
6. THE CONTRACTOR SHALL MAINTAIN A CLEAN LEGIBLE SET OF RECORD DRAWINGS AND PROVIDE A SET TO THE OWNER PRIOR TO DEMOBILIZATION OF THE SITE. SEE SPECIFICATIONS.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRAFFIC CONTROL IN ACCORDANCE WITH MUTCD. PRIOR TO DISRUPTION OF ANY TRAFFIC, TRAFFIC CONTROL PLANS SHALL BE PREPARED AND SUBMITTED TO THE CITY FOR APPROVAL. NO WORK SHALL COMMENCE UNTIL ALL APPROVED TRAFFIC CONTROL IS IN PLACE.



VICINITY MAP

NTS



LOCATION MAP

NTS

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(360) 454-5490

KEVIN W. BROWN — STATE OF WASHINGTON — 39319 — REGISTERED PROFESSIONAL ENGINEER

YVONNE B. PAWTOWSKI — STATE OF WASHINGTON — 41853 — REGISTERED PROFESSIONAL ENGINEER

NORTH BEND — easy to reach. . . hard to leave

CITY OF NORTH BEND

SR 202 SHARED-USE TRAIL EXTENSION

No.	DATE	REVISION

ISSUED FOR:	PRELIMINARY DESIGN SUBMITTAL
ISSUE DATE:	DEC 2024
APPROVED BY:	R.W.K.
CHECKED BY:	K.W.B.
DRAWN BY:	S.E.M.
G&O #:	24421.00
FILE:	LEGEND.DWG

0 1" 2"
TWO INCHES AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

ABBREVIATIONS, SYMBOL LEGEND, AND SHEET INDEX

SHEET: **G-1** OF: **46**

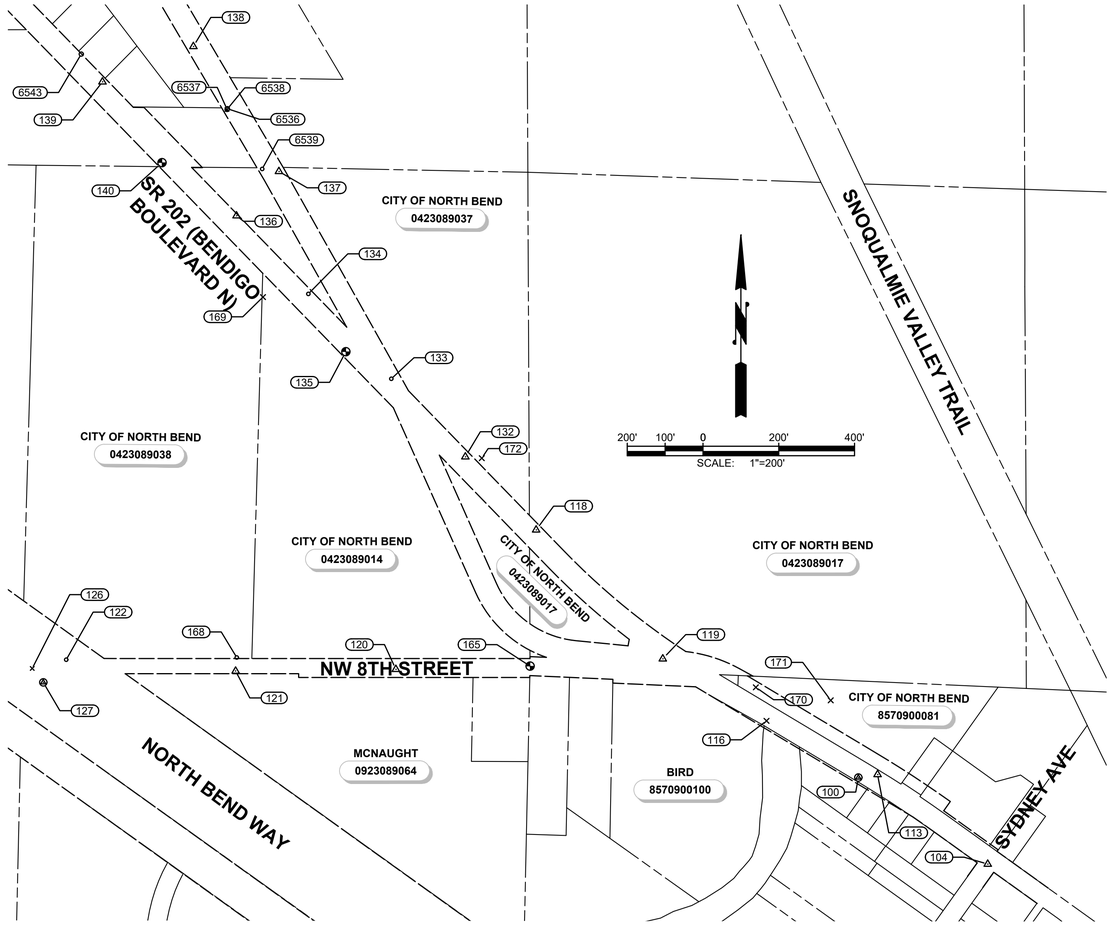
M:\NBEND\24421.00 SR 202 Shared Use Trail\01 Design\PLANSET\General\LEGEND.dwg, 12/20/2024 4:33 PM, KEVIN BROWN

SURVEY CONTROL & MONUMENTATION

HORIZONTAL DATUM:	**NAD83/91** WASHINGTON PLANE COORDINATE SYSTEM, NORTH ZONE, GRID NORTH USED COORDINATES FROM PROVIDED SURVEY BY BEYLER CONSULTING.
VERTICAL DATUM:	**NAVD88** HOLDING PUBLISHED ELEV FOR PROJECT BENCHMARK #1 (WGS POINT #P1) (G&O #100=441.20')

	SR 202 SHARED USE TRAIL EXTENSION			
POINT	NORTHING	EASTING	ELEV	DESCRIPTION
7	183759.93	1400859.32	434.54	SSRC=SET 5/8" REBAR W/ RED PLASTIC "G&O CONTROL" CAP. N SIDE OF 8TH ST W OF NINTENDO ENTRANCE. 40' ESE OF LARGE COTTONWOOD. 45' E OF LARGE ABANDONED TIRE?
8	183747.48	1401110.43	436.95	SFMC=FOUND MONUMENT IN CASE, SPIKE SET IN 2" SQUARE CONC. DOWN 0.55' IN CASE.
10	184606.66	1400890.42	435.89	SSNT=SET MAG NAIL W/ "G&O CONTROL" CAP, N EDGE OF ALM WAY. 12.5' PERPENDICULAR FROM POWER POLE #218476 176050.
11	185771.53	1401178.06	433.68	SSRC, S SIDE OF 14TH ST IN FRONT OF 1305 14TH ST. 35' SE OF MAILBOX. 25' ENE OF T POST W/ GRAPE VINES.
12	185766.71	1401470.46	434.47	SSRC, S SIDE OF 14TH ST IN FRONT OF 1225 14TH ST. 20' N OF A RHODODENDRON.
13	186410.00	1402310.09	433.45	SFMC, 3 1/2" BRASS DISC W/ PUNCH SET IN 4" SQUARE CONC POST. CENTER OF BOALCH AVE, NE CORNER OF SIRIUS SPORTS COMPLEX.
15	186628.15	1401301.96	432.67	SSNT, SW QUADRANT INTX BOALCH AVE & ENTRANCE TO "NORTH BEND ANIMAL CLINIC." 1.5' N OF SOUTHERLY EDGE OF ASPHALT. 8' W OF GATE VALVE. 22' E OF SE CORNER OF CROSSWALK.
16	186914.23	1401074.74	432.64	SSNT, NE SIDE OF SR 202. NORTH OF SPORTS COMPLEX.
100	183453.08	1404653.90	441.20	SFM=FOUND SURFACE MONUMENT, 2" BRASS DISC ON SE COR BRIDGE. "KC-P-1 1995"
101	183440.29	1404789.62	438.69	SSRC, 12' N10°W OF POWER SERVICE POLE. 9' N54°W OF GUY ANCHOR. ~23' N31°E OF N'LY EDGE ASPHALT.
104	183224.68	1404995.37	439.87	SSNT, CENTERLINE SYDNEY AVE N. ~1' N OF SW EDGE ASPHALT OF BENDIGO BLVD. IN S'LY CORNER OF PATCH AROUND DRAIN MANHOLE. 3' SW OF CENTER OF LID. 7.7' NE OF NW'LY CORNER STOP BAR.
113	183461.12	1404704.64	440.56	SSNT, 0.5' S OF N EDGE ASPHALT BENDIGO BLVD. 10.5' N60°W OF E END GUARDRAIL. ~18' S5°W OF POWER GUY ANCHOR. ~S84°E OF G&O #100.
116	183602.84	1404411.61	447.91	SSC=SCRIBED "X" ON SW SIDE OF BRIDGE W OF WWTP, S SIDE BENDIGO BLVD N.
118	184106.76	1403803.39	440.62	SSNT, NE EDGE OF ASPHALT OF BENDIGO BLVD AT START APPROXIMATE START OF GUARDRAIL.
119	183766.46	1404137.67	439.40	SSNT, SW EDGE OF ASPHALT OF BENDIGO BLVD AT INTX W/ NW 8TH ST.
120	183738.79	1403433.13	433.61	SSNT, S EDGE OF ASPHALT OF NW 8TH ST. 115' E OF POWER POLE ON S SIDE OF ROAD. E OF BRIDGE.
121	183734.27	1403010.24	437.48	SSNT, S EDGE OF ASPHALT OF NW 8TH ST. AT APPROXIMATE W END OF GUARDRAIL.
123	183754.99	1402230.95	443.33	SSNT, N EDGE OF ASPHALT OF NW 8TH ST AT EAST SIDE OF RAILROAD CROSSING. 25' E OF RAILROAD CROSSING SIGN.
124	183756.49	1401877.78	440.08	SSNT, N EDGE OF ASPHALT OF NW 8TH ST W OF INTX W/ SE 106TH PL. ACROSS FROM A POWER VAULT.
125	183719.84	1401499.62	439.07	SSNT, E SIDE OF ENTRANCE TO NINTENDO SITE ON NW 8TH ST. 1' N OF FACE OF CURB.
126	183741.10	1402473.41	443.23	SFNT=FOUND NAIL W/ TAG, NAIL W/ "LS 28101" TAG.
127	183704.36	1402502.47	442.70	SFM, 3" ALUMINUM DISC W/ PUNCH. "BONNEVILLE POWER ADMIN TANNER 01995."
128	183873.20	1401914.46	437.99	SSNT, ON NE EDGE OF ALM WAY. APPROXIMATELY 150' NW OF INTX W/ 8TH AVE.
129	184080.73	1401624.51	436.95	SSNT, ON NE EDGE OF ALM WAY. APPROXIMATELY 500' NW OF INTX W/ NW 8TH ST.
130	183747.40	1401997.86	440.95	SFMC, 1 1/2" BRASS DISC W/ PUNCH. DOWN 0.55' IN CASE. INTX NW 8TH ST & ALM WAY.
131	184339.16	1401264.12	436.12	SSNT, NE EDGE OF ASPHALT OF SE 106TH PL.
132	184299.71	1403616.59	440.88	SSNT, NE SIDE SR 202 JUST NW OF BRIDGE OVER RIBERY CREEK AT PEDESTRIAN CROSSING ENTRANCE.
133	184505.63	1403421.06	439.14	SSRC, NE SIDE SR 202. 1' FROM EDGE OF ASPHALT. ACROSS FROM DRIVEWAY TO 901?
134	184729.72	1403202.13	437.81	SSRC, AT GRADE. NE SIDE SR 202 (BENDIGO BLVD). SE OF BOALCH AVE NW. 2.4' NE OF NE EDGE OF ASPHALT OF BENDIGO. 9.6' SW OF SW FACE OF PHONE POLE. TWO PHONE POLES SOUTH OF INTX W/ BOALCH AVE.
135	184577.10	1403301.15	437.65	SFMC, 3 1/4" ALUMINUM DISC W/ PUNCH, "WSDOT 2018 GP17202-360." DOWN 0.7' IN CASE.
136	184935.95	1403012.56	436.68	SSNT, N QUADRANT INTX SR 202 & BOALCH AVE NW.
137	185052.90	1403124.42	437.02	SSNT, NE SIDE BOALCH AVE NW. N OF SR 202. NEAR APPROX END CURVE OF ASPHALT AND DRIVEWAY FOR 1202 BOALCH AVE.
138	185382.85	1402898.70	433.80	SSNT, SW SIDE BOALCH AVE NW. NW SIDE OF ENTRANCE FOR 1355 BOALCH AVE NW.
139	185289.46	1402658.71	435.26	SSNT, NE SIDE SR 202 IN ASPHALT OVERPOUR BETWEEN DRIVEWAYS FOR "FRED'S SLEDS" ON SR 202. DESCRIPTION OUT OF DATE.
140	185076.21	1402815.86	435.55	SFMC, 3 1/4" ALUMINUM DISC W/ PUNCH, "WSDOT 2018 GP17202-359." DOWN 0.55' IN CASE.
141	185528.45	1402423.35	434.05	SSRC, NE SIDE SR 202 ACROSS FROM DRIVEWAY FOR 1309 BENDIGO BLVD.
142	185781.25	1402123.06	433.65	SSNT, NW QUADRANT INTX NW 14TH ST & SR 202.
143	185761.41	1402708.72	434.92	SSNT, E QUADRANT INTX OF NW 14TH ST & BOALCH AVE NW. S FLOWLINE FOR DRIVEWAY OF "DEVON SELF STORAGE."
144	186069.81	1402493.14	433.55	SSNT, SW SIDE SR 202. NW OF DRIVEWAY FOR ENCOMPASS LEARNING CENTER.
145	185750.48	1402414.40	434.72	SSNT, S SIDE NW 14TH ST ACROSS FROM W PARKING ROW.
146	185791.57	1402709.43	435.35	SFNT, NAIL W/ "TYEE LS 29276" TAG. DRIVEWAY FOR DEVON SELF STORAGE.
147	185731.83	1402685.82	433.50	SFR=FOUND REBAR, 1/2" REBAR, SHOT AT BEND, 1.1' DOWN. S QUADRANT INTX NW 14TH ST & BOALCH AVE NW.
148	186307.55	1402353.38	433.27	SSNT, SW SIDE BOALCH AVE NW IN BIKE LANE SE OF ENTRANCE TO SIRIUS SPORTS COMPLEX.
149	186092.68	1401911.59	434.30	SSRC, NE SIDE SR 202. NW OF INTX W/ NW 14TH ST. NEAR SW CORNER OF FENCE FOR BASEBALL DIAMOND.
150	186347.18	1401577.45	433.15	SSNT, SW SIDE OF SR 202 AT SE EDGE OF DRIVEWAY FOR "PACIFIC CREST ENVIRONMENTAL."
151	186416.81	1401272.21	430.29	SFM, 3 1/2" CONC MON W/ PIN. W 1/4 CORNER SECTION 4.
152	186003.77	1402549.67	434.19	SFMC, 1" REBAR OR IRON BAR, SOLID, LEANING TO SW. SHOT WHERE IT ENTERS GROUND.
153	186657.88	1402164.17	431.35	SFMC, 3 1/4" BRASS DISC W/ PUNCH, SET IN 4" SQUARE CONC POST. DOWN 0.25' IN CASE.
154	186836.17	1402100.08	431.86	SFMC, 3 1/4" BRASS DISC W/ PUNCH, SET IN 4" SQUARE CONC POST. DOWN 0.45' IN CASE.
155	186912.65	1402087.86	432.29	SFMC, 3 1/4" BRASS DISC W/ PUNCH, SET IN 4" SQUARE CONC POST. DOWN 0.35' IN CASE.
156	185734.82	1402483.31	432.65	SFRC=FOUND REBAR W/ CAP, 3/8" REBAR W/ DAMAGED ILLEGIBLE CAP.
158	185758.64	1401864.91	434.74	SSN=SET NAIL, 60-D NAIL W/ PINK WHISKERS. 18' W OF MAILBOX TO #1108.
159	185769.39	1402136.54	433.83	SFNT, NAIL W/ "DEI 28191" TAG.
160	185788.24	1401664.16	434.24	SSN, 60-D NAIL W/ PINK WHISKERS. 15' E OF MAILBOX TO #1148.
161	185811.00	1401235.88	433.58	SFP=FOUND PIPE, 1" INSIDE DIAMETER IRON PIPE AT GRADE.
162	183747.46	1401338.52	439.19	SFRC, 1/2" REBAR W/ "24???" CAP.
163	185807.81	1401525.25	434.09	SFRC, 5/8" REBAR W/ ORANGE PLASTIC "KAP 49286" CAP. AT GRADE.

	SR 202 SHARED USE TRAIL EXTENSION CONT.			
POINT	NORTHING	EASTING	ELEV	DESCRIPTION
164	185808.57	1401435.82	434.56	SFRC, 5/8" REBAR W/ ORANGE PLASTIC "KAP 49286" CAP.
165	183747.33	1403787.37	434.36	SFMC, FOUND SPIKE W/ PUNCH, DOWN 1.05' IN CASE.
166	185774.82	1401713.72	434.67	SFS=FOUND SPIKE, RAILROAD SPIKE W/ PUNCH ON S EDGE. CENTERLINE NW 14TH ST, AT W PROPERTY LINE OF 1135 EXTENDED TO N.
167	186754.56	1402100.49	431.81	SSN, 60-D NAIL W/ BLUE WHISKERS. DOWN 0.3' IN PLANTER STRIP S OF S CURB LINE OF BOALCH AVE. 2' S OF BACK OF CURB. 5' N OF CENTER OF SPRINKLER BOX. BEHIND HOME PLATE. SW-NE NORTHERLY CONCRETE FACE OF WALL EXTENDED NORTHEASTERLY.
168	183769.93	1403013.21	438.12	SSRC, 11' NE OF NW END OF EASTERLY GUARDRAIL FROM E EDGE. W SIDE OF BRIDGE. SET IN FREEZING GROUND, LOOSE WHEN GROUND THAWED IN JAN 2024.
169	184721.25	1403082.41	433.74	SSN, 60-D NAIL W/ WHITE WHISKERS. DOWN 0.2' IN GRASS. 5' NE OF BARBWIRE FENCE AT 3RD T-BAR S OF SOUTHERLY (OF 3) WOOD POST IN FENCE LINE. 33' NW OF NW END OF BENCH.
170	183691.27	1404383.38	438.96	SSN, 60-D NAIL W/ WHITE WHISKERS AT GRADE AT DIKE ACCESS ROAD. NW QUADRANT OF "T" INTERSECTION.
1008	183365.37	1404879.43	439.67	SFRC, 1/2" REBAR W/ DESTROYED RED PLASTIC CAP.
6536	185218.43	1402988.69	436.33	SFRC, 1/2" REBAR W/ ILLEGIBLE YELLOW PLASTIC CAP.
6537	185216.70	1402987.73	436.23	SFRC, 5/8" REBAR W/ YELLOW PLASTIC "DRS 35974" CAP.
6538	185216.64	1402987.55	436.24	SFN=FOUND NAIL, SMALL PK NAIL.
6539	185059.52	1403080.35	435.50	SFP, 1 1/4" OUTSIDE DIAMETER IRON PIPE, SHOT AT BEND.
6542	185640.07	1402333.86	430.40	SFRC, 1/2" REBAR W/ YELLOW PLASTIC "CHIC 12786" CAP.
6543	185362.62	1402602.66	433.92	SFRC, 5/8" REBAR W/ YELLOW PLASTIC "SITE SURVEY 38964-48378" CAP.
6545	185799.90	1402207.03	432.36	SFR, 1/2" REBAR, BENT SLIGHTLY TO W. SHOT TOP CENTER. DOWN 0.9' BELOW F/G.



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CHECKED BY:		K.W.B.
DRAWN BY:		S.E.M.
G&O #:		24421.00
FILE:		SURVEY CONTROL.DWG

0 1" 2"
TWO INCHES AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

SURVEY CONTROL

SHEET: **G-2** OF: **46**

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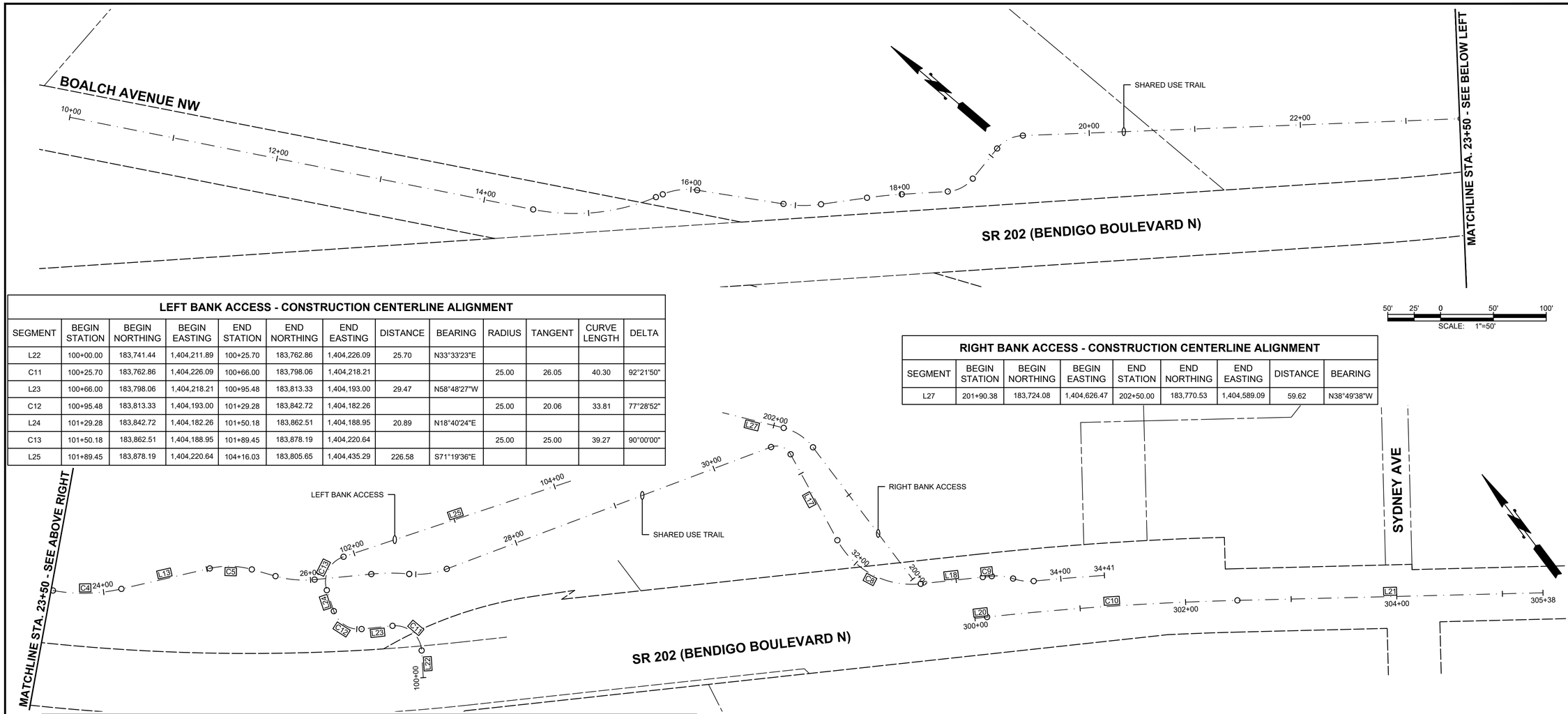

LEFT BANK ACCESS - CONSTRUCTION CENTERLINE ALIGNMENT

SEGMENT	BEGIN STATION	BEGIN NORTHING	BEGIN EASTING	END STATION	END NORTHING	END EASTING	DISTANCE	BEARING	RADIUS	TANGENT	CURVE LENGTH	DELTA
L22	100+00.00	183,741.44	1,404,211.89	100+25.70	183,762.86	1,404,226.09	25.70	N33°33'23"E				
C11	100+25.70	183,762.86	1,404,226.09	100+66.00	183,798.06	1,404,218.21			25.00	26.05	40.30	92°21'50"
L23	100+66.00	183,798.06	1,404,218.21	100+95.48	183,813.33	1,404,193.00	29.47	N58°48'27"W				
C12	100+95.48	183,813.33	1,404,193.00	101+29.28	183,842.72	1,404,182.26			25.00	20.06	33.81	77°28'52"
L24	101+29.28	183,842.72	1,404,182.26	101+50.18	183,862.51	1,404,188.95	20.89	N18°40'24"E				
C13	101+50.18	183,862.51	1,404,188.95	101+89.45	183,878.19	1,404,220.64			25.00	25.00	39.27	90°00'00"
L25	101+89.45	183,878.19	1,404,220.64	104+16.03	183,805.65	1,404,435.29	226.58	S71°19'36"E				

RIGHT BANK ACCESS - CONSTRUCTION CENTERLINE ALIGNMENT

SEGMENT	BEGIN STATION	BEGIN NORTHING	BEGIN EASTING	END STATION	END NORTHING	END EASTING	DISTANCE	BEARING
L27	201+90.38	183,724.08	1,404,626.47	202+50.00	183,770.53	1,404,589.09	59.62	N38°49'38"W

SHARED USE TRAIL - CONSTRUCTION CENTERLINE ALIGNMENT

SEGMENT	BEGIN STATION	BEGIN NORTHING	BEGIN EASTING	END STATION	END NORTHING	END EASTING	DISTANCE	BEARING	RADIUS	TANGENT	CURVE LENGTH	DELTA
C4	23+51.84	184,018.63	1,403,982.02	24+17.12	183,980.76	1,404,034.63			160.00	33.10	65.28	23°22'34"
L13	24+17.12	183,980.76	1,404,034.63	25+02.93	183,945.79	1,404,112.99	85.81	S65°56'40"E				
C5	25+02.93	183,945.79	1,404,112.99	25+43.19	183,921.00	1,404,144.18			80.00	20.57	40.26	28°50'07"
L17	30+79.30	183,700.28	1,404,616.63	31+71.93	183,608.67	1,404,602.92	92.63	S8°30'41"W				
C8	31+71.93	183,608.67	1,404,602.92	32+66.30	183,528.20	1,404,640.93			80.00	53.54	94.37	67°35'09"
L18	32+66.30	183,528.20	1,404,640.93	33+25.39	183,497.83	1,404,691.62	59.10	S59°04'28"E				
C9	33+25.39	183,497.83	1,404,691.62	33+33.92	183,493.44	1,404,698.94			2,902.99	4.27	8.53	0°10'06"

SR 202 - CONSTRUCTION CENTERLINE ALIGNMENT

SEGMENT	BEGIN STATION	BEGIN NORTHING	BEGIN EASTING	END STATION	END NORTHING	END EASTING	DISTANCE	BEARING	RADIUS	TANGENT	CURVE LENGTH	DELTA
L20	300+00.00	183,471.17	1,404,662.18	300+11.56	183,465.23	1,404,672.10	11.56	S59°04'28"E				
C10	300+11.56	183,465.23	1,404,672.10	302+49.09	183,334.86	1,404,870.57			2,865.00	118.84	237.53	4°45'01"
L21	302+49.09	183,334.86	1,404,870.57	305+38.47	183,166.09	1,405,105.64	289.38	S54°19'27"E				

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CHECKED BY:	K.W.B.
DRAWN BY:	S.E.M.
G&O #:	24421.00
FILE:	ALIGN.DWG

0 1" 2"
TWO INCHES AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

ALIGNMENT TABLES

SHEET: **G-3** OF: **46**

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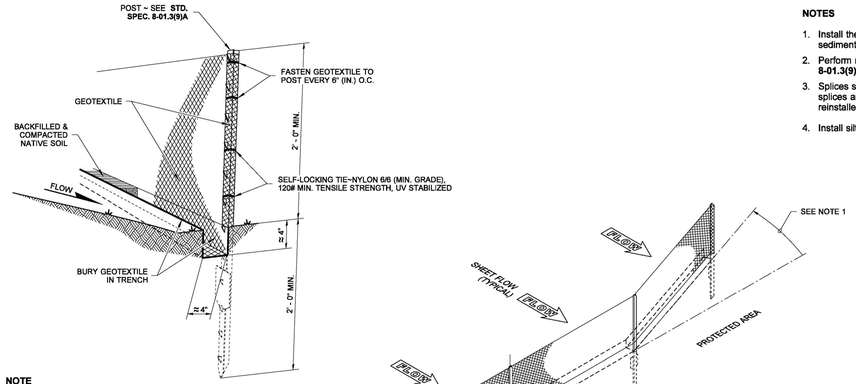
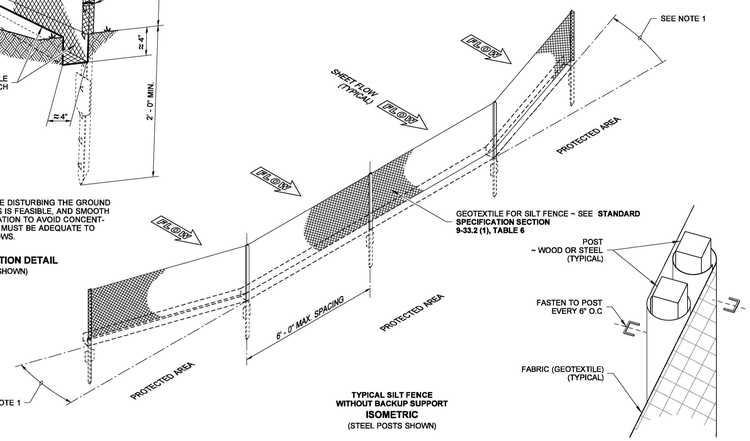


NOTE

DURING EXCAVATION, MINIMIZE DISTURBING THE GROUND AROUND TRENCH AS MUCH AS IS FEASIBLE, AND SMOOTH SURFACE FOLLOWING EXCAVATION TO AVOID CONCENT-RATING FLOWS. COMPACTION MUST BE ADEQUATE TO PREVENT UNDERCUTTING FLOWS.

TYPICAL INSTALLATION DETAIL
(STEEL POSTS SHOWN)



TYPICAL SILT FENCE WITHOUT BACKUP SUPPORT
ISOMETRIC
(STEEL POSTS SHOWN)

SPLICED FENCE SECTIONS SHALL BE CLOSE ENOUGH TOGETHER TO PREVENT SILT LADEN WATER FROM ESCAPING THROUGH THE FENCE AT THE OVERLAP.

SPLICE DETAIL
(WOOD POSTS SHOWN)

NOTES

1. Install the ends of the silt fence to point slightly upslope to prevent sediment from flowing around the ends of the fence.
2. Perform maintenance in accordance with **Standard Specifications 8-01.3(9)A and 8-01.3(15)**.
3. Splices shall never be placed in low spots or sump locations. If splices are located in low or sump areas, the fence may need to be reinstalled unless the Project Engineer approves the installation.
4. Install silt fencing parallel to mapped contour lines.

STATE OF WASHINGTON
REGISTERED
LANDSCAPE ARCHITECT
SANDRA L. SALISBURY
CERTIFICATE NO. 000860

NOTE: THIS PLAN IS NOT A LEGAL ENGINEERING DOCU-MENT BUT AN ELECTRONIC DUPLICATE. THE ORIGINAL, SIGNED BY THE ENGINEER AND APPROVED FOR PUBLICATION, IS KEPT ON FILE AT THE WASHINGTON STATE DEPART-MENT OF TRANSPORTATION. A COPY MAY BE OBTAINED UPON REQUEST.

SILT FENCE

STANDARD PLAN I-30.15-02

SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION
Pasco Bakotich III 3/22/13
STATE DESIGN ENGINEER — DATE
Washington State Department of Transportation

TESC NOTES:

1. CONTRACTOR SHALL SUBMIT A TEMPORARY WATER POLLUTION/EROSION CONTROL PLAN PER THE CONTRACT PROVISIONS.
2. ALL LIMITS OF CLEARING AND AREAS OF VEGETATION PRESERVATION SHALL BE OBSERVED DURING CONSTRUCTION.
3. ALL REQUIRED SEDIMENTATION/EROSION CONTROL FACILITIES SHALL BE IN OPERATION PRIOR TO LAND CLEARING AND/OR OTHER CONSTRUCTION ACTIVITIES TO ENSURE THAT SEDIMENT LADEN WATER DOES NOT ENTER THE EXISTING DRAINAGE SYSTEM. ALL EROSION AND SEDIMENT FACILITIES SHALL BE MAINTAINED IN A SATISFACTORY CONDITION UNTIL SUCH TIME THAT CLEARING AND/OR CONSTRUCTION IS COMPLETED AND THE POTENTIAL FOR ON-SITE EROSION HAS PASSED. THE IMPLEMENTATION, MAINTENANCE, REPLACEMENT AND ADDITIONS TO EROSION/SEDIMENTATION CONTROL SYSTEMS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
4. THE EROSION AND SEDIMENTATION CONTROL SYSTEMS DEPICTED ON THIS DRAWING ARE INTENDED TO BE MINIMUM REQUIREMENTS TO MEET ANTICIPATED SITE CONDITIONS. AS CONSTRUCTION PROGRESSES AND AS UNEXPECTED OR SEASONAL CONDITIONS DICTATE, THE CONTRACTOR SHOULD ANTICIPATE THAT MORE EROSION AND SEDIMENTATION CONTROL FACILITIES WILL BE NECESSARY TO ENSURE COMPLETE SILTATION CONTROL ON THE PROPOSED SITE. DURING THE COURSE OF CONSTRUCTION, IT SHALL BE THE OBLIGATION AND RESPONSIBILITY OF THE CONTRACTOR TO ADDRESS ANY NEW CONDITIONS THAT MAY BE CREATED BY HIS ACTIVITIES AND TO PROVIDE ADDITIONAL FACILITIES, OVER AND ABOVE THE MINIMUM REQUIREMENTS, AS MAY BE NEEDED TO PROTECT ADJACENT PROPERTIES AND THE WATER QUALITY OF THE RECEIVING DRAINAGE SYSTEM.
5. AT NO TIME SHALL MORE THAN ONE FOOT OF SEDIMENT BE ALLOWED TO ACCUMULATE WITHIN A CATCH BASIN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND DISPOSING OF THE SEDIMENT. ALL STORM DRAINAGE STRUCTURES WITHIN THE PROJECT LIMITS SHALL BE CLEANED AFTER COMPLETION OF THE PROJECT.
6. THE CONTRACTOR SHALL REMOVE MATERIAL DROPPED, WASHED OR TRACKED FROM VEHICLES ONTO THE RIGHT-OF-WAY OR INTO THE EXISTING STORM DRAINAGE SYSTEM. DEBRIS SHALL NOT BE WASHED INTO THE STORM DRAINAGE SYSTEM.
7. TEMPORARY EROSION CONTROL FACILITIES SHALL BE INSPECTED WEEKLY AND MAINTAINED WITHIN 24 HOURS FOLLOWING A STORM EVENT. SEDIMENT SHALL BE REMOVED TO INSURE THE FACILITIES WILL FUNCTION PROPERLY. THE FACILITIES SHALL BE SATISFACTORILY MAINTAINED UNTIL CONSTRUCTION IS COMPLETED AND THE POTENTIAL FOR ON-SITE EROSION HAS PASSED.
8. ALL STORM DRAIN INLETS MADE OPERABLE DURING CONSTRUCTION SHALL BE PROTECTED SO THAT STORM WATER RUNOFF SHALL NOT ENTER THE CONVEYANCE SYSTEM WITHOUT FIRST BEING FILTERED OR OTHERWISE TREATED TO REMOVE SEDIMENT.
9. NO DISTURBED SOIL SHALL REMAIN UNSTABILIZED FOR MORE THAN SEVEN CALENDAR DAYS.

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CHECKED BY:	K.W.B.
DRAWN BY:	S.E.M.
G&O #:	24421.00
FILE:	TESC NOTES & DETAILS.DWG

0 1" 2"
TWO INCHES AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

TEMPORARY EROSION CONTROL NOTES & DETAILS

SHEET: **G-4** OF: **46**

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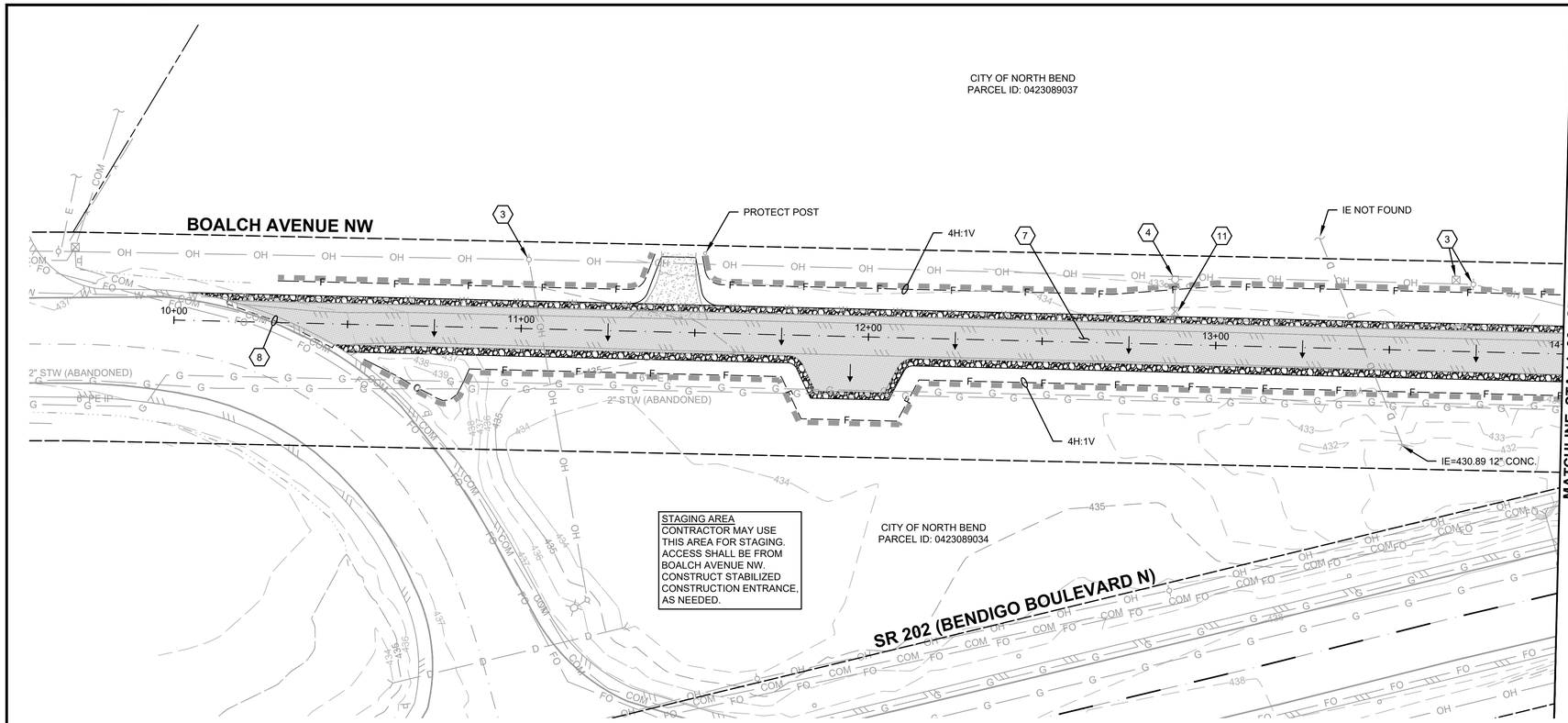

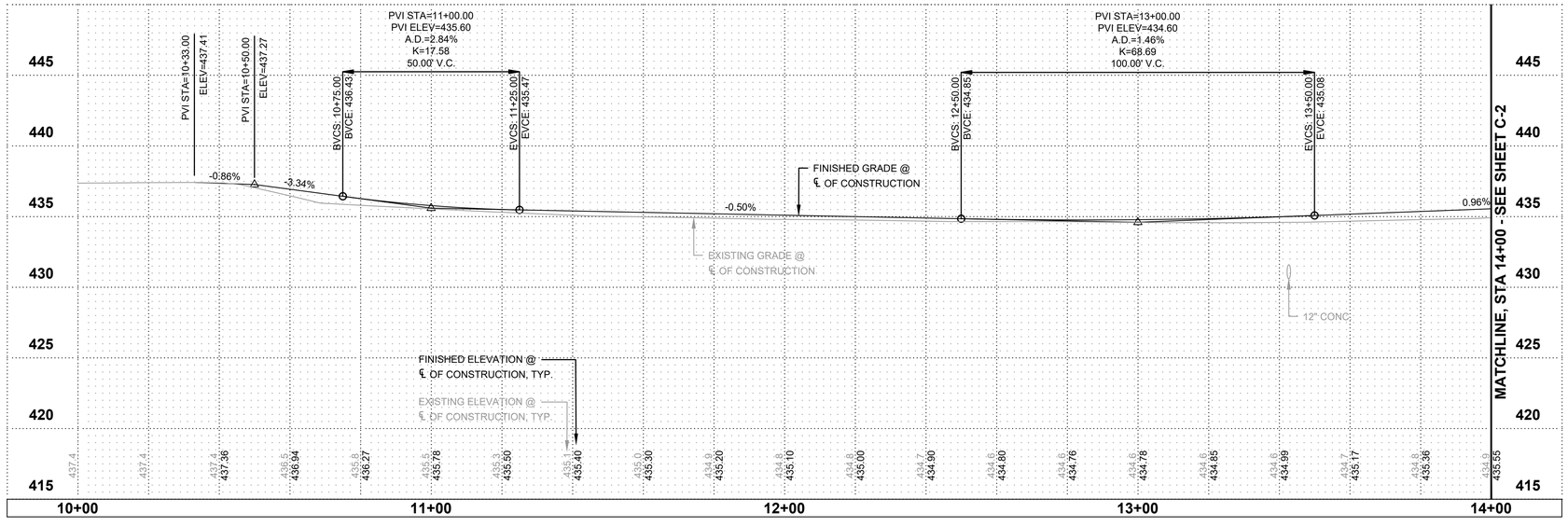

20' 10' 0 20' 40'

SCALE: HORIZONTAL 1"=20'
VERTICAL 1"=5'

CONSTRUCTION NOTES

1. CAUTION : POTENTIAL UTILITY CONFLICT. VERIFY (POTHOLE) EXACT LOCATION AND DEPTH OF EXISTING UTILITY. SEE ORDER OF WORK.
2. EXISTING UTILITY TO BE REMOVED/RELOCATED BY OTHERS. COORDINATE WORK WITH UTILITY REPRESENTATIVE. SEE GENERAL NOTE 2, SHEET X.
3. PROTECT EXISTING UTILITY POLE, GUY WIRE, PEDESTAL, VAULT DURING CONSTRUCTION. SEE GENERAL NOTE 2 SHEET X.
4. PROTECT EXISTING FIRE HYDRANT, WATER METER, WATER VALVE, CATCH BASIN DURING CONSTRUCTION.
5. CLEAR AND GRUB EXISTING TREE,
6. PROTECT EXISTING BOARDWALK, ASPHALT, FENCE, GUARDRAIL, AND TREE, DURING CONSTRUCTION.
7. REMOVE AND WASTEHAUL EXISTING PAVEMENT, FENCE, GATE, PER THE SPECIFICATIONS. THIS WORK TO BE INCLUDED IN REMOVAL OF STRUCTURES AND OBSTRUCTIONS.
8. SAWCUT EXISTING PAVEMENT AND SEAL JOINT (WHERE APPLICABLE) THEN APPLY SAND BLANKET TO THE SURFACE JOINT.
9. CONNECT NEW STORM PIPE TO EXISTING CATCH BASIN. CORE DRILL IF KNOCK OUT IS NOT PRESENT.
10. ADJUST EXISTING SEWER MANHOLE TO GRADE.
11. ADJUST EXISTING WATER VALVE BOX TO GRADE.
12. ADJUST EXISTING GAS VALVE BOX TO GRADE.
13. CONSTRUCT CURB RAMP PER DETAIL(S) SHEET XX.
14. CONSTRUCT CURB END SECTION PER DETAIL SHEET XX.
15. CONSTRUCT MODULAR BLOCK HEADWALL PER DETAIL SHEET XX.
16. CONSTRUCT HMA DRIVEWAY REPAIR.
17. CONSTRUCT CEMENT CONCRETE DRIVEWAY ENTRANCE.
18. CONSTRUCT NEW FENCE OR RAILING PER DETAIL SHEET XX.

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0 1" 2"
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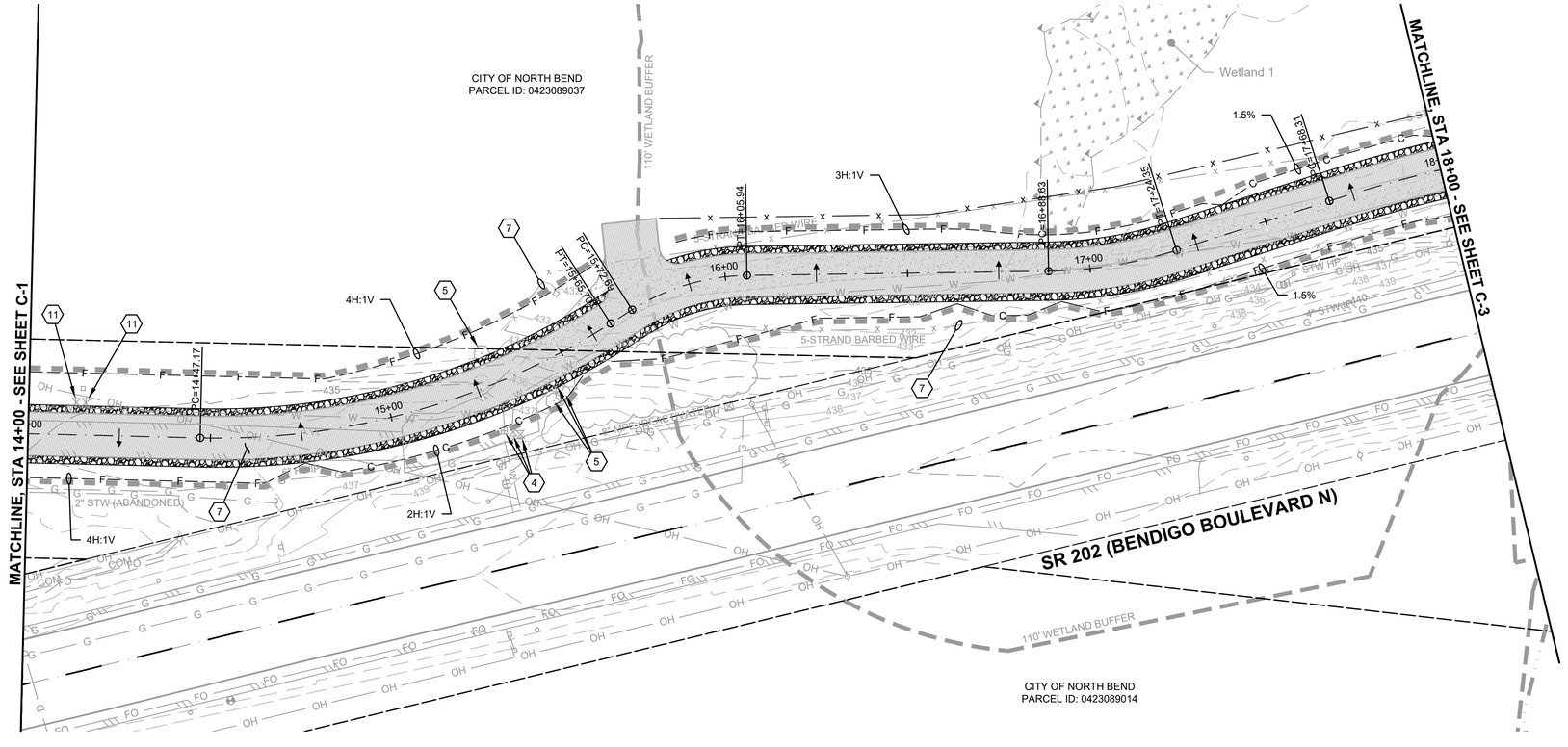
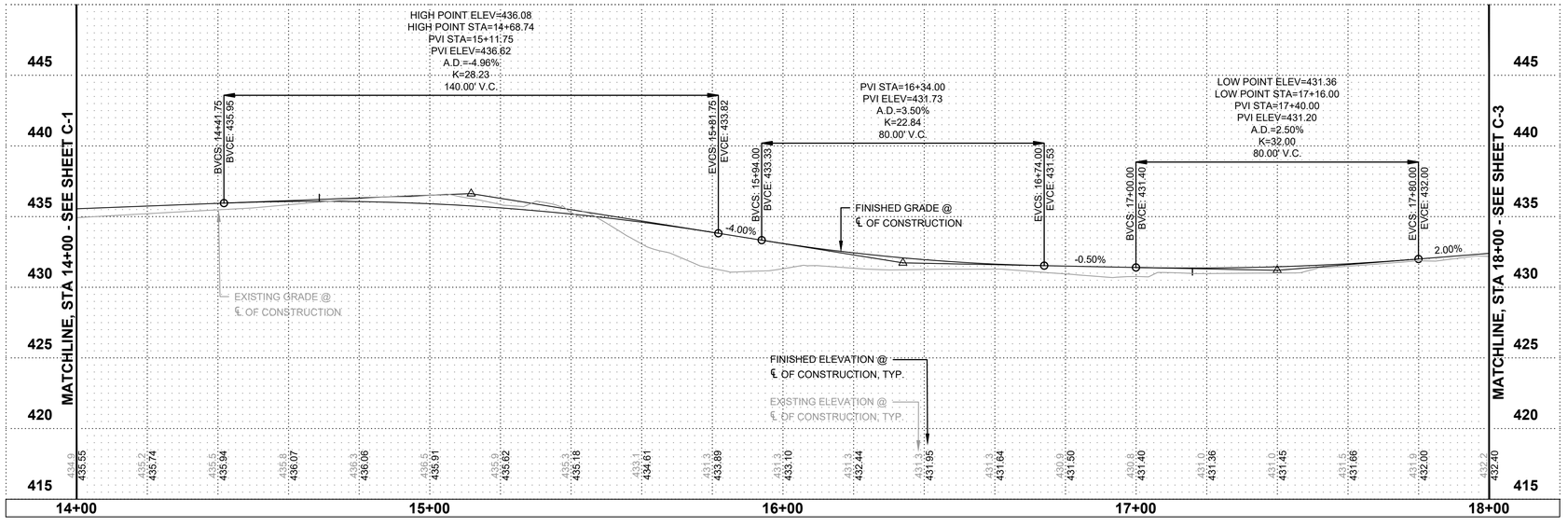
IF NOT, SCALE ACCORDINGLY

PLAN & PROFILE

SHEET: **C-1** OF: **46**





20' 10' 0 20' 40'

SCALE: HORIZONTAL 1"=20'
VERTICAL 1"=5'

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SR 202 SHARED-USE TRAIL EXTENSION

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CHECKED BY:	K.W.B.
DRAWN BY:	S.E.M.
G&O #:	24421.00
FILE:	PLANPROF.DWG

0 1" 2"
TWO INCHES AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

PLAN & PROFILE

SHEET: **C-2** OF: **46**

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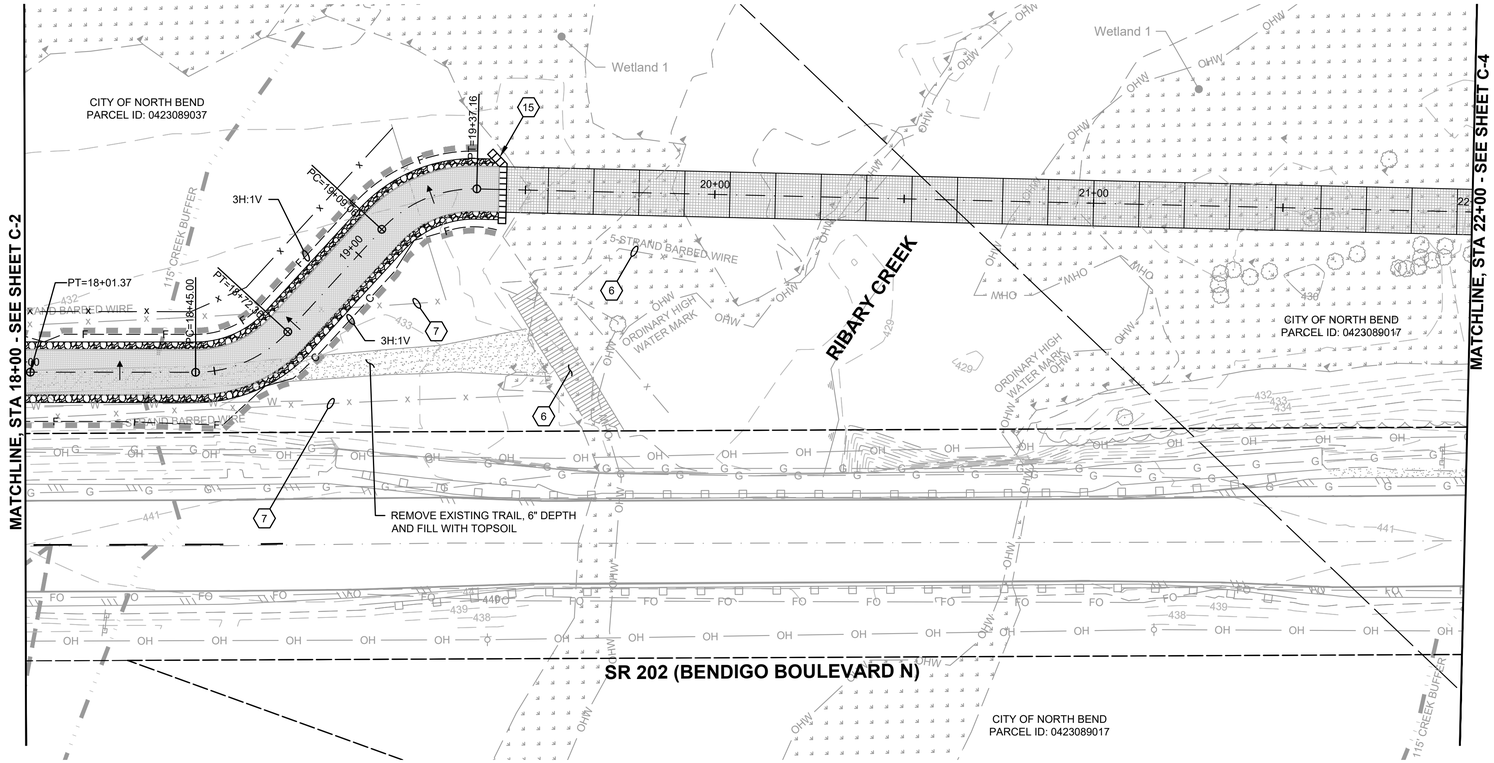

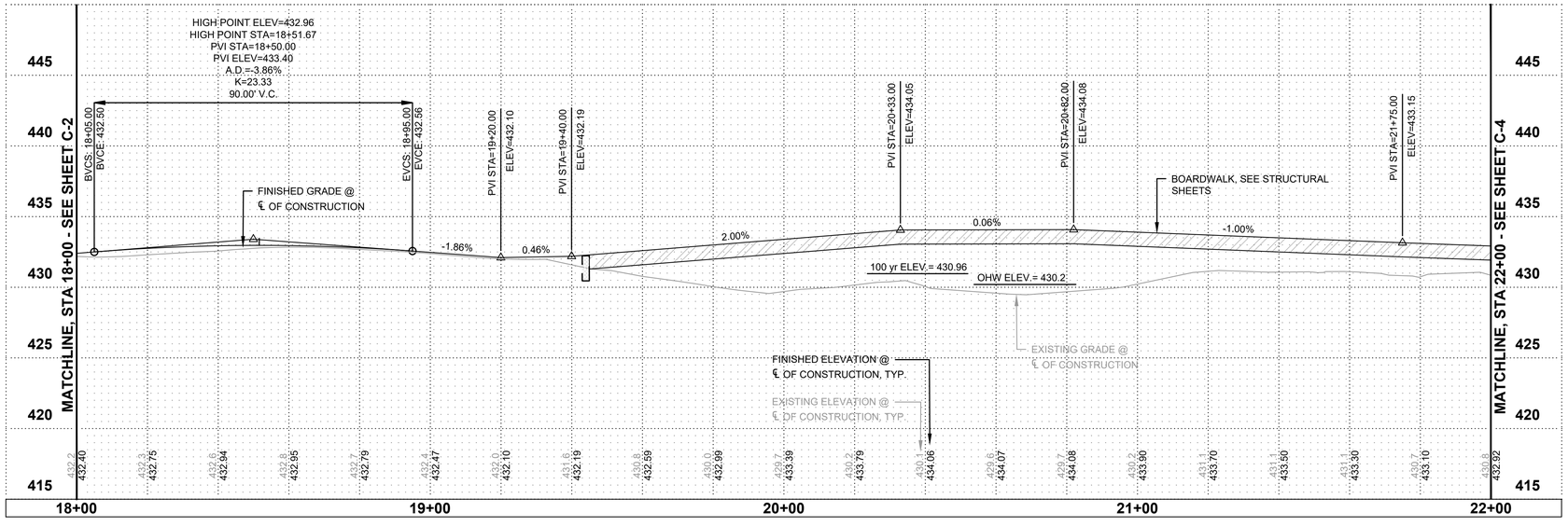

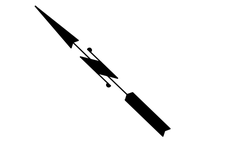

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PLAN & PROFILE

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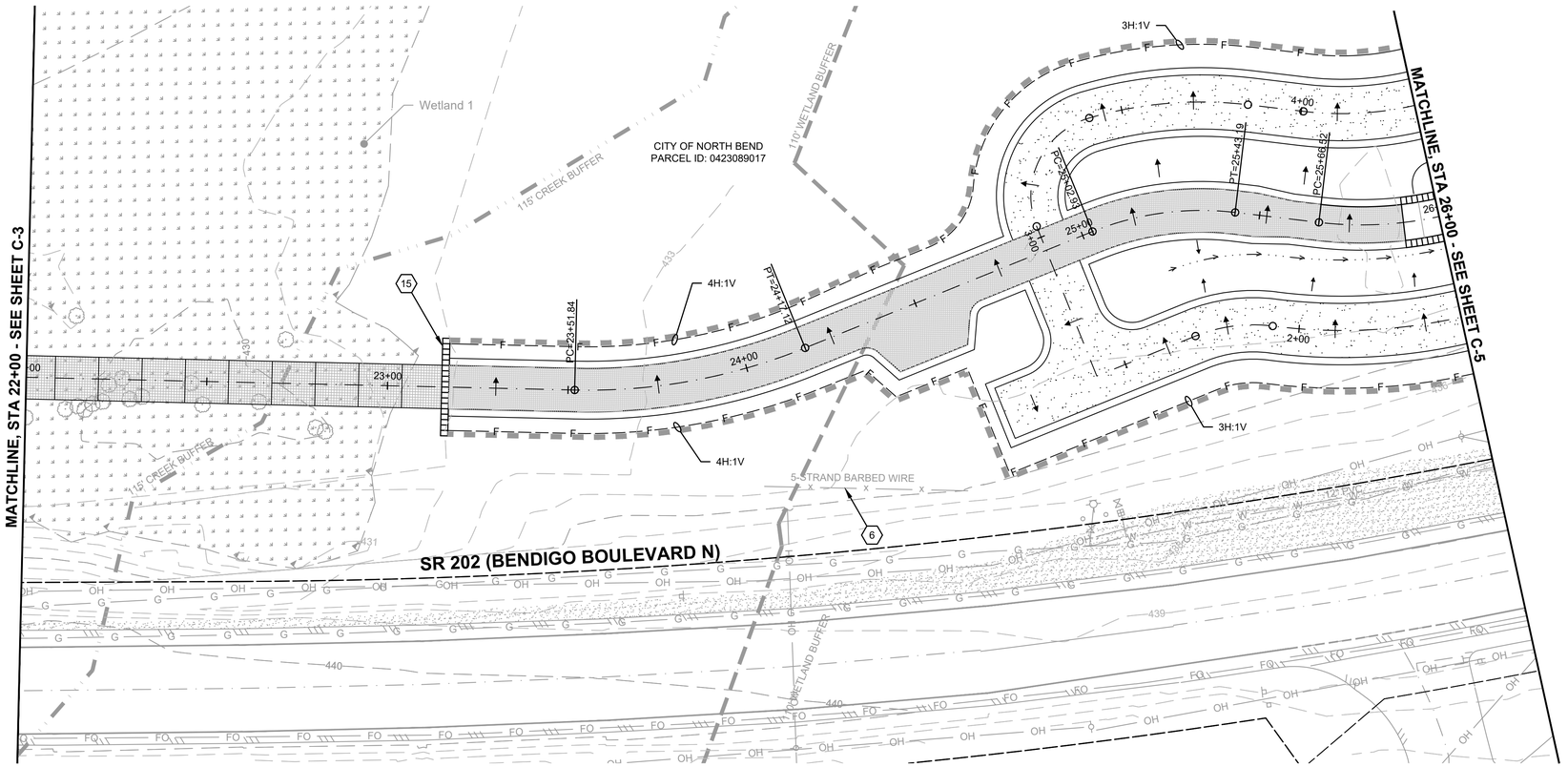

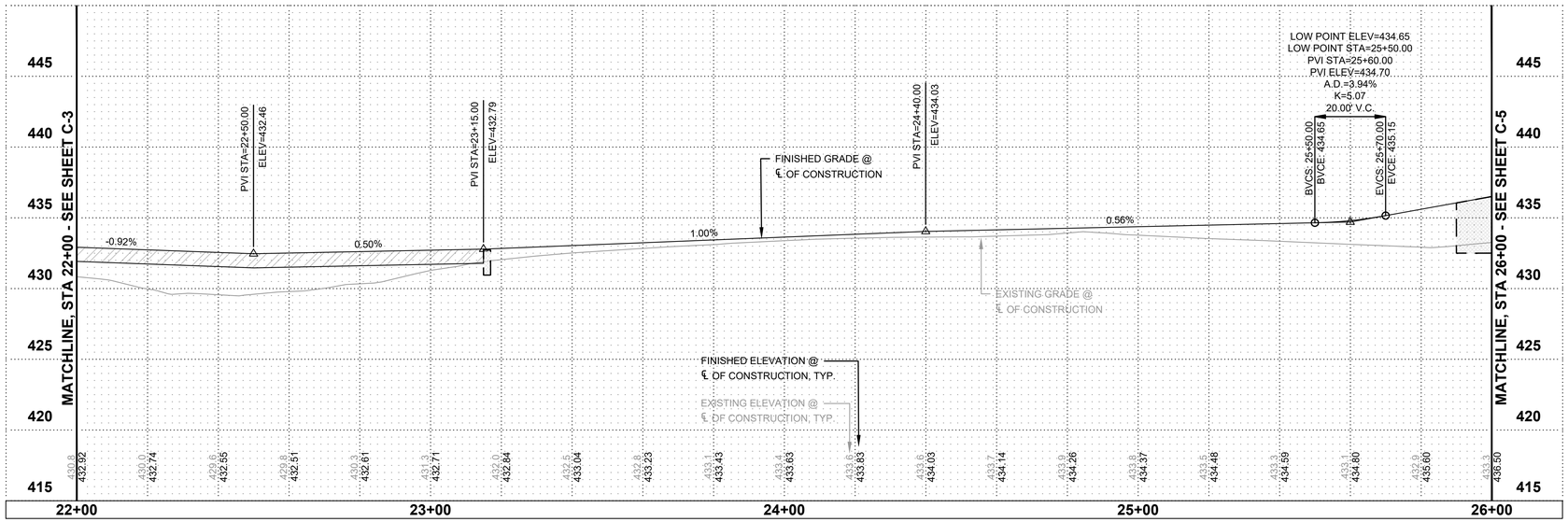

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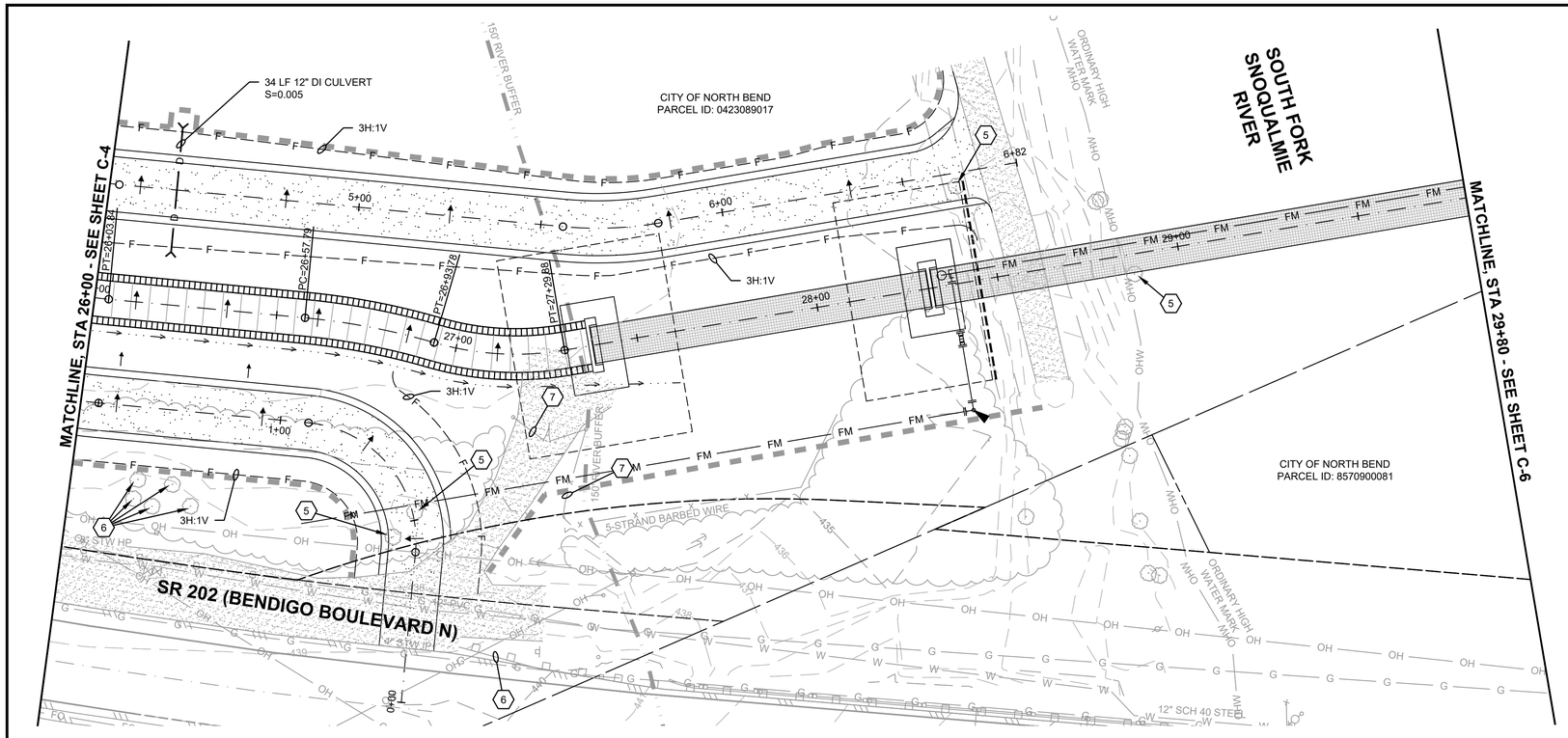
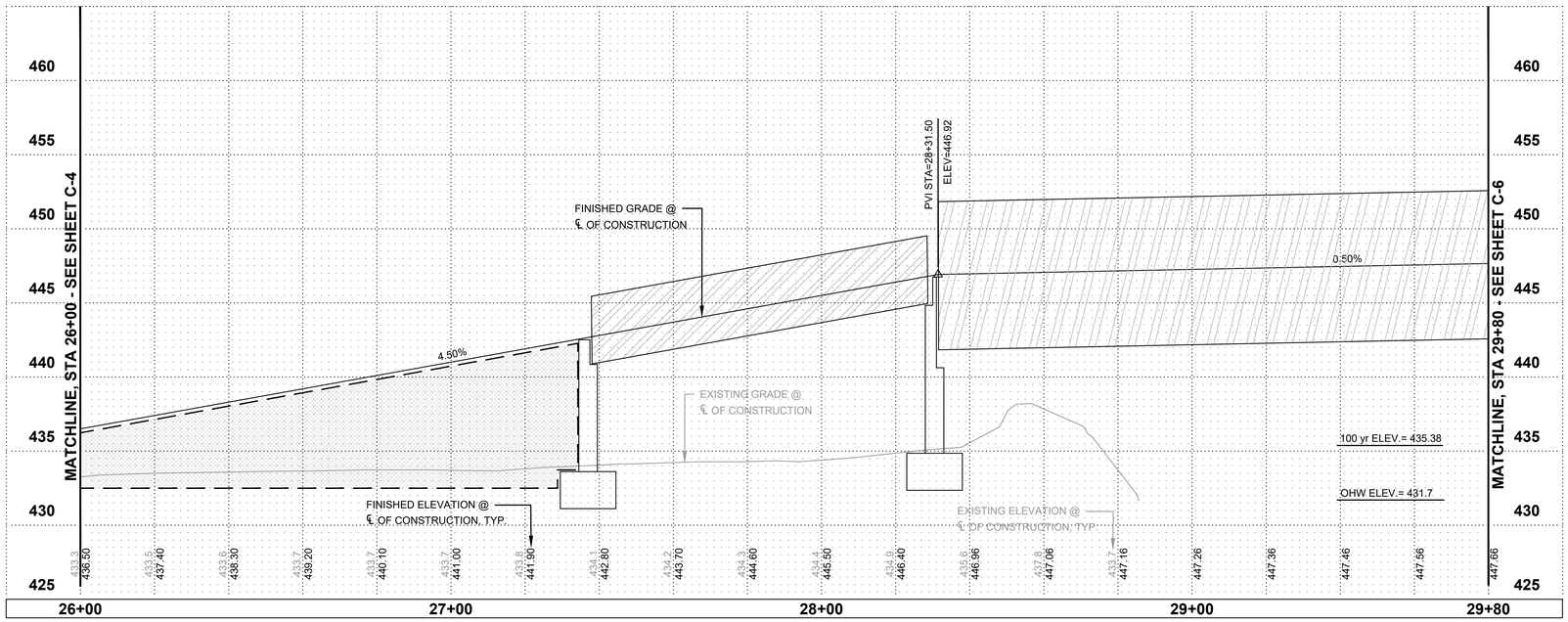
SHEET: **C-4** OF: **46**





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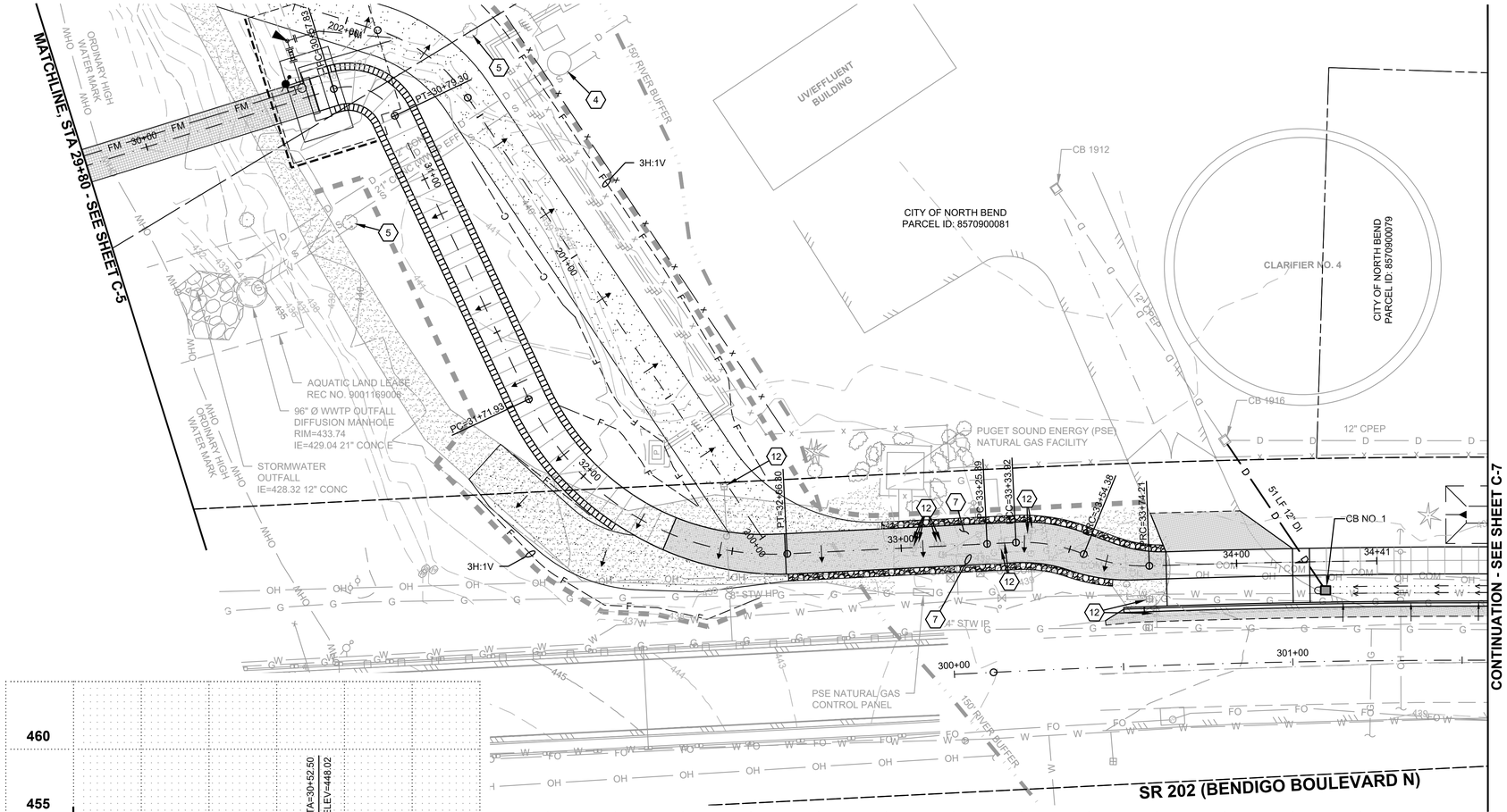

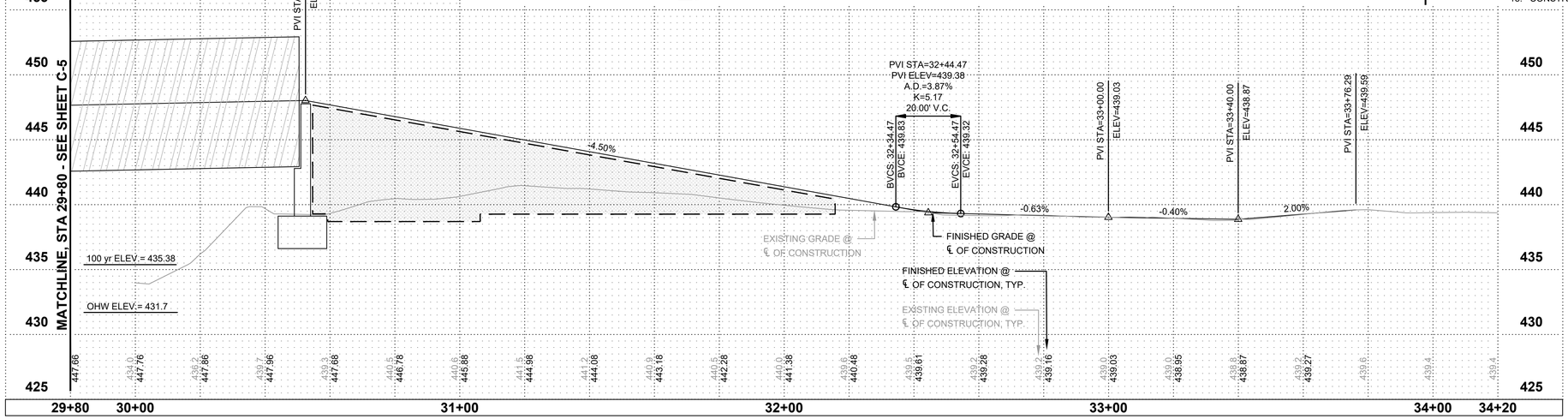

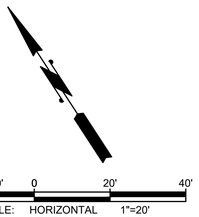

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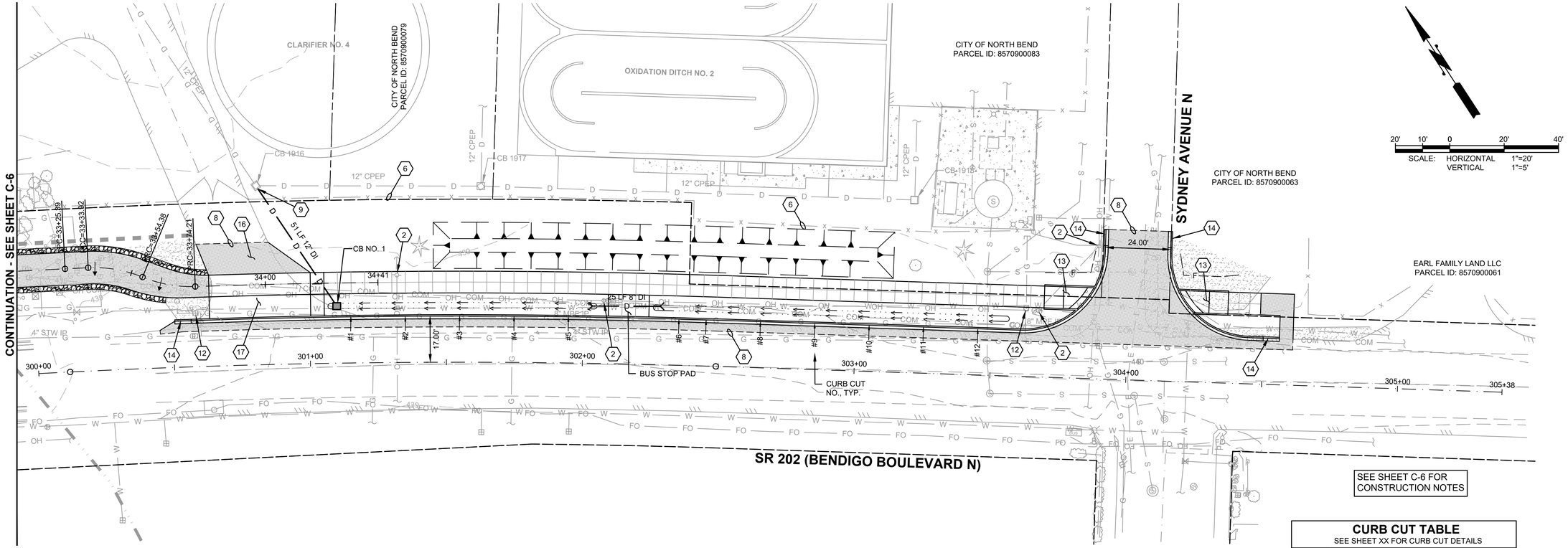
SHEET: **C-6** OF: **46**

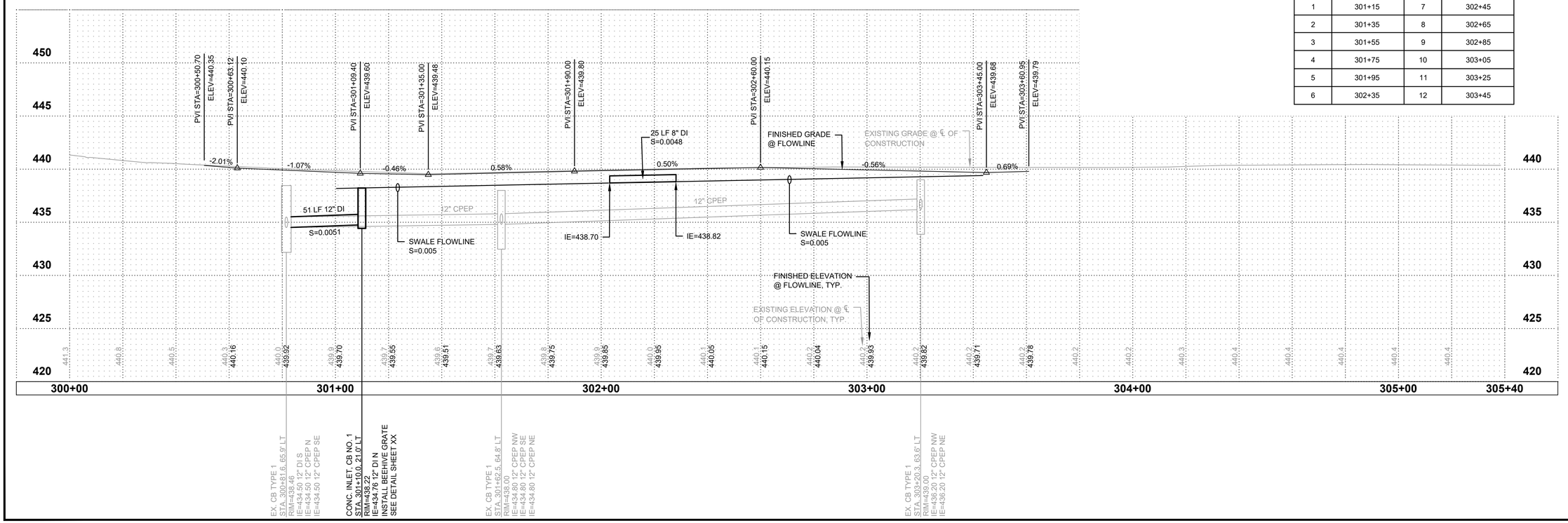


SEE SHEET C-6 FOR CONSTRUCTION NOTES

CURB CUT TABLE

SEE SHEET XX FOR CURB CUT DETAILS

NO.	STATION	NO.	STATION
1	301+15	7	302+45
2	301+35	8	302+65
3	301+55	9	302+85
4	301+75	10	303+05
5	301+95	11	303+25
6	302+35	12	303+45



EX. CB TYPE 1
STA..300+81.6, 65.9' LT
RIM=438.46
IE=434.50 12" DI S
IE=434.50 12" CPEP N
IE=434.50 12" CPEP SE

CONC. INLET, CB NO..1
STA..301+10.0, 21.0' LT
RIM=438.22
IE=434.76 12" DI N
INSTALL BEEHIVE GRATE
SEE DETAIL SHEET XX

EX. CB TYPE 1
STA..301+62.5, 64.8' LT
RIM=438.00
IE=434.80 12" CPEP NW
IE=434.80 12" CPEP SE
IE=434.80 12" CPEP NE

EX. CB TYPE 1
STA..303+20.3, 63.6' LT
RIM=439.00
IE=436.20 12" CPEP NW
IE=436.20 12" CPEP NE

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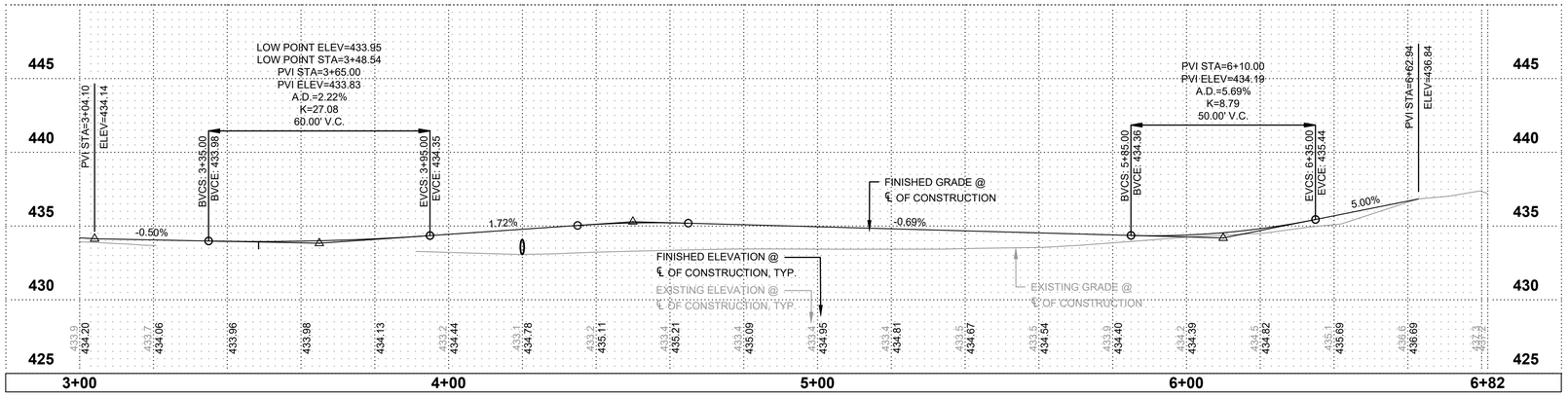

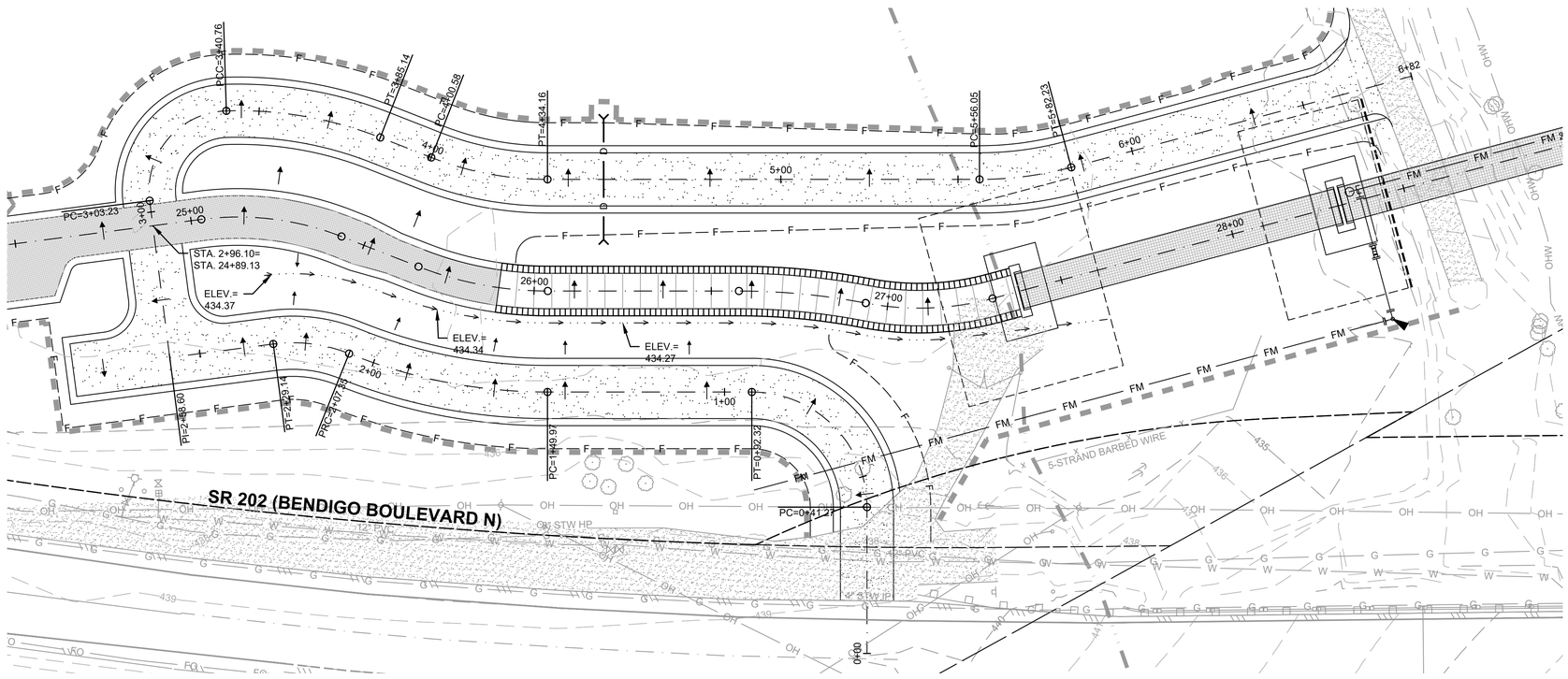

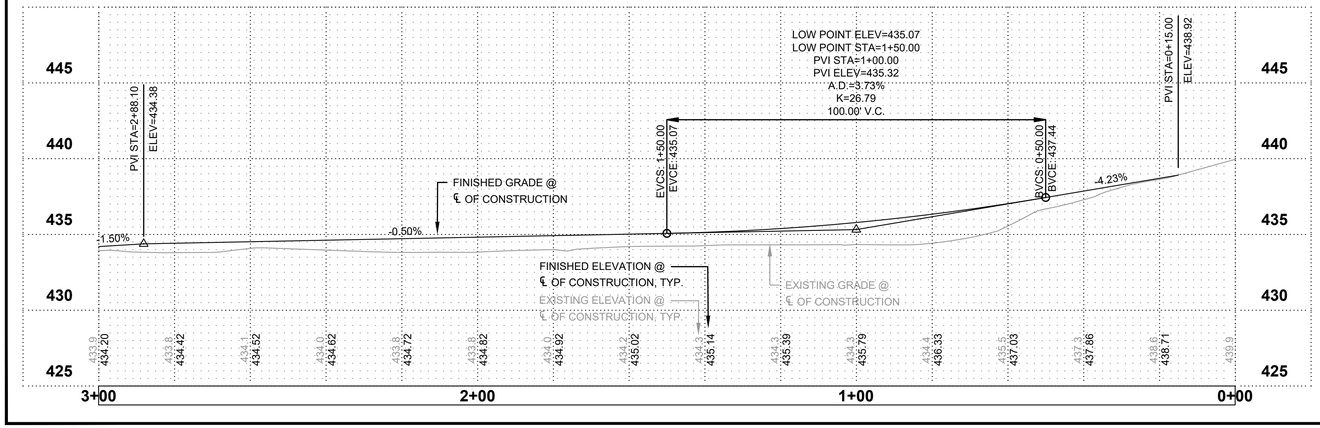

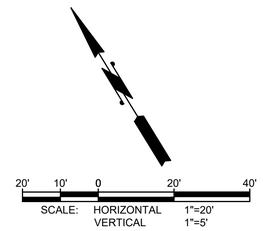

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17. CONSTRUCT CEMENT CONCRETE DRIVEWAY ENTRANCE.
18. CONSTRUCT NEW FENCE OR RAILING PER DETAIL SHEET XX.

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41853
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NORTH BEND
easy to reach. . .hard to leave

CITY OF NORTH BEND

SR 202 SHARED-USE TRAIL EXTENSION

No.	DATE	REVISION

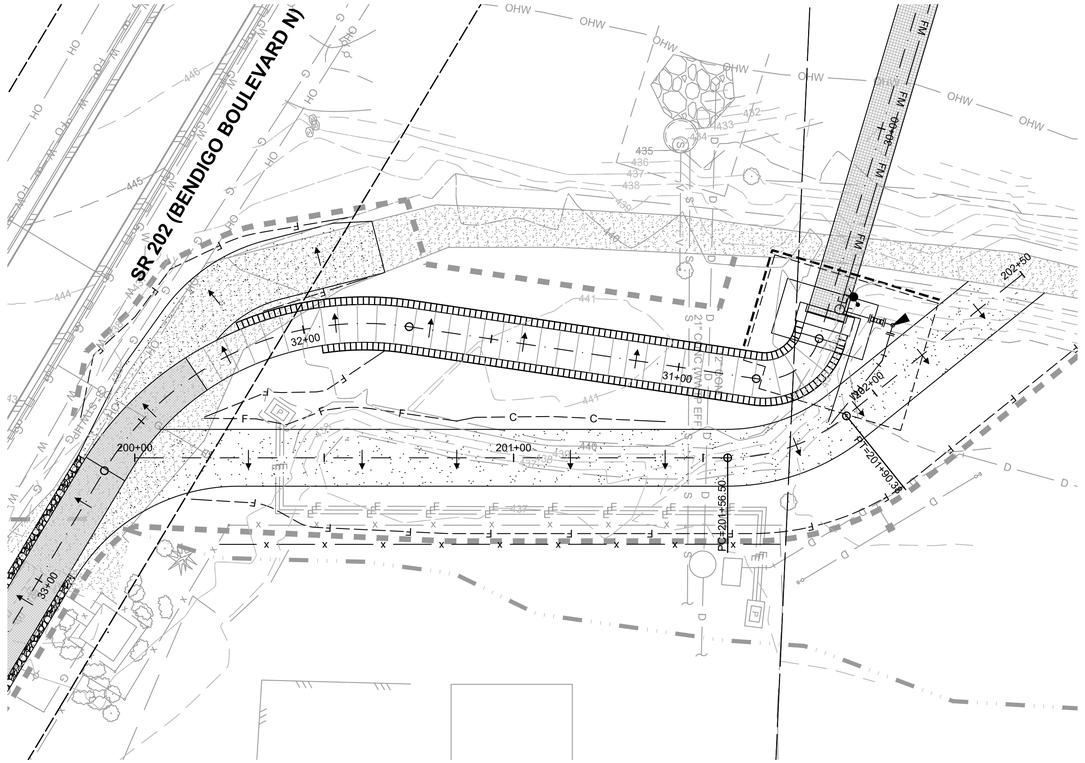
ISSUED FOR:	PRELIMINARY DESIGN SUBMITTAL
ISSUE DATE:	DEC 2024
APPROVED BY:	R.W.K.
CHECKED BY:	K.W.B.
DRAWN BY:	S.E.M.
G&O #:	24421.00
FILE:	PLANPROF.DWG

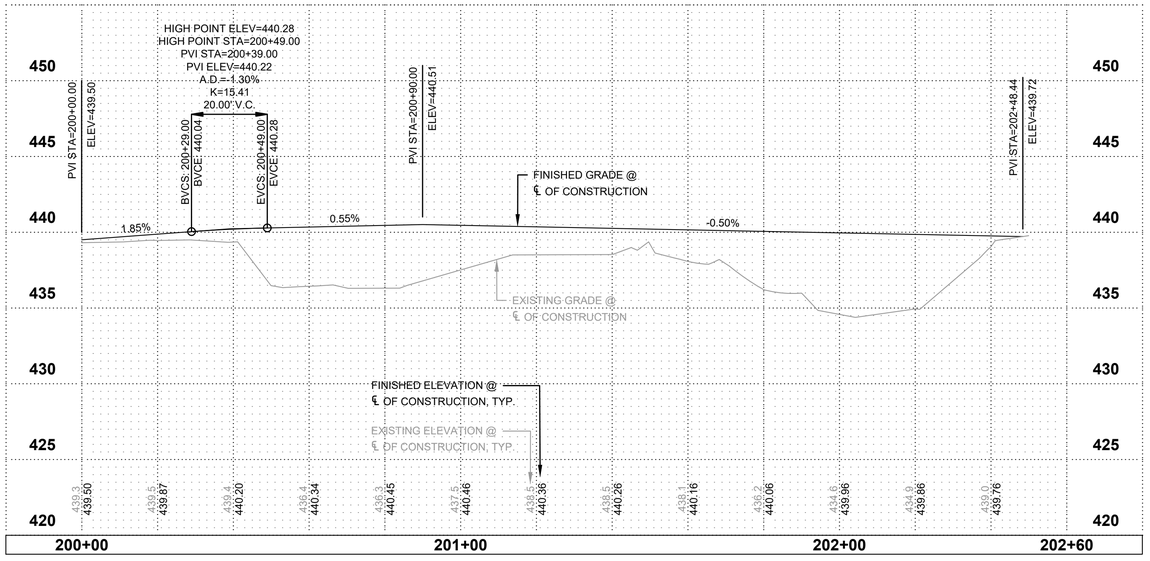
0 1" 2"
TWO INCHES AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

PLAN & PROFILE - LEFT BANK ACCESS ROAD

SHEET: **C-8** OF: **46**

M:\NBEND\24421.00 SR 202 Shared Use Trail\01 Design\PLANSET\Civil\PLANPROF.dwg, 12/20/2024 4:52 PM, KEVIN BROWN





20' 10' 0 20' 40'

SCALE: HORIZONTAL 1"=20'
VERTICAL 1"=5'

CONSTRUCTION NOTES

1. CAUTION : POTENTIAL UTILITY CONFLICT. VERIFY (POTHOLE) EXACT LOCATION AND DEPTH OF EXISTING UTILITY. SEE ORDER OF WORK.
2. EXISTING UTILITY TO BE REMOVED/RELOCATED BY OTHERS. COORDINATE WORK WITH UTILITY REPRESENTATIVE. SEE GENERAL NOTE 2, SHEET X.
3. PROTECT EXISTING UTILITY POLE, GUY WIRE, PEDESTAL, VAULT DURING CONSTRUCTION. SEE GENERAL NOTE 2 SHEET X.
4. PROTECT EXISTING FIRE HYDRANT, WATER METER, WATER VALVE, CATCH BASIN DURING CONSTRUCTION.
5. CLEAR AND GRUB EXISTING TREE,
6. PROTECT EXISTING BOARDWALK, ASPHALT, FENCE, GUARDRAIL, AND TREE, DURING CONSTRUCTION.
7. REMOVE AND WASTEHAUL EXISTING PAVEMENT, FENCE, GATE, PER THE SPECIFICATIONS. THIS WORK TO BE INCLUDED IN REMOVAL OF STRUCTURES AND OBSTRUCTIONS.
8. SAWCUT EXISTING PAVEMENT AND SEAL JOINT (WHERE APPLICABLE) THEN APPLY SAND BLANKET TO THE SURFACE JOINT.
9. CONNECT NEW STORM PIPE TO EXISTING CATCH BASIN. CORE DRILL IF KNOCK OUT IS NOT PRESENT.
10. ADJUST EXISTING SEWER MANHOLE TO GRADE.
11. ADJUST EXISTING WATER VALVE BOX TO GRADE.
12. ADJUST EXISTING GAS VALVE BOX TO GRADE.
13. CONSTRUCT CURB RAMP PER DETAIL(S) SHEET XX.
14. CONSTRUCT CURB END SECTION PER DETAIL SHEET XX.
15. CONSTRUCT MODULAR BLOCK HEADWALL PER DETAIL SHEET XX.
16. CONSTRUCT HMA DRIVEWAY REPAIR.
17. CONSTRUCT CEMENT CONCRETE DRIVEWAY ENTRANCE.
18. CONSTRUCT NEW FENCE OR RAILING PER DETAIL SHEET XX.

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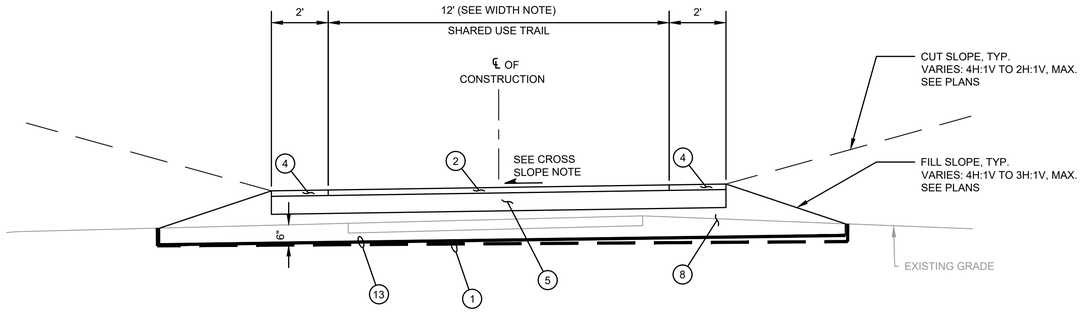
0 1" 2"
TWO INCHES AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

PLAN & PROFILE - RIGHT BANK ACCESS ROAD

SHEET: **C-9** OF: **46**



SHARED USE PATH CROSS SLOPES NOTE:

PROJECT BEGIN TO APPROX. STATION 14+80 = 1.5% LEFT-TO-RIGHT
APPROX. STATION 14+80 TO APPROX. STATION 16+30 = VARIES, 1.5% MAX.
APPROX. STATION 16+30 TO APPROX. STATION 19+45 = 1.5% RIGHT-TO-LEFT
APPROX. STATION 32+25 TO APPROX. STATION 33+75 = 1.5% LEFT-TO-RIGHT

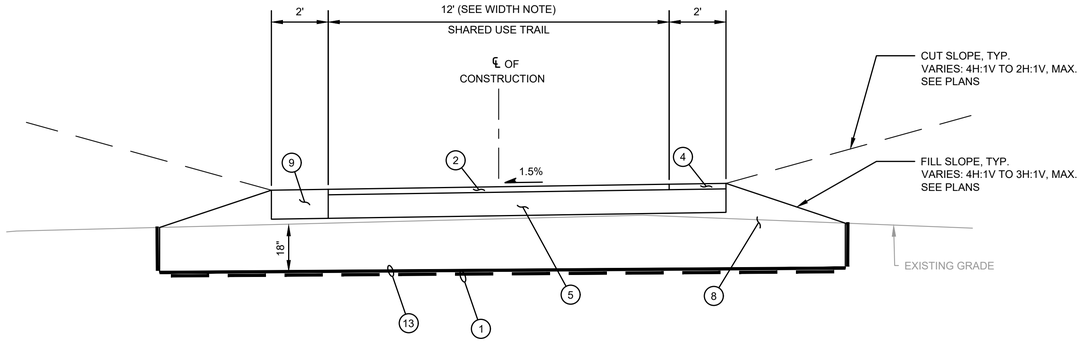
TYPICAL CROSS SECTION
SHARED USE TRAIL
PROJECT BEGIN TO APPROX. STA. 19+45
APPROX. STA. 32+15 TO APPROX. STA. 33+75

NTS

SHARED USE TRAIL WIDTH NOTE:

TAPER TRAIL WIDTH FROM 12' TO 10' BETWEEN STATION 25+50 TO 25+60
TAPER TRAIL WIDTH FROM 10' TO 12' BETWEEN STATION 32+20 TO 32+65

MATERIAL CODE	
(XX)	**DESCRIPTION**
1	EXCAVATION, EMBANKMENT AND GRADING LIMITS.
2	2" COMPACTED DEPTH HMA.
3	6" COMPACTED DEPTH HMA.
4	2" COMPACTED DEPTH CRUSHED SURFACING TOP COURSE.
5	6" COMPACTED DEPTH CRUSHED SURFACING TOP COURSE.
6	8" COMPACTED DEPTH CRUSHED SURFACING TOP COURSE.
7	8" COMPACTED DEPTH CRUSHED SURFACING BASE COURSE.
8	GRAVEL BORROW, DEPTH AS REQUIRED.
9	2'X6" LEVEL SPREADER PER DETAIL SHEET XX.
10	CEMENT CONC. CURB AND GUTTER WITH CURB CUTS AS NOTED ON THE PLANS. SEE DETAILS SHEET XX-XX.
11	CEMENT CONCRETE SIDEWALK PER DETAILS ON SHEET XX.
12	4" COMPACTED DEPTH TOPSOIL TYPE A AND HYDROSEED.
13	GEOGRID, SEE SPECIFICATIONS.



TYPICAL CROSS SECTION
SHARED USE TRAIL
APPROX. STA. 23+15 TO APPROX. STA. 25+90

NTS

APPROX. STA. 19+45 TO APPROX. STA. 23+15
BOARDWALK - SEE STRUCTURAL SHEETS

APPROX. STA. 25+90 TO APPROX. STA. 27+40
RETAINING WALL SECTION - SEE RETAINING WALL SHEETS

APPROX. STA. 27+40 TO APPROX. STA. 30+50
BRIDGE - SEE STRUCTURAL SHEETS

APPROX. STA. 30+50 TO APPROX. STA. 32+15
RETAINING WALL SECTION - SEE RETAINING WALL SHEETS

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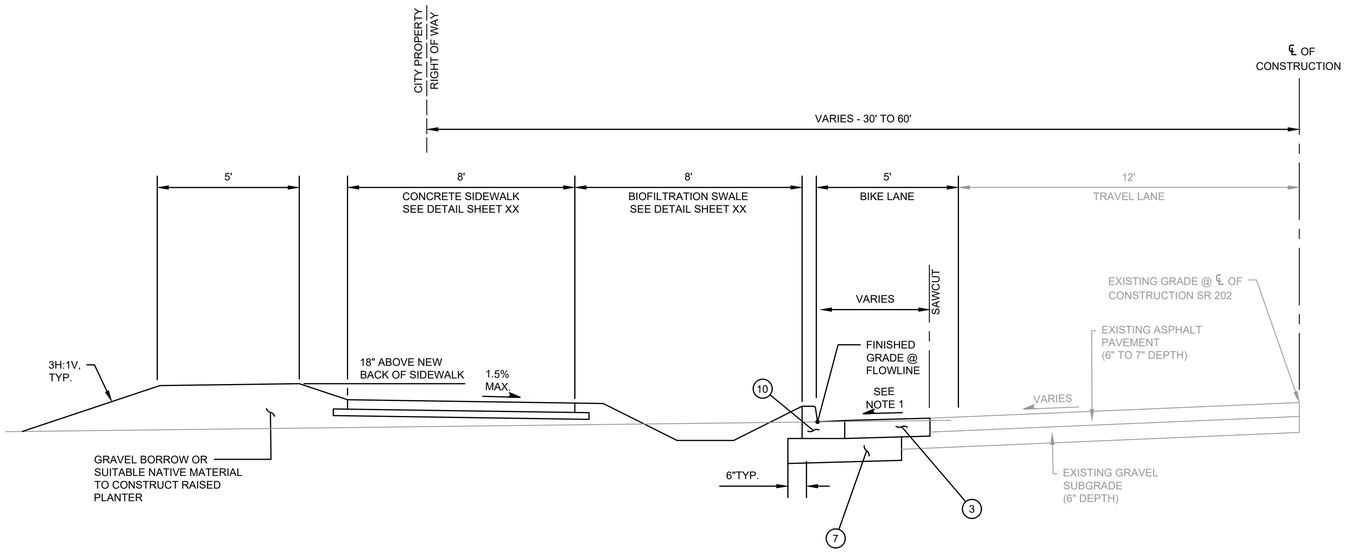
FILE:	CROSS SECTIONS.DWG

0 1" 2"
TWO INCHES AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

TYPICAL CROSS SECTIONS

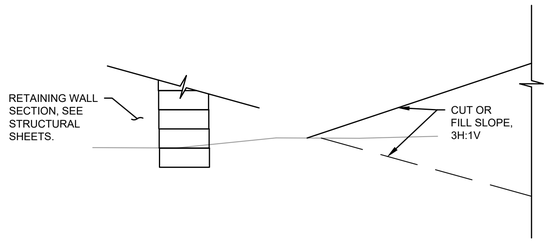
SHEET: **C-10** OF: **46**



TYPICAL CROSS SECTION
SR 202 (BENDIGO BOULEVARD N.)

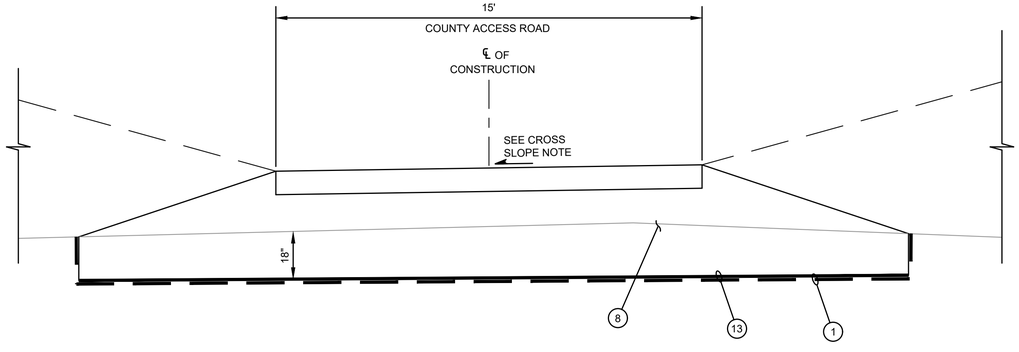
NTS

MATERIAL CODE	
(XX)	DESCRIPTION
1	EXCAVATION, EMBANKMENT AND GRADING LIMITS.
2	2" COMPACTED DEPTH HMA.
3	6" COMPACTED DEPTH HMA.
4	2" COMPACTED DEPTH CRUSHED SURFACING TOP COURSE.
5	6" COMPACTED DEPTH CRUSHED SURFACING TOP COURSE.
6	8" COMPACTED DEPTH CRUSHED SURFACING TOP COURSE.
7	8" COMPACTED DEPTH CRUSHED SURFACING BASE COURSE.
8	GRAVEL BORROW, DEPTH AS REQUIRED.
9	2'X6" LEVEL SPREADER PER DETAIL SHEET XX.
10	CEMENT CONC. CURB AND GUTTER WITH CURB CUTS AS NOTED ON THE PLANS. SEE DETAILS SHEET XX-XX.
11	CEMENT CONCRETE SIDEWALK PER DETAILS ON SHEET XX.
12	4" COMPACTED DEPTH TOPSOIL TYPE A AND HYDROSEED.
13	GEOGRID, SEE SPECIFICATIONS.



APPROX. STA. 200+00 TO APPROX. STA. 202+35

NTS

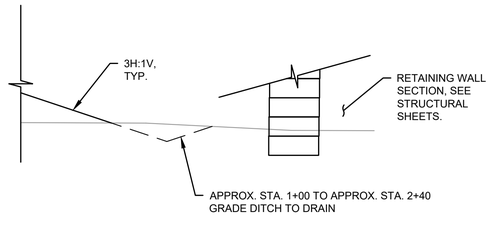


ACCESS ROAD CROSS SLOPES NOTE:

APPROX. STATION 0+15 TO APPROX. STATION 6+60 = 1.5% RIGHT-TO-LEFT
APPROX. STATION 200+00 TO APPROX. STATION 202+35 = 1.5% LEFT-TO-RIGHT

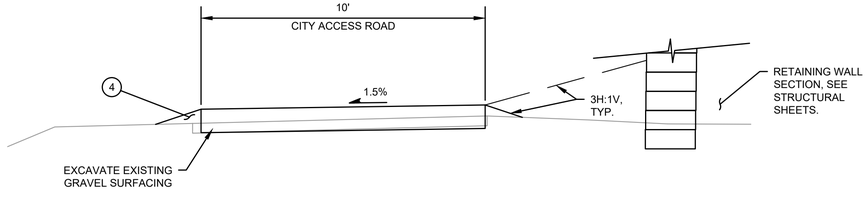
TYPICAL CROSS SECTION
LEFT & RIGHT BANK ACCESS ROADS

NTS



APPROX. STA. 0+15 TO APPROX. STA. 6+60

NTS



TYPICAL CROSS SECTION
CITY ACCESS ROAD

NTS

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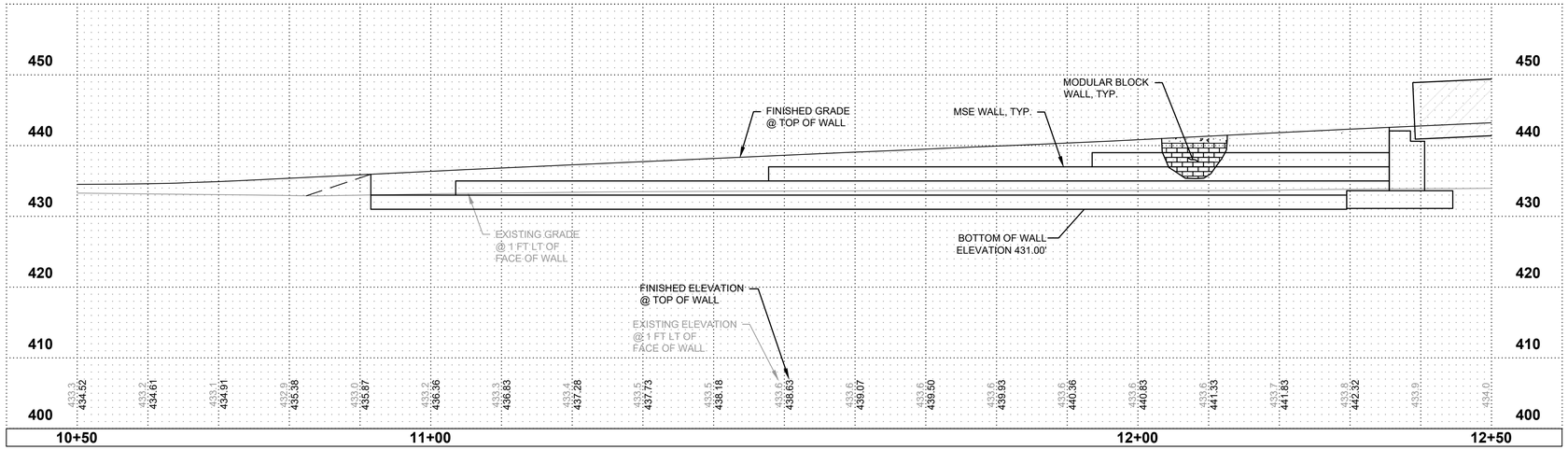
G&O #:	24421.00
FILE:	CROSS SECTIONS.DWG

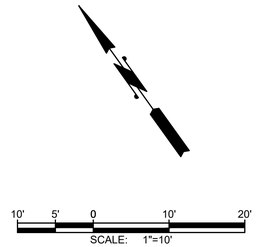
0 1" 2"
TWO INCHES AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

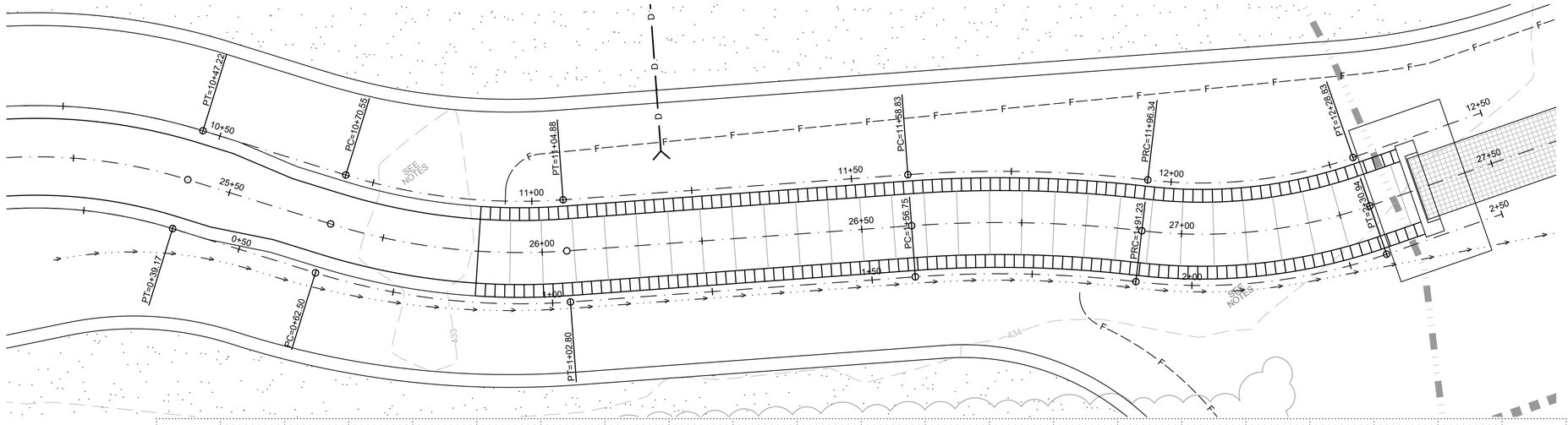
TYPICAL CROSS SECTIONS

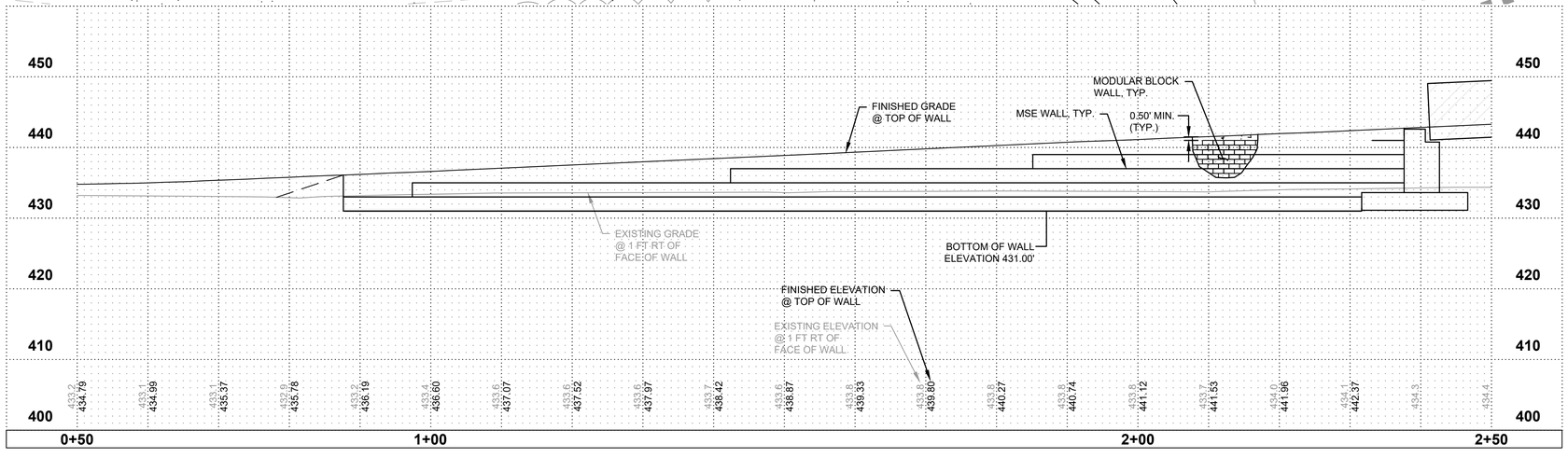
SHEET: **C-11** OF: **46**

M:\NBEND\24421.00 SR 202 Shared Use Trail\01 Design\PLANSET\Civil\CROSS SECTIONS.dwg, 12/20/2024 4:37 PM, KEVIN BROWN









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FILE:	WALLPROF.DWG

0 1" 2"
TWO INCHES AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

RETAINING WALL PLAN & PROFILE

SHEET: **C-12** OF: **46**

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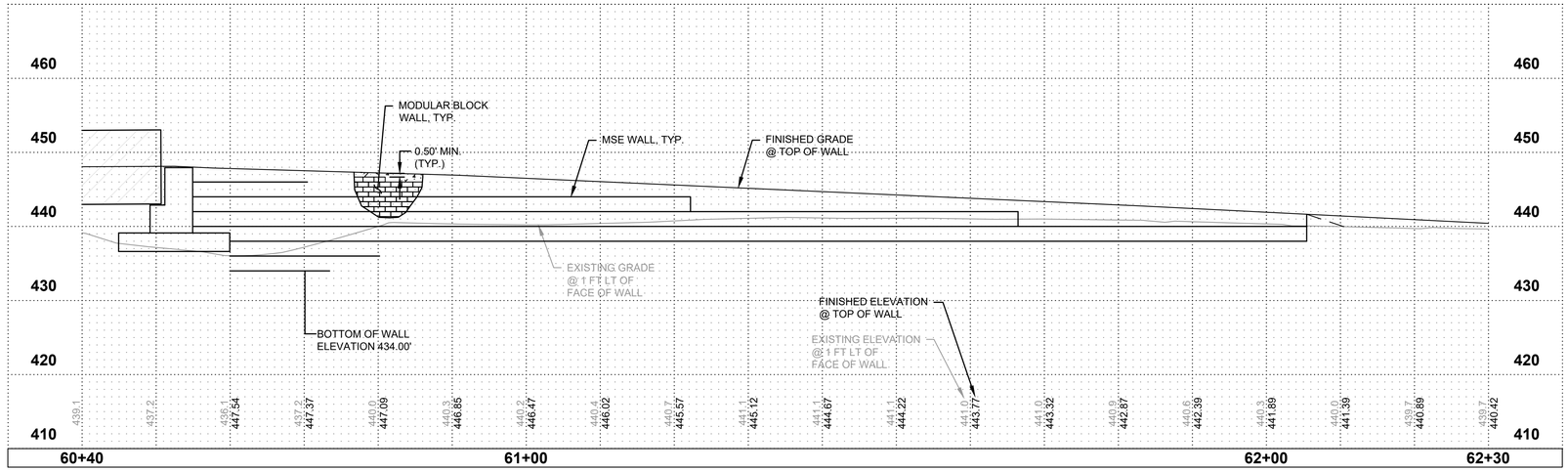

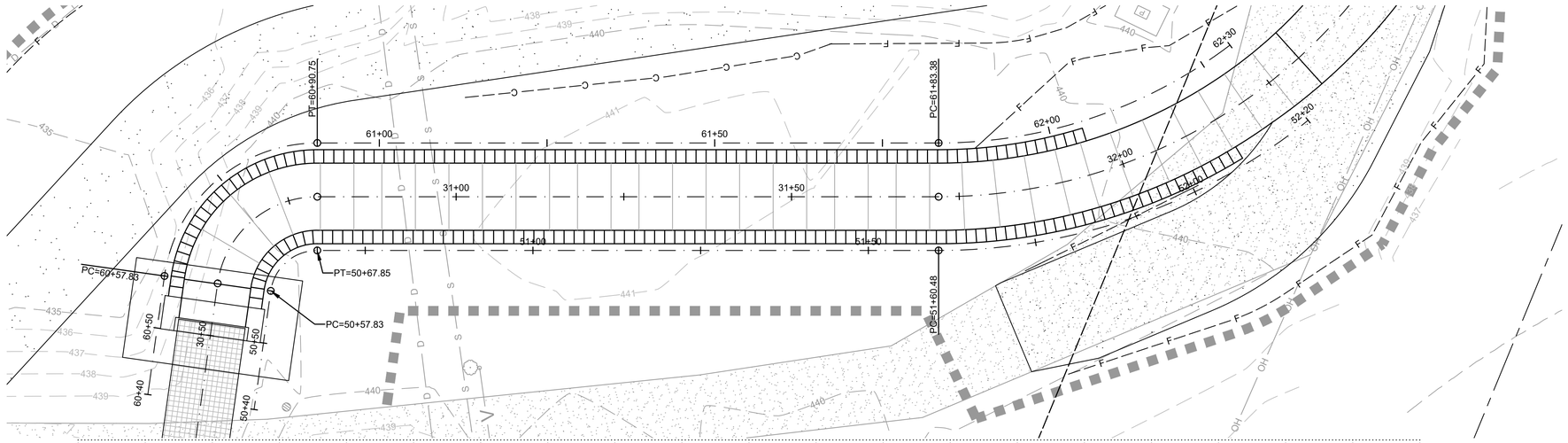

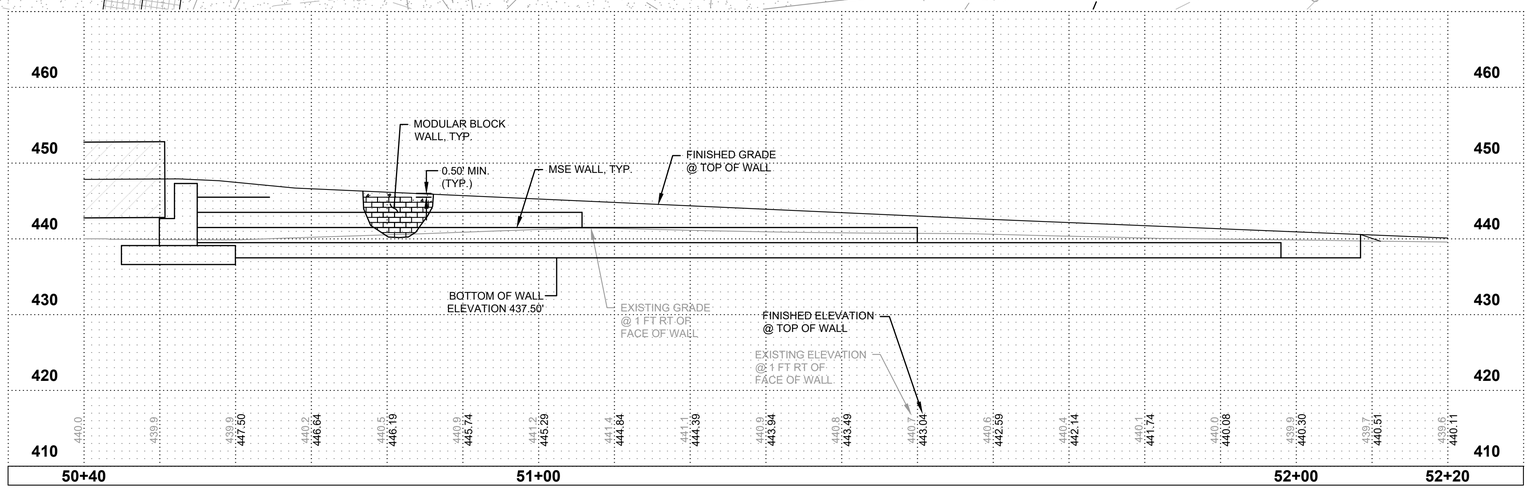

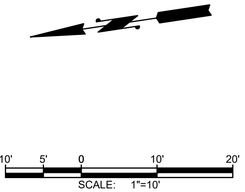

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FILE:	WALLPROF.DWG

0 1" 2"
TWO INCHES AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

RETAINING WALL PLAN & PROFILE

SHEET: **C-13** OF: **46**

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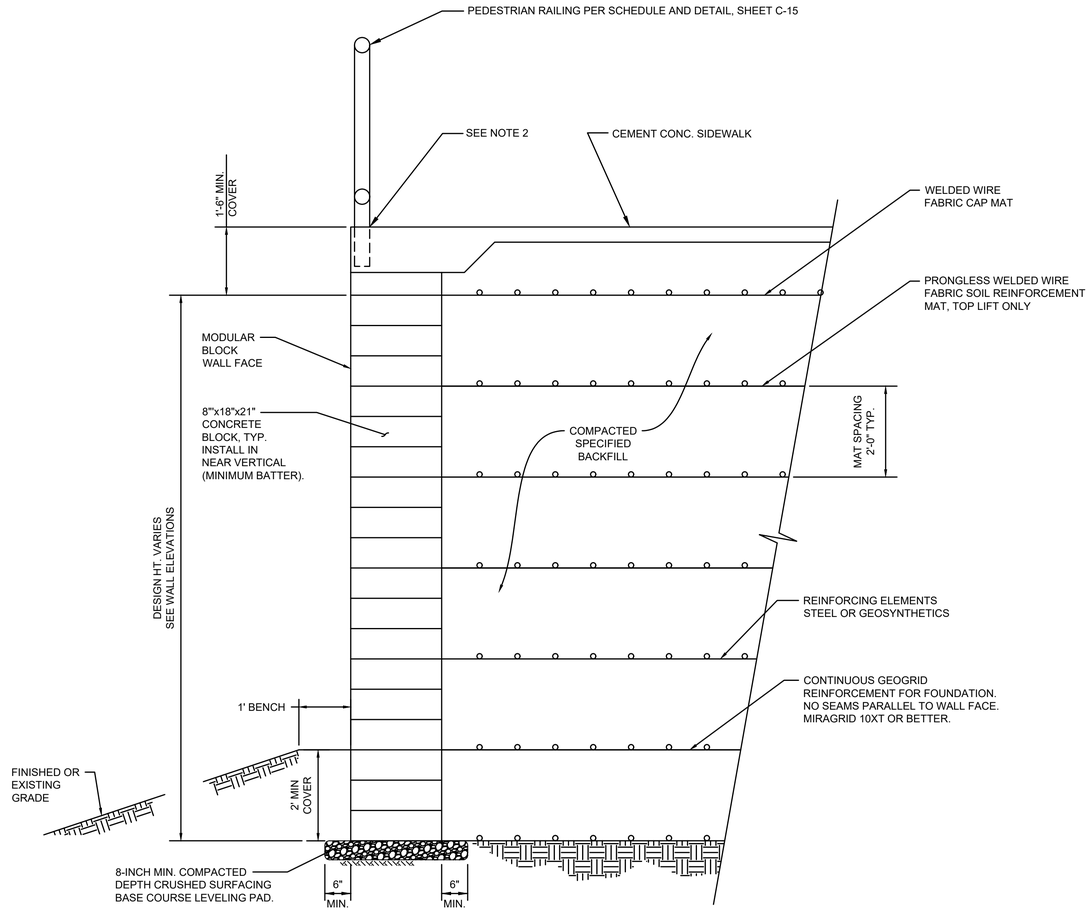

MSE RETAINING WALL W/ SEGMENTAL BLOCK WALL FACE

NOT TO SCALE

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0 1" 2"
TWO INCHES AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

RETAINING WALL DETAILS

SHEET: **C-14** OF: **46**

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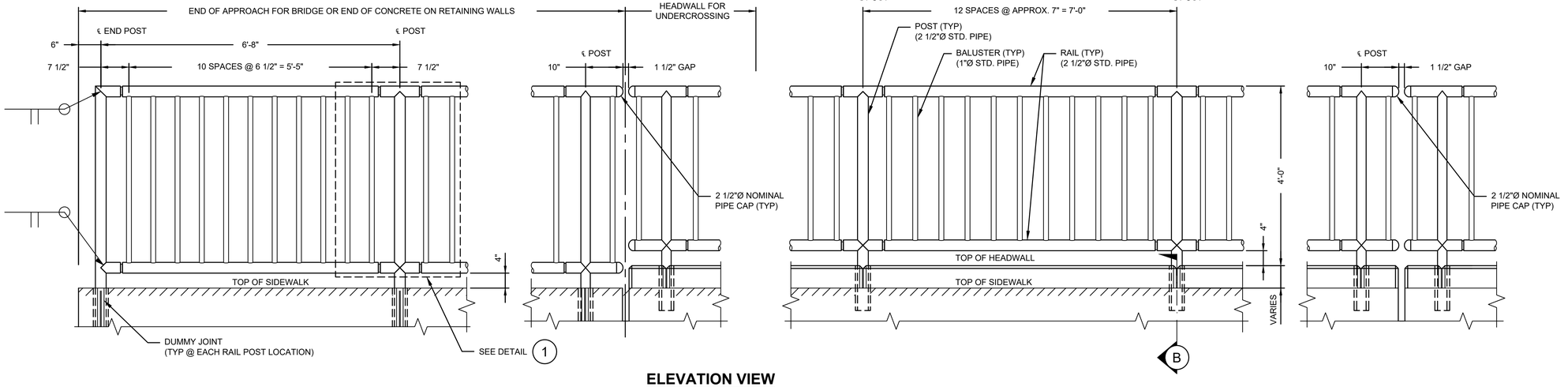
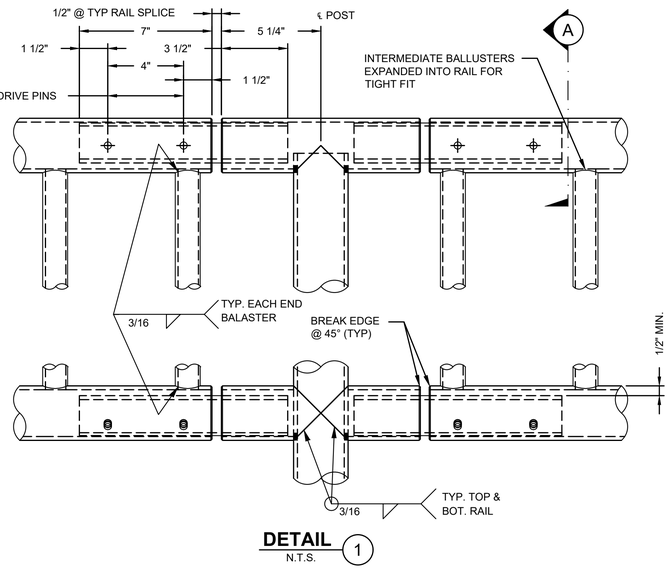
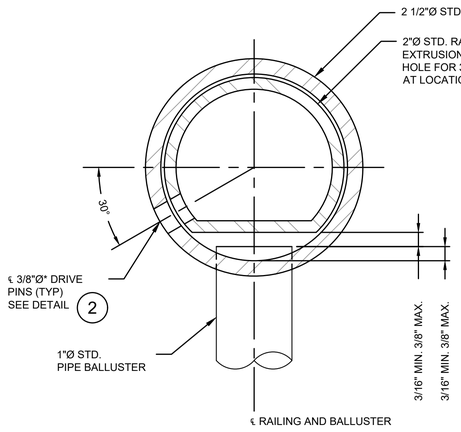


ELEVATION VIEW

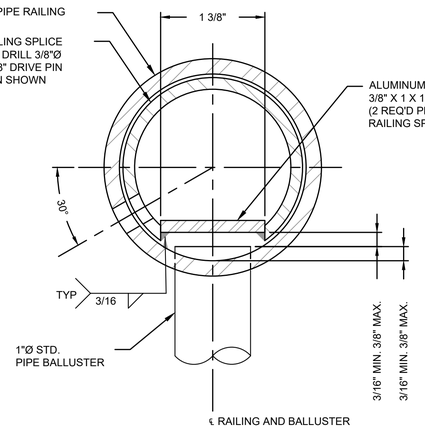
BALUSTERS NORMAL TO GRADE
TOP AND BOTTOM RAILS PARALLEL TO GRADE
N.T.S.



DETAIL 1
N.T.S.



SECTION A
N.T.S.
OPTION #1



SECTION A
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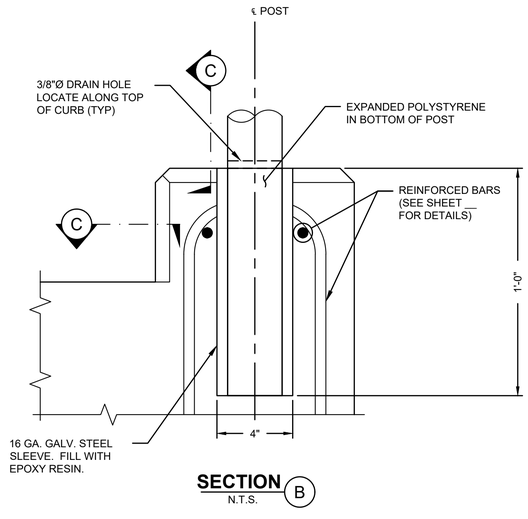
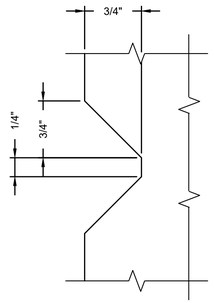
OPTION #2



SECTION B
N.T.S.

* LOCATE ON OPPOSITE SIDE OF TRAFFIC. DRIVE PINS SHALL BE DRIVEN FLUSH WITH THE OUTSIDE FACE OF THE RAILING.

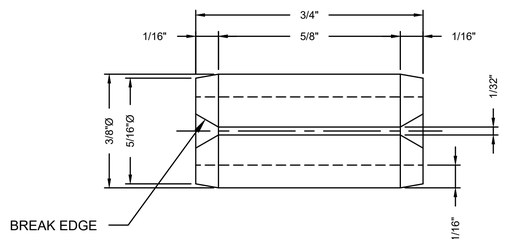


SECTION C
N.T.S.

PEDESTRIAN RAIL SCHEDULE

LINE	STATION START	STATION END	LEFT	RIGHT	LENGTH

MATERIAL	PART	MATERIAL SPECIFICATION
ALUMINUM	PIPES	ASTM B 221-6005-T5 SCHEDULE 40 (STD. PIPE) ASTM B 241 OR B 429 6061-T6
	BAR	ASTM B 221-6005-TS
STEEL	DRIVE PINS	ASTM A 276 TYPE 302 STAINLESS STEEL



DETAIL 2
N.T.S.

SLOTTED TYPE SPRING PIN (ANSI B18.8.2)
SCALE 1:32

NOTES:

1. PIPE RAILING AND PIPE RAILING SPLICES SHALL BE BENT TO THE HORIZONTAL CURVE WHERE THE RADIUS OF CURVATURE IS LESS THAN 200'. THESE ITEMS MAY BE HEATED TO NOT MORE THAN 400°F FOR A PERIOD NOT TO EXCEED 30 MINUTES TO FACILITATE FORMING OR BENDING TO HORIZONTAL CURVATURE.
2. SHOP DRAWINGS OF RAILING SHALL BE SUBMITTED FOR APPROVAL SHOWING COMPLETE DIMENSIONS AND DETAILS OF FABRICATION AND INCLUDING AN ERECTION DIAGRAM. MATERIAL SPECIFICATIONS SHALL BE PROVIDED IN THE SHOP DRAWINGS FOR ALL COMPONENTS.
3. CUTTING SHALL BE DONE BY SAWING OR MILLING AND ALL CUTS SHALL BE TRUE AND SMOOTH. FLAME CUTTING WILL NOT BE PERMITTED.
4. WELDING OF ALUMINUM SHALL CONFORM TO STD. SPEC. SECTION 9-28.14(3).
5. AFTER FABRICATION, POSTS SHALL BE HEAT TREATED IN ACCORDANCE WITH SECTION 6.5 OF THE AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS DATED 2001.
6. ALL ALUMINUM PARTS SHALL BE GIVEN A *[CLEAR OR BRONZE] ANODIC COATING OF AT LEAST 0.0006" THICK AND SEALED TO MEET THE REQUIREMENTS OF ASTM B 580 WITH A UNIFORM FINISH.
7. PIPE RAILING, PIPE BALUSTERS AND PIPE RAILING SPLICES SHALL BE ADEQUATELY WRAPPED TO INSURE SURFACE PROTECTION DURING HANDLING AND TRANSPORTATION TO THE JOB SITE.

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41853
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CITY OF NORTH BEND

SR 202 SHARED-USE TRAIL EXTENSION

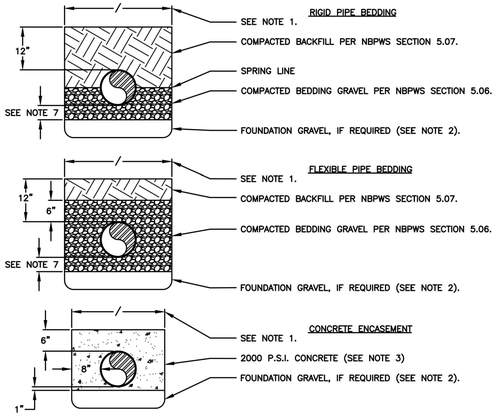
No.	DATE	REVISION

ISSUED FOR:	PRELIMINARY DESIGN SUBMITTAL
ISSUE DATE:	DEC 2024
APPROVED BY:	R.W.K.
CHECKED BY:	K.W.B.
DRAWN BY:	S.E.M.
G&O #:	24421.00
FILE:	PRAIL_DET.DWG

0 1" 2"
TWO INCHES AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

PEDESTRIAN RAILING DETAILS

SHEET: **C-15** OF: **46**



NOTES:

1. FOR PIPES 15–INCHES AND UNDER, TRENCH WIDTH=I.D. + 30–INCHES. FOR PIPES 18–INCHES AND OVER, TRENCH WIDTH=(1.5 x I.D.)+18–INCHES. PER SECTION 2–09.4, "MEASUREMENT", OF THE WSDOT STANDARD SPECIFICATIONS.
2. EXCAVATE UNSTABLE MATERIAL DOWN TO FIRM SOIL AND REPLACE WITH FOUNDATION GRAVEL PER SECTION 9–03.9(1), "BALLAST", OF THE STANDARD SPECIFICATIONS.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANCHORING PIPE TO PREVENT FLOTATION DURING CONCRETE PLACEMENT.
4. WHEN THE DESIGN OF TANKS OR PIPES DOES NOT TAKE INTO ACCOUNT BUOYANCY, UNDERDRAINS SHALL BE PROVIDED.
5. PROVIDE CLEANOUTS ON UNDERDRAIN PIPE, EVERY 100 FEET, AND AT BENDS OR JUNCTIONS.
6. SEE WSDOT SECTION 9–03.9 FOR ADDITIONAL REQUIREMENTS.
7. 4–INCHES FOR PIPE 18–INCH DIAMENTER AND LESS; 6–INCHES FOR PIPE GREATER THAN 18–INCH DIAMETER.
8. COMPACTED CRUSHED SURFACING TOP COURSE CAN ALSO BE USED AS BEDDING GRAVEL.

CITY OF NORTH BEND

PIPE BEDDING DETAIL

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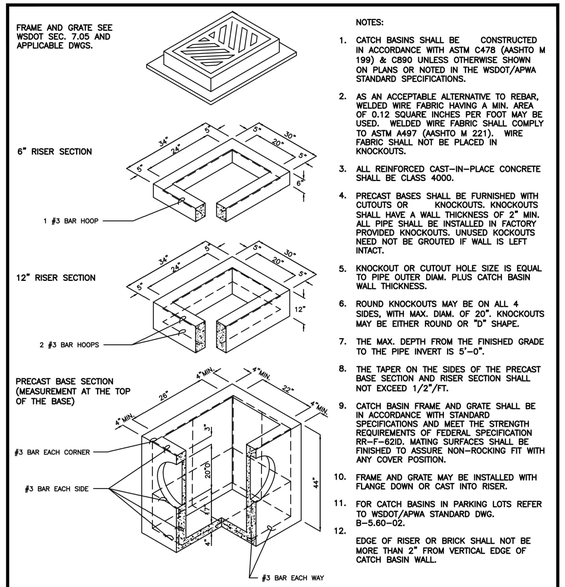
MARK RIGOS, P.E.	MAY 2018	SD–14
BY CITY	DATE	



NOTES:

1. CATCH BASINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH ASTM C478 (AASHTO M 199) & C890 UNLESS OTHERWISE SHOWN ON PLANS OR NOTED IN THE WSDOT/APWA STANDARD SPECIFICATIONS.
2. AS AN ACCEPTABLE ALTERNATIVE TO REBAR, WELDED WIRE FABRIC HAVING A MIN. AREA OF 0.12 SQUARE INCHES PER FOOT MAY BE USED. WELDED WIRE FABRIC SHALL COMPLY TO ASTM A497 (AASHTO M 221). WIRE FABRIC SHALL NOT BE PLACED IN KNOCKOUTS.
3. ALL REINFORCED CAST–IN–PLACE CONCRETE SHALL BE CLASS 4000.
4. PRECAST BASES SHALL BE FURNISHED WITH CUTOUTS OR KNOCKOUTS. KNOCKOUTS SHALL HAVE A WALL THICKNESS OF 2" MIN. ALL PIPE SHALL BE INSTALLED IN FACTORY PROVIDED KNOCKOUTS. UNUSED KOCKOUTS NEED NOT BE GROUTED IF WALL IS LEFT INTACT.
5. KNOCKOUT OR CUTOUT HOLE SIZE IS EQUAL TO PIPE OUTER DIAM. PLUS CATCH BASIN WALL THICKNESS.
6. ROUND KNOCKOUTS MAY BE ON ALL 4 SIDES, WITH MAX. DIAM. OF 20". KNOCKOUTS MAY BE EITHER ROUND OR "D" SHAPE.
7. THE MAX. DEPTH FROM THE FINISHED GRADE TO THE PIPE INVERT IS 5'–0".
8. THE TAPER ON THE SIDES OF THE PRECAST BASE SECTION AND RISER SECTION SHALL NOT EXCEED 1/2"/FT.
9. CATCH BASIN FRAME AND GRATE SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATIONS AND MEET THE STRENGTH REQUIREMENTS OF FEDERAL SPECIFICATION RR–F–621D. MATING SURFACES SHALL BE FINISHED TO ASSURE NON–ROCKING FIT WITH ANY COVER POSITION.
10. FRAME AND GRATE MAY BE INSTALLED WITH FLANGE DOWN OR CAST INTO RISER.
11. FOR CATCH BASINS IN PARKING LOTS REFER TO WSDOT/APWA STANDARD DWG. B–5.60–02.
12. EDGE OF RISER OR BRICK SHALL NOT BE MORE THAN 2" FROM VERTICAL EDGE OF CATCH BASIN WALL.

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CATCH BASIN – TYPE 1

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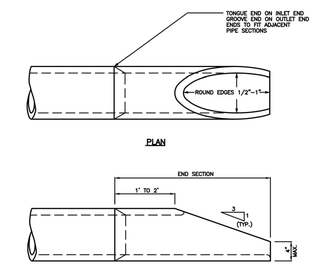
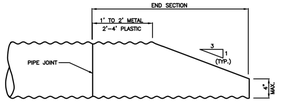
BY CITY	DATE	



CONCRETE PIPE



METAL & THERMO-PLASTIC PIPE

NOTE:

1. SIDE SLOPE SHALL BE WARPED TO MATCH THE BEVELED PIPE END. WHEN CULVERT IS ON SKEW, BEVELED END SHALL BE ROTATED TO CONFORM TO SLOPE. IF SLOPE DIFFERS FROM 3:1, PIPE SHALL BE BEVELED TO MATCH SLOPE.
2. REFER TO WSDOT STANDARD PLAN B–70.20.00 FOR ADDITIONAL DETAILS.
3. FOR PIPES UNDER 18" DIAMETER.

CITY OF NORTH BEND

BEVELED END PIPE SECTION

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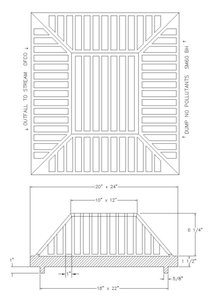
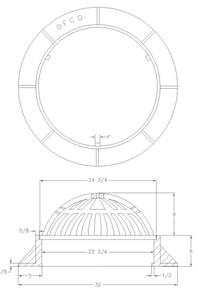
OLYMPIC SM60BH



NOTES:

1. MATERIAL: DUCTILE IRON ASTM A536, CL80–55–06.
2. PROVIDE 2–5/8" DIAMETER STAINLESS STEEL ALLEN TYPE BOLTS COUNTER SUNK FLUSH WITH COVER.
3. ALL LIDS TO BE LOCKING UNLESS OTHERWISE SPECIFIED IN PLANS.

OLYMPIC MH25BH



NOTES:

1. MATERIAL: CAST IRON ASTM A48, CL 30.
2. PROVIDE 2–5/8" DIAMETER STAINLESS STEEL ALLEN TYPE BOLTS COUNTER SUNK FLUSH WITH COVER.
3. ALL LIDS TO BE LOCKING UNLESS OTHERWISE SPECIFIED IN PLANS.

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BEEHIVE GRATE

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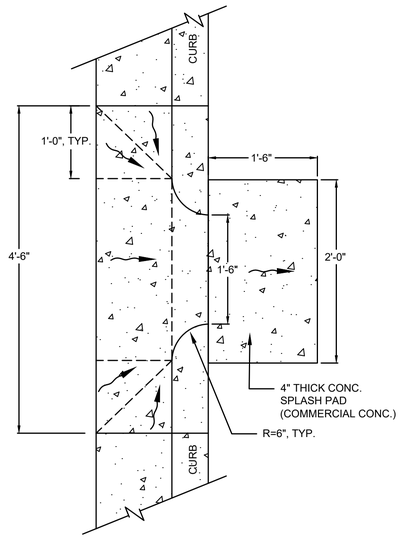
DRAWN BY:	S.E.M.
G&O #:	24421.00
FILE:	STORM DET.DWG

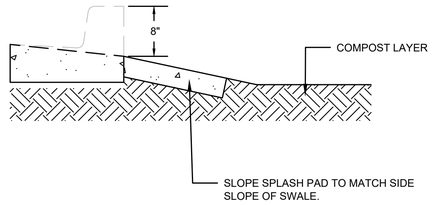
0 1" 2"
TWO INCHES AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

STORM DRAINAGE DETAILS

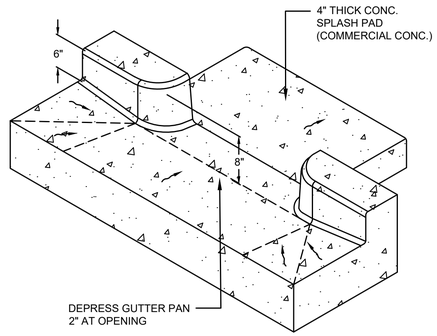
SHEET: **C-16** OF: **46**



PLAN



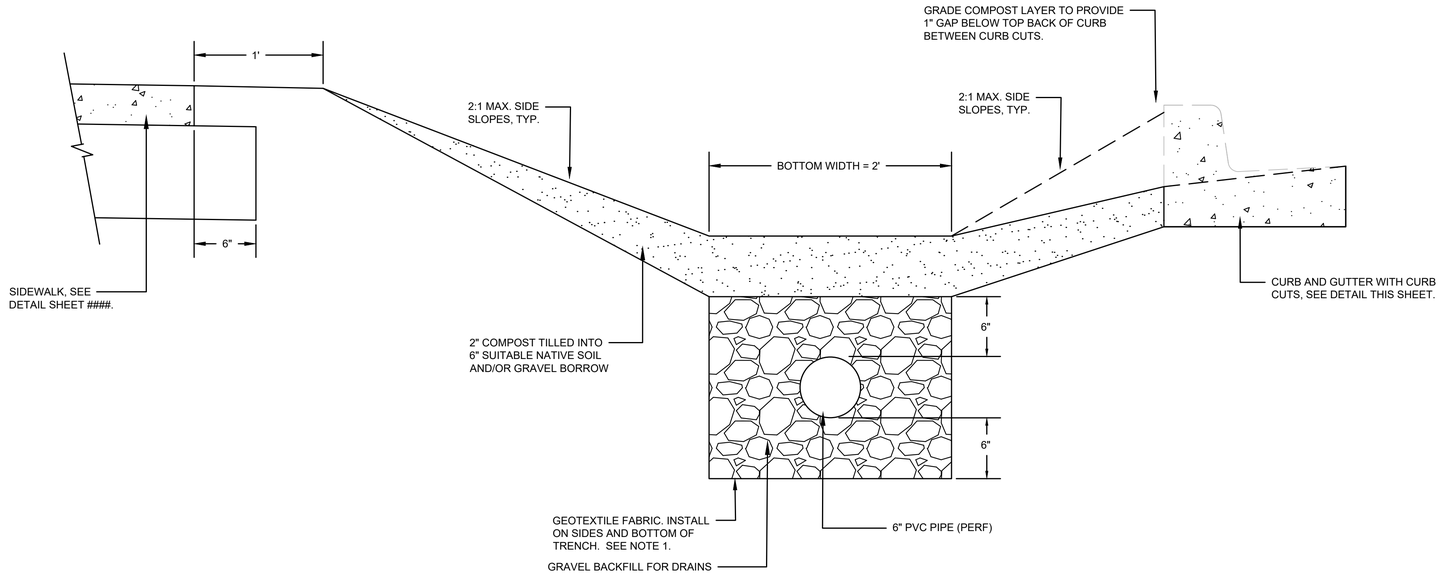
SECTION



ISOMETRIC

CURB CUT DETAIL

NTS



NOTES:

1. GEOTEXTILE FOR UNDERGROUND DRAINAGE, MODERATE SURVIVABILITY CLASS A PER SECTION 9-33.1 OF THE WSDOT STANDARD SPECIFICATIONS.

BIOFILTRATION SWALE

NTS

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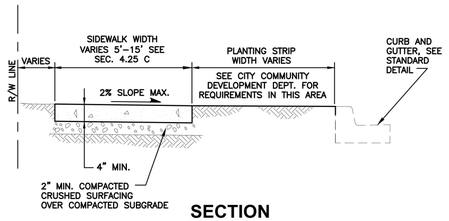
FILE:	STORM DET.DWG

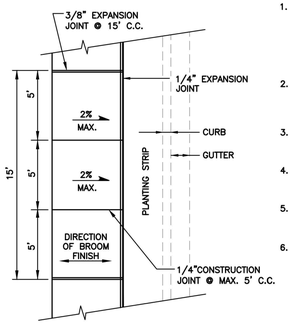
0 1" 2"
TWO INCHES AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

STORM DRAINAGE DETAILS

SHEET: **C-17** OF: **46**



SECTION

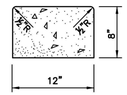


PLAN

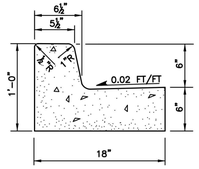
NOTES:

1. THRU JOINTS AND CONTRACTION JOINTS SHALL BE AS SHOWN ABOVE. THRU JOINTS SHALL ALSO BE PLACED IN THE SIDEWALK SECTION AT DRIVEWAY RETURNS. ALL JOINTS SHALL BE CLEAN AND EDGED WITH AN EDGE HAVING 1/4" RADIUS. JOINT SHALL BE FLUSH WITH THE FINISHED SURFACE.
2. ALL METER BOXES, ETC. IN SIDEWALK AREAS SHALL HAVE 3/8" JOINT MATERIAL (FULL DEPTH) PLACED AROUND THEM BEFORE PLACING CONCRETE.
3. PREMOLDED JOINT FILLER SHALL BE ASPHALT SATURATED FELT OR PAPER, FULL DEPTH OF SIDEWALK.
4. FORMS SHALL BE EITHER WOOD OR STEEL AND SHALL MEET ALL REQUIREMENTS OF THESE SPECIFICATIONS.
5. CEMENT CONCRETE SHALL BE AIR–ENTRAINED CLASS 3000 PSI, EXCEPT CLASS 4000 SHALL BE USED AT DRIVEWAY CROSSINGS.
6. FOR SIDEWALKS GREATER THAN 8' IN WIDTH, ADDITIONAL EXPANSION AND CONTRACTION JOINTS WILL BE REQUIRED.

CITY OF NORTH BEND		
SIDEWALK WITH PLANTING STRIP		
APPROVED:		DWG. NO.
MARK RIGOS, P.E.	MAY 2018	T–19
BY CITY	DATE	



BORDER CURB

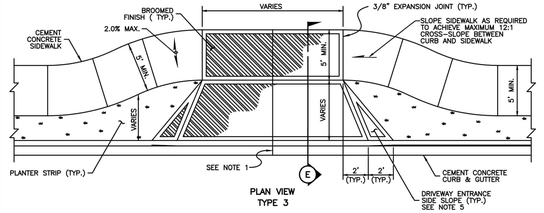


VERTICAL CONCRETE CURB AND GUTTER

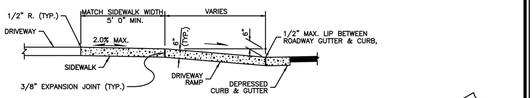
NOTES:

1. THE CURBS, GUTTERS AND SIDEWALKS SHALL HAVE EXPANSION JOINTS (3/8") AT INTERVALS OF NOT GREATER THAN 15'–0"
2. CEMENT CONCRETE SHALL BE AIR–ENTRAINED CLASS 3000, EXCEPT CLASS 4000 SHALL BE USED AT DRIVEWAY APPROACHES.
3. WHEN REPAIRING AND/OR REPLACING CEMENT CONCRETE CURB AND GUTTER, EXISTING CURB AND GUTTER SHALL BE REMOVED TO THE NEAREST JOINT, SAWCUTTING AND REMOVAL SHALL NOT BE ALLOWED.

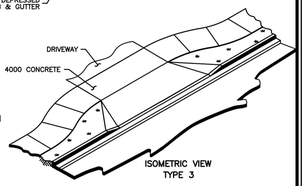
CITY OF NORTH BEND		
CONCRETE CURB AND GUTTER		
APPROVED:		DWG. NO.
MARK RIGOS, P.E.	MAY 2018	T–22
BY CITY	DATE	



PLAN VIEW
TYPE 3



SECTION (E)



ISOMETRIC VIEW
TYPE 3

NOTES:

1. WHEN THE DRIVEWAY WIDTH EXCEEDS 15 FEET, CONSTRUCT A FULL DEPTH EXPANSION JOINT WITH 3/8" JOINT FILLER ALONG THE DRIVEWAY CENTERLINE. CONSTRUCT EXPANSION JOINTS PARALLEL WITH THE CENTERLINE AS REQUIRED AT 15 FEET MAXIMUM SPACING WHEN DRIVEWAY WIDTHS EXCEED 30 FEET.
2. ALL CEMENT CONCRETE SHALL BE AIR–ENTRAINED.
3. WHERE "GRADE BREAK" IS CALLED OUT, THE ENTIRE LENGTH OF THE LINE BETWEEN THE TWO ADJACENT SURFACE PLANES SHALL BE FLUSH.
4. THE RAMP MAXIMUM RUNNING SLOPE SHALL NOT REQUIRE THE RAMP LENGTH TO EXCEED 15 FEET TO AVOID CHASING THE SLOPE INDEFINITELY WHEN CONNECTING TO STEEP GRADES. WHEN APPLYING THE 15 FOOT MAX. LENGTH, THE RUNNING SLOPE OF THE RAMP SHALL BE AS FLAT AS FEASIBLE.
5. MINIMUM LENGTH OF FULL HEIGHT CURB BETWEEN DRIVEWAYS SHALL BE 2 FEET.

LEGEND

SLOPE IN EITHER DIRECTION

CITY OF NORTH BEND		
CEMENT CONCRETE DRIVEWAY TYPE 3		
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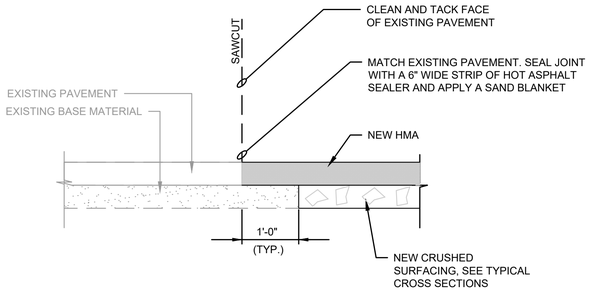
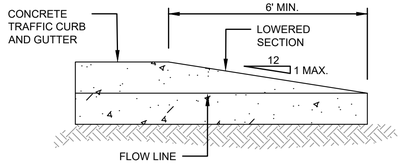
BY CITY	DATE	



BUTT JOINT DETAIL

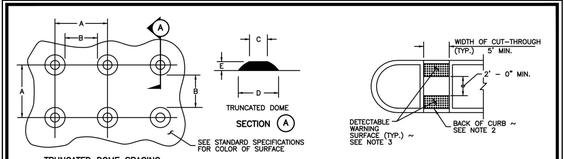
NTS



NOTE:
CONCRETE CURB END SECTION SHALL BE USED AT ALL LOCATIONS WHERE NEW CURB DOES NOT MEET EXISTING CURB AND/OR AS DIRECTED IN THE FIELD.

CONCRETE CURB END SECTION

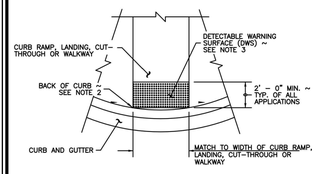
NTS



TRUNCATED DOME SPACING
SEE NOTE 3

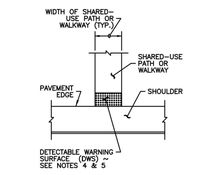
	MIN.	MAX.
A	1.60"	2.40"
B	0.65"	—
C	0.45"	0.90"
D	0.9"	1.40"
E	0.2"	0.2"

TRUNCATED DOME DETAILS



DETECTABLE WARNING SURFACE DETAIL

MEDIAN CUT–THROUGH



SHARED–USE PATH CONNECTION

NOTES

1. THE DETECTABLE WARNING SURFACE (DWS) SHALL EXTEND THE FULL WIDTH OF THE CURB RAMP (EXCLUSIVE OF FLARES) OR THE LANDING.
2. THE DETECTABLE WARNING SURFACE SHALL BE PLACED AT THE BACK OF CURB, AND NEED NOT FOLLOW THE RADIUS.
3. THE ROWS OF TRUNCATED DOMES SHALL BE ALIGNED TO BE PERPENDICULAR TO THE GRADE BREAK AT THE BACK OF CURB.
4. THE ROWS OF TRUNCATED DOMES SHALL BE ALIGNED TO BE PARALLEL TO THE DIRECTION OF TRAVEL.
5. IF CURB AND GUTTER ARE NOT PRESENT, SUCH AS A SHARED–USE PATH CONNECTION, THE DETECTABLE WARNING SURFACE SHALL BE PLACED AT THE PAVEMENT EDGE.
6. WHEN THE GRADE BREAK BETWEEN THE CURB RAMP AND THE LANDING IS LESS THAN OR EQUAL TO 5 FT. FROM THE BACK OF CURB AT ALL POINTS, PLACE THE DETECTABLE WARNING SURFACE ON THE BOTTOM OF THE CURB RAMP.

CITY OF NORTH BEND		
DETECTABLE WARNING SURFACE		
APPROVED:		DWG. NO.
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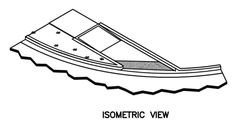
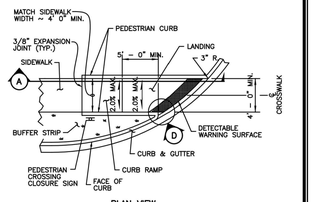
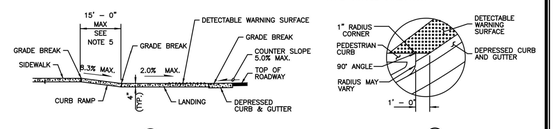
BY CITY	DATE	



ISOMETRIC VIEW
TYPE SINGLE DIRECTION



PLAN VIEW
TYPE SINGLE DIRECTION



SECTION (A) DETAIL (D)

NOTES

1. THIS PLAN IS TO BE USED WHERE PEDESTRIAN CROSSING IN ONE DIRECTION IS NOT PERMITTED.
2. CURB RAMP LOCATION SHALL BE PLACED WITHIN THE WIDTH OF THE ASSOCIATED CROSSWALK, OR AS SHOWN IN THE CONTRACT PLANS.
3. WHERE "GRADE BREAK" IS CALLED OUT, THE ENTIRE LENGTH OF THE GRADE BREAK BETWEEN THE TWO ADJACENT SURFACE PLANES SHALL BE FLUSH.
4. DO NOT PLACE GRATINGS, JUNCTION BOXES, ACCESS COVERS OR OTHER APPURTENANCES IN FRONT OF THE CURB RAMP OR ON ANY PART OF THE CURB RAMP OR LANDING.
5. CURB RAMP MAXIMUM RUNNING SLOPE SHALL NOT REQUIRE THE RAMP LENGTH TO EXCEED 15 FEET TO AVOID CHASING THE SLOPE INDEFINITELY WHEN CONNECTING TO STEEP GRADES. WHEN APPLYING THE 15 FOOT MAXIMUM LENGTH, THE RUNNING SLOPE OF THE CURB RAMP SHALL BE AS FLAT AS FEASIBLE.
6. CURB RAMPS AND LANDINGS SHALL RECEIVE BROOM FINISH.
7. PEDESTRIAN CURB MAY BE OMITTED IF THE GROUND SURFACE AT THE BACK OF THE CURB RAMP AND/OR LANDING WILL BE AT THE SAME ELEVATION AS THE CURB RAMP OR LANDING AND THERE WILL BE NO MATERIAL TO RETAIN.
8. SUBGRADE AND FORM INSPECTION BY THE CITY SHALL BE REQUIRED PRIOR TO PLACING CEMENT CONCRETE. ALL CEMENT CONCRETE SHALL BE AIR–ENTRAINED.

LEGEND

SLOPE IN EITHER DIRECTION

CITY OF NORTH BEND		
SINGLE DIRECTION CURB RAMP		
APPROVED:		DWG. NO.
MARK RIGOS, P.E.	MAY 2018	T–24C
BY CITY	DATE	

Gray & Osborne, Inc.
CONSULTING ENGINEERS
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KEVIN W. BROWN
STATE OF WASHINGTON
39319
REGISTERED
PROFESSIONAL ENGINEER

YVONNE B. PAWTOWSKI
STATE OF WASHINGTON
41853
REGISTERED
PROFESSIONAL ENGINEER

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SR 202 SHARED-USE TRAIL EXTENSION

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CHECKED BY:		K.W.B.
DRAWN BY:		S.E.M.
G&O #:		24421.00
FILE:		ROAD DET.DWG

0 1" 2"
TWO INCHES AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

ROADWAY DETAILS

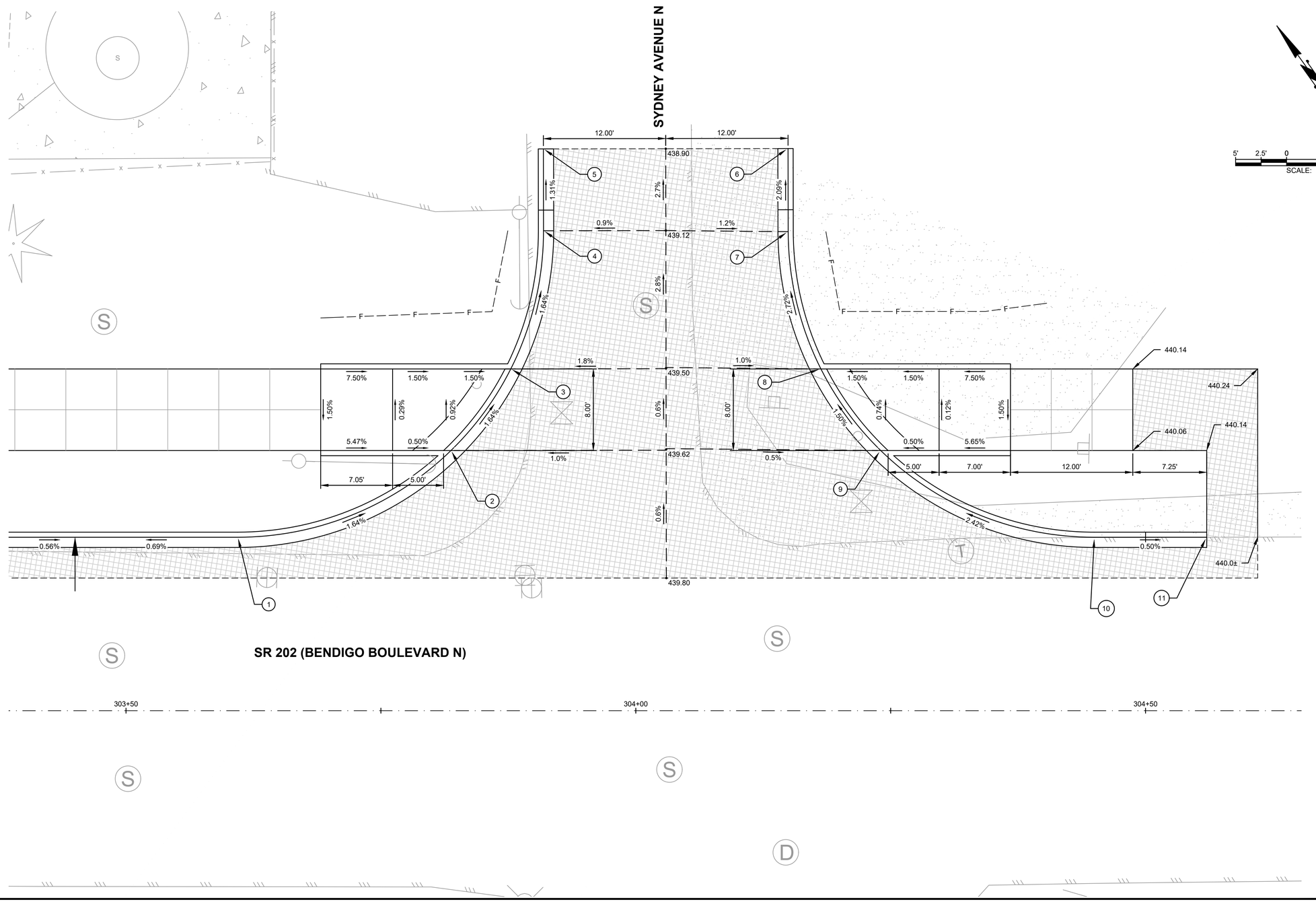
SHEET: **C-18** OF: **46**

SYDNEY AVENUE N INTERSECTION - NW CORNER CURB TABLE

CURB POINT:	POINT DESCRIPTION:	STATION:	OFFSET:	FL. ELEVATION:	CURB HEIGHT:	CURVE DESCRIPTION:	CENTER:
1	PC / HI POINT	303+60.95	17.00' LT	439.79	6.0"	L=47.17' R=30.00' Δ=90° 05' 04"	303+60.95 47.00 LT
2	FLOWLINE / LANDING	303+81.87	25.50' LT	439.41	6.0" / 0.0"		
3	FLOWLINE / LANDING	303+87.74	33.50' LT	439.25	0.0" / 6.0"		
4	PT	303+90.95	47.04' LT	439.02	6.0"		
5	END CURB	303+90.94	55.07' LT	438.91	0.0"		

SYDNEY AVENUE N INTERSECTION - NE CORNER CURB TABLE

CURB POINT:	POINT DESCRIPTION:	STATION:	OFFSET:	FL. ELEVATION:	CURB HEIGHT:	CURVE DESCRIPTION:	CENTER:
6	END CURB	304+14.94	55.10' LT	438.81	0.0"		
7	PC	304+14.95	46.96' LT	438.98	6.0"	L=47.08' R=30.00' Δ=89° 54' 56"	304+44.95 47.00 LT
8	FLOWLINE / LANDING	304+18.16	33.50' LT	439.36	6.0" / 0.0"		
9	FLOWLINE / LANDING	304+24.03	25.50' LT	439.51	0.0" / 6.0"		
10	PT	304+44.95	17.00' LT	440.07	6.0"		
11	END CURB	304+56.00	17.00' LT	440.01	0.0"		



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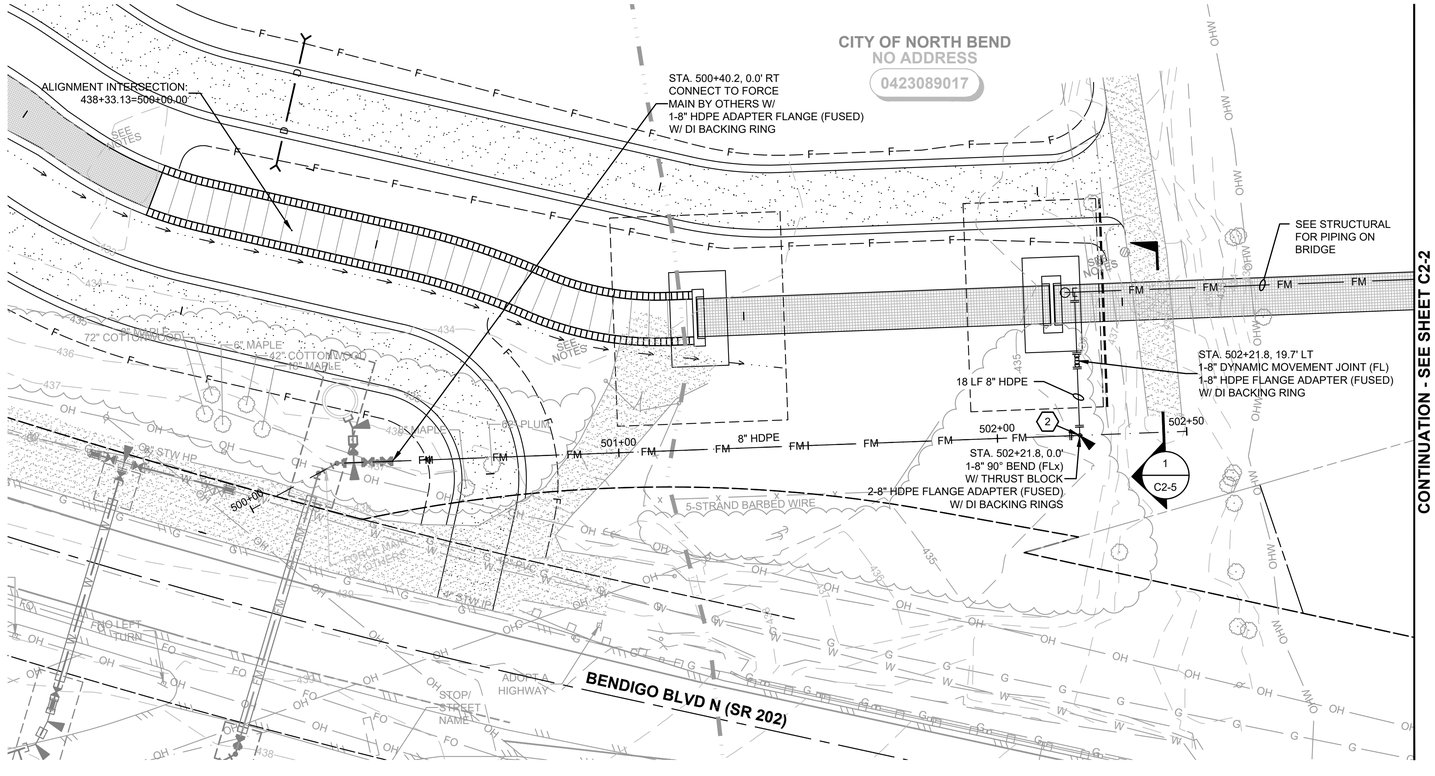
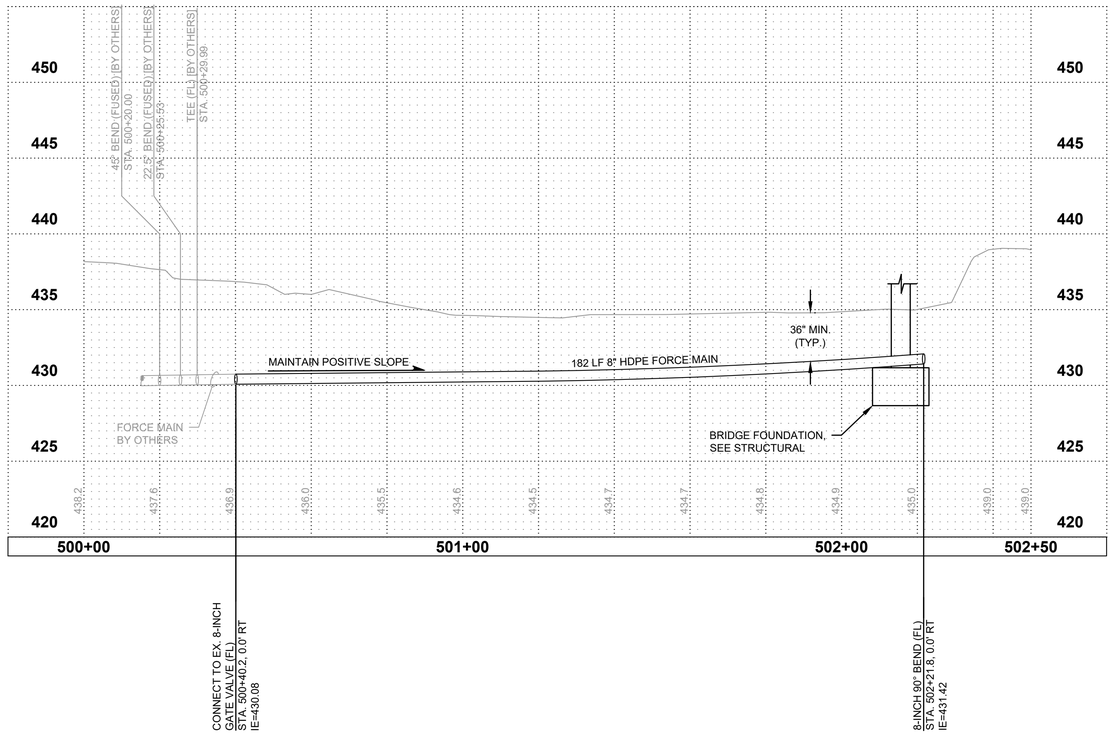
G&O #:	24421.00
FILE:	CURB RETURNS.DWG

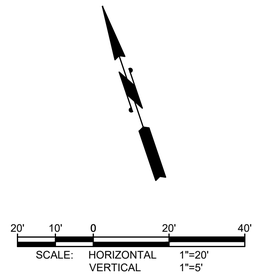
0 1" 2"
TWO INCHES AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

CURB RETURN TABLES

SHEET: **C-19** OF: **46**







GENERAL SEWER NOTES:

1. ALL FORCE MAIN PIPING, FITTINGS, AND VALVES SHALL BE RESTRAINED JOINT.
2. ALL HDPE PIPE AND FITTINGS SHALL BE JOINED BY BUTT FUSION. ELECTROFUSION COUPLINGS MAY BE USED IF THE COUPLINGS HAVE THE SAME SDR AND WORKING PRESSURE RATING OF THE PIPE. ALL CONNECTIONS OF HDPE PIPE TO FLANGED DUCTILE IRON VALVES/FITTINGS, WHERE ALLOWED, SHALL BE MADE WITH A BUTT WELDED HDPE FLANGE ADAPTER AND A DUCTILE IRON BACKING RING.
3. ALL DUCTILE IRON PIPE AND FITTINGS FOR CONVEYANCE OF SANITARY SEWER SHALL BE PROTECTO 401™ EPOXY LINED, OR APPROVED EQUAL.
4. GRAVITY SEWER TRENCH PER CITY OF NORTH BEND STANDARD DETAIL S-14, SHEET D-1.
5. FORCE MAIN TRENCH PER DETAIL 2, SHEET D-2.
6. MAINTAIN POSITIVE SLOPE ON FORCE MAIN AS REQUIRED TO ALLOW FOR AIR EGRESS TO AIR/VAC AND/OR DISCHARGE LOCATION(S) AS SHOWN ON THE PLANS.
7. SEE STRUCTURAL FOR PIPING ON BRIDGE.

CONSTRUCTION NOTES:

1. CAUTION: POTENTIAL UTILITY CONFLICT. POTHOLE TO DETERMINE EXACT LOCATION AND DEPTH OF THE EXISTING UTILITIES PRIOR TO CONSTRUCTION. ANY DISCREPANCIES FOUND IN THE FIELD FROM THOSE SHOWN HEREIN SHALL BE REPORTED TO THE CONTRACTING AGENCY PRIOR TO COMMENCING THE WORK.
2. LOCATE STATION PER DETAIL 1, SHEET D-3.
3. SEWER COMBINATION AIR AND VACUUM RELEASE VALVE ASSEMBLY PER DETAIL 5, SHEET .

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HANS L.B. THORESON — STATE OF WASHINGTON — 24033453 — REGISTERED PROFESSIONAL ENGINEER

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0 1" 2"
TWO INCHES AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

PLAN & PROFILE - SEWER

SHEET: **C2-1** OF: **46**

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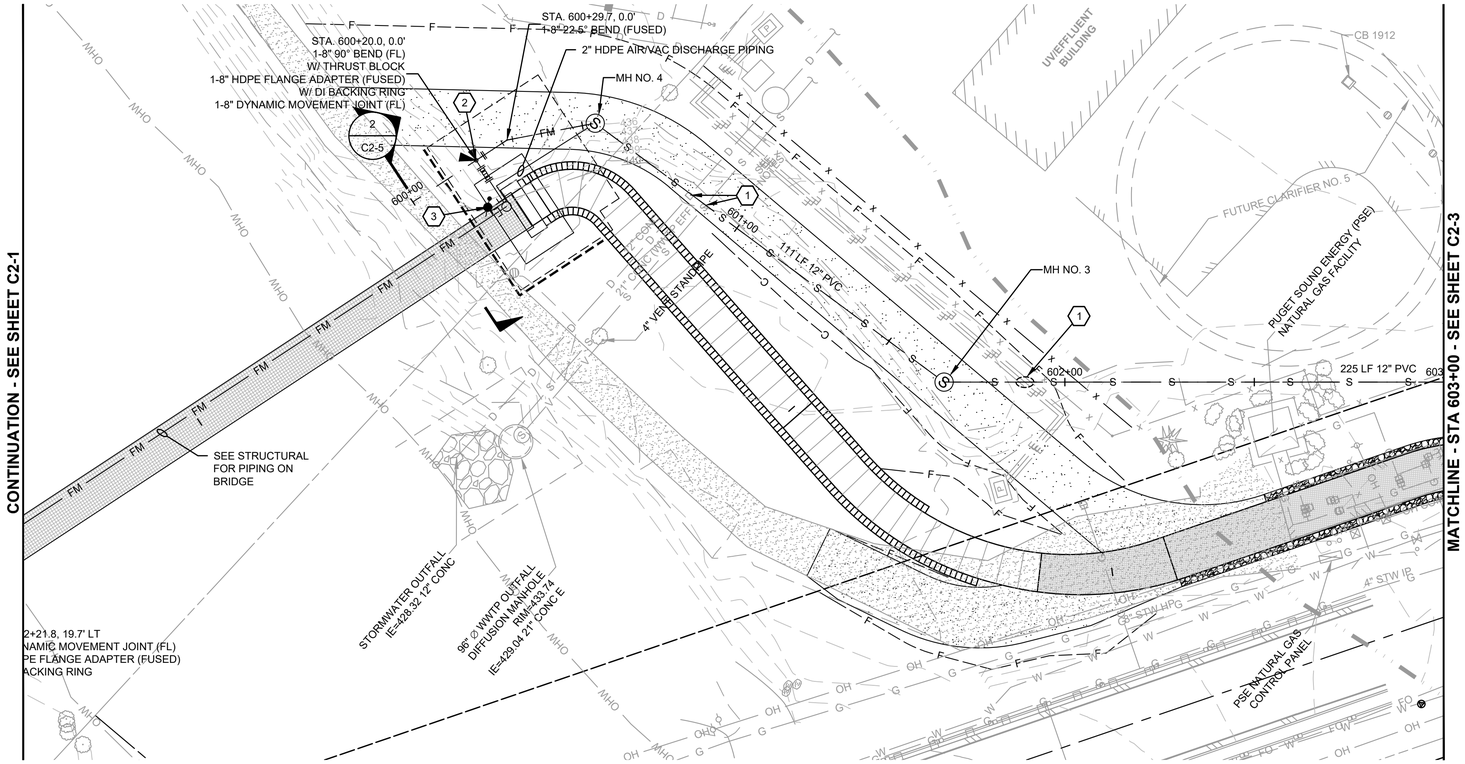

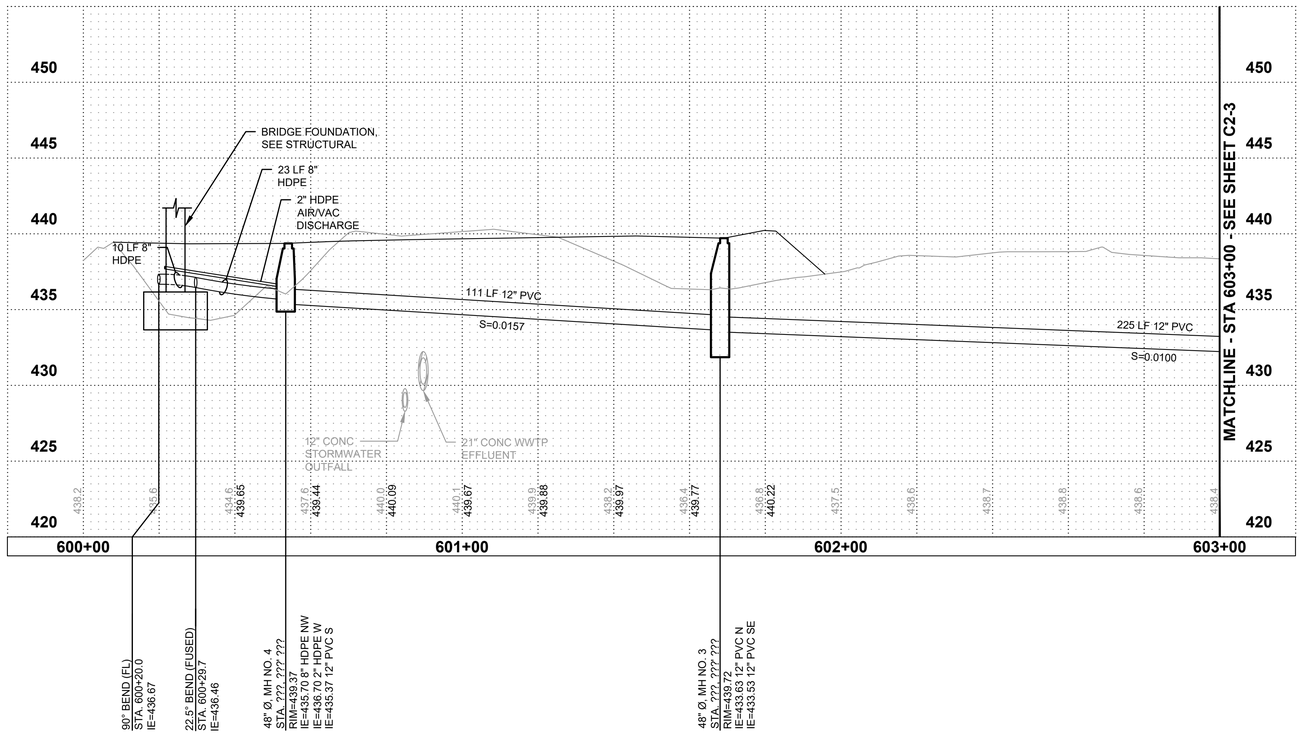

20' 10' 0 20' 40'

SCALE: HORIZONTAL 1"=20'
VERTICAL 1"=5'

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7. SEE STRUCTURAL FOR PIPING ON BRIDGE.

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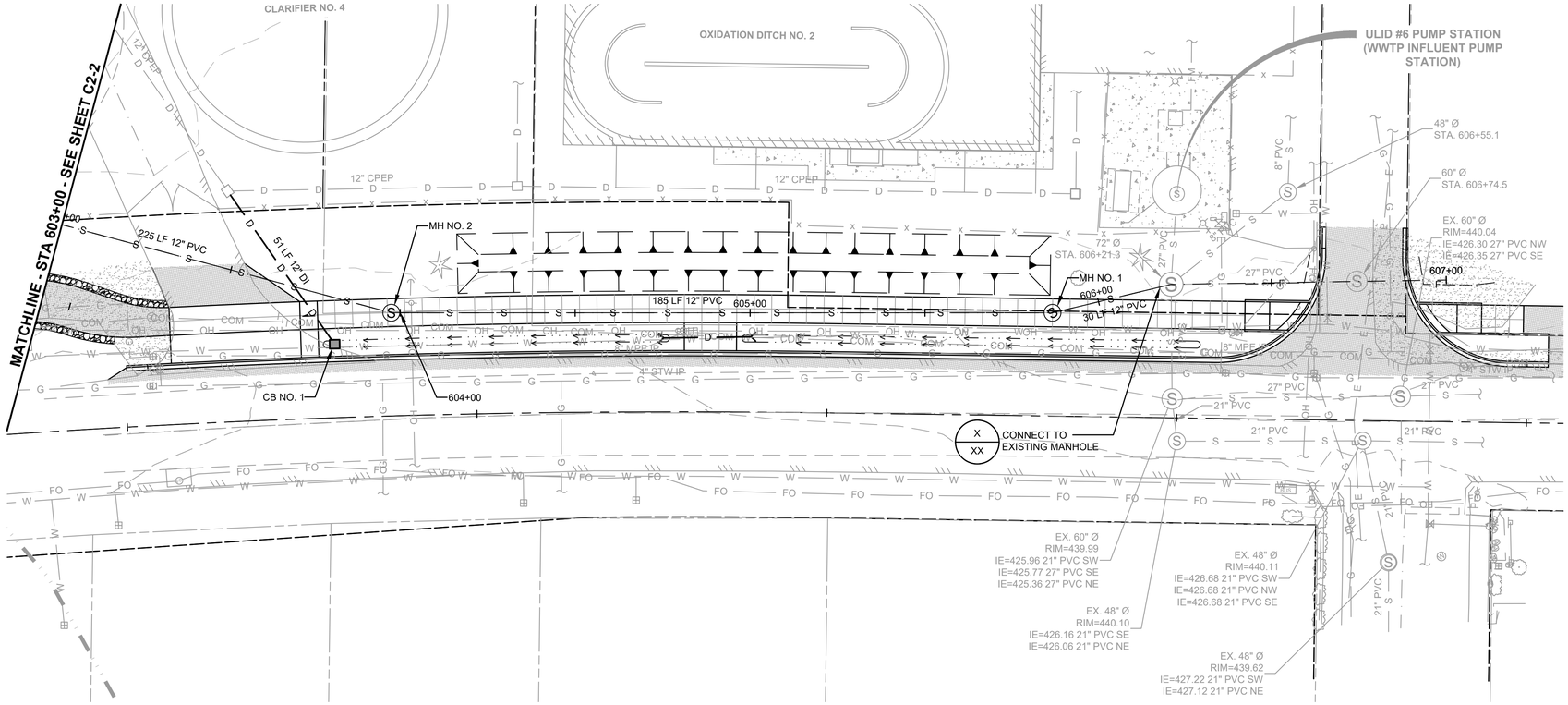
0 1" 2"
TWO INCHES AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

PLAN & PROFILE - SEWER

SHEET: **C2-2** OF: **46**



20' 10' 0 20' 40'

SCALE: HORIZONTAL 1"=20'
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7. SEE STRUCTURAL FOR PIPING ON BRIDGE.

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CITY OF NORTH BEND

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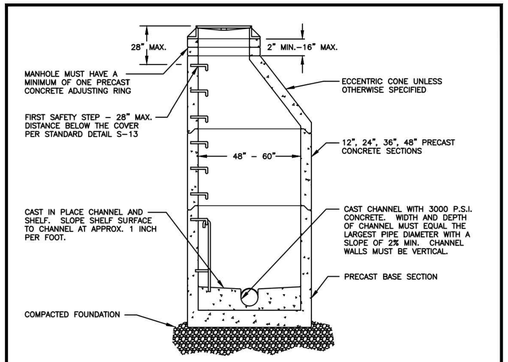
DRAWN BY:	S.E.M.
G&O #:	24421.00
FILE:	PLANPROF-SEWER.DWG

0 1" 2"
TWO INCHES AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

PLAN & PROFILE - SEWER

SHEET: **C2-3** OF: **46**



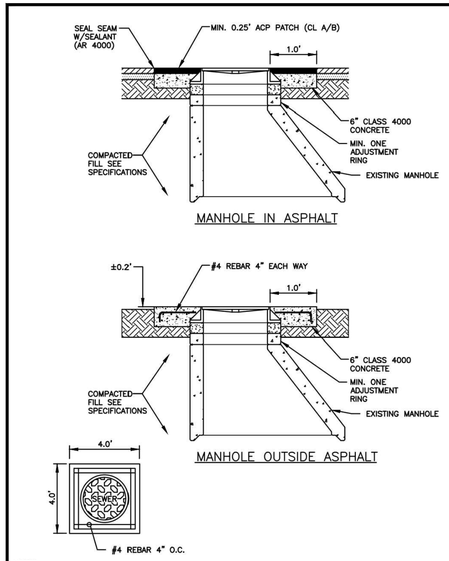
GENERAL NOTES – APPLIES TO ALL MANHOLES:

1. PRECAST SECTIONS SHALL BE REINFORCED PER ASTM SPECS FOR CORRESPONDING SEWER PIPE.
2. POLYPROPYLENE SAFETY STEPS SHALL BE PER STANDARD DETAIL S-13.
3. ALL HOLES FOR PIPE SHALL BE BLOCKED OUT AT THE TIME OF CASTING THE SECTION.
4. ALL MANHOLE SECTIONS SHALL BE FURNISHED WITH RUBBER GASKET JOINT PER ASTM C-478 AND ASTM C-443.
5. MANHOLES OVER 10' DEEP SHALL BE FURNISHED WITH A MIN. WALL THICKNESS OF 5".
6. MANHOLE DIAMETER IN ACCORDANCE WITH CITY OF NORTH BEND STANDARDS.
7. WHERE AWWA C900 PVC PIPE IS USED, CONNECTION SHALL BE MADE WITH PVC MANHOLE ADAPTER SIZED FOR THE O.D. OF AWWA C900 PVC PIPE. ADAPTER LENGTH SHALL MATCH OR EXCEED THE MANHOLE SECTION WALL THICKNESS.
8. GROUT ALL JOINTS INSIDE, OUTSIDE AND IN BETWEEN TO ACHIEVE WATERTIGHT CONSTRUCTION. FINISH SMOOTH THE INSIDE OF STRUCTURE. USE NON-SHRINK GROUT ONLY.
9. WHERE STANDARD MANHOLE CANNOT BE INSTALLED, THE CUSTOM MANHOLE SHALL BE DETAILED ON THE CONSTRUCTION PLANS.
10. PIPE CONNECTION TO MANHOLE: KOR-N-SEAL OR EQUAL FOR CORE-DRILLED SECTIONS, OR SAND COLLAR FOR SECTIONS WITH KNOCKOUTS. WITH ENGINEER AND CITY OF NORTH BEND APPROVAL.

CITY OF NORTH BEND

STANDARD MANHOLE

APPROVED:		DWG. NO.
MARK RIGOS, P.E. BY CITY	MAY 2018 DATE	S-1



MANHOLE IN ASPHALT

MANHOLE OUTSIDE ASPHALT

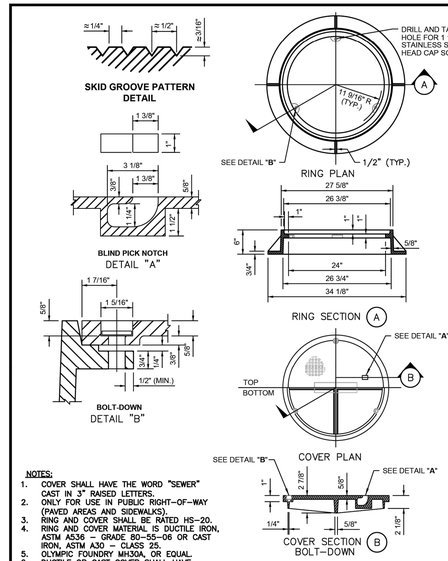
NOTES:

1. ON MANHOLE OUTSIDE ASPHALT ADD REINFORCING STEEL AS SHOWN ABOVE. DEFORMED BAR TO MEET ASTM A615 GRADE 60.
2. ON MANHOLE OUTSIDE PAVED AREAS, CONCRETE COLLAR TO BE 4' x 4' SQUARE.

CITY OF NORTH BEND

MANHOLE GRADE ADJUSTMENT

APPROVED:		DWG. NO.
MARK RIGOS, P.E. BY CITY	MAY 2018 DATE	S-8



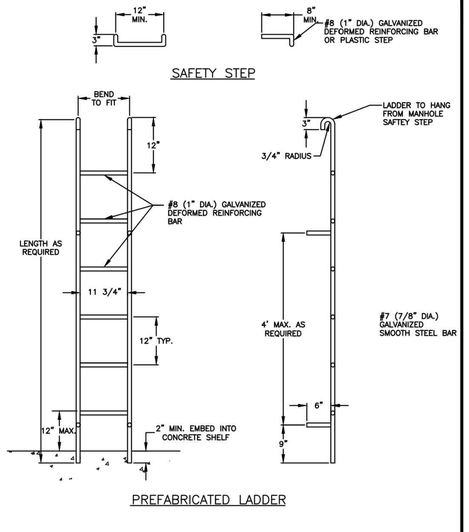
NOTES:

1. COVER SHALL HAVE THE WORD "SEWER" CAST IN 3" RAISED LETTERS.
2. ONLY FOR USE IN PUBLIC RIGHT-OF-WAY (PAVED AREAS AND SIDEWALKS).
3. RING AND COVER SHALL BE RATED HS-20.
4. RING AND COVER MATERIAL IS DUCTILE IRON, ASTM A536 – GRADE 80-55-06 OR CAST IRON, ASTM A30 – CLASS 25.
5. OLYMPIC FOUNDRY MH30A, OR EQUAL.
6. DUCTILE OR CAST COVER SHALL HAVE MINIMUM WEIGHT OF 150 LBS.
7. DUCTILE OR CAST RING SHALL HAVE MINIMUM WEIGHT OF 210 LBS.
8. ALL LIDS TO BE LOCKING UNLESS APPROVED OTHERWISE BY CITY OF NORTH BEND.
9. PROVIDE A BLIND PICK NOTCH FOR ALL SEWER LIDS, OPEN HOLES ARE NOT PERMITTED.

CITY OF NORTH BEND

24" LOCKING MANHOLE RING AND COVER

APPROVED:		DWG. NO.
MARK RIGOS, P.E. BY CITY	MAY 2018 DATE	S-11



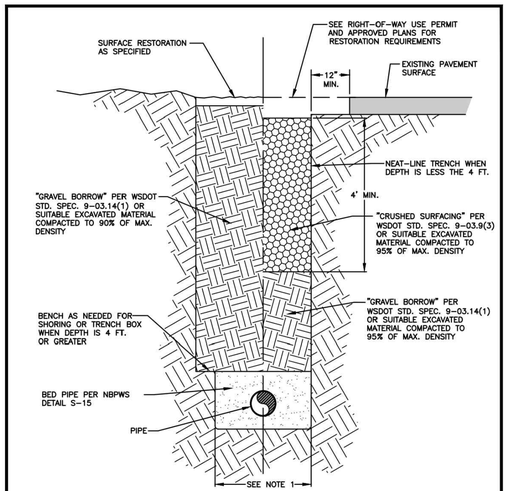
NOTE:

1. LADDER RUNGS FOR MANHOLES AND CATCH BASINS SHALL MEET THE REQUIREMENTS OF AASHTO M 199.

CITY OF NORTH BEND

SAFETY STEP AND PREFABRICATED LADDER

APPROVED:		DWG. NO.
MARK RIGOS, P.E. BY CITY	MAY 2018 DATE	S-13



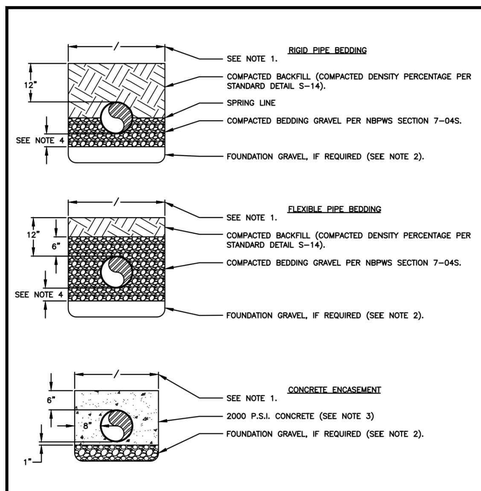
NOTES:

1. FOR PIPES 15-INCHES AND UNDER, TRENCH WIDTH=I.D. + 30-INCHES. FOR PIPES 18-INCHES AND OVER, TRENCH WIDTH=(1.5 x I.D.)+18-INCHES. PER SECTION 2-09.4, "MEASUREMENT", OF THE WSDOT STANDARD SPECIFICATIONS.
2. EXCAVATIONS OVER 4' DEEP SHALL COMPLY WITH THE SAFETY STANDARD DISCRIBED IN CHAPTER 296-155 – PART N OF THE WAC.
3. SEE "BEDDING, BACKFILL AND COMPACTION" IN THE STANDARDS FOR ADDITIONAL CONSTRUCTION REQUIREMENTS.

CITY OF NORTH BEND

TYPICAL TRENCH DETAIL

APPROVED:		DWG. NO.
MARK RIGOS, P.E. BY CITY	MAY 2018 DATE	S-14



NOTES:

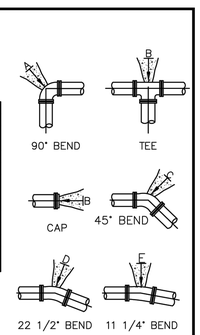
1. FOR PIPES 15-INCHES AND UNDER, TRENCH WIDTH=I.D. + 30-INCHES. FOR PIPES 18-INCHES AND OVER, TRENCH WIDTH=(1.5 x I.D.)+18-INCHES. PER SECTION 2-09.4, "MEASUREMENT", OF THE WSDOT STANDARD SPECIFICATIONS.
2. EXCAVATE UNSTABLE MATERIAL DOWN TO FIRM SOIL AND REPLACE WITH FOUNDATION GRAVEL PER SECTION 9-03.9(3), "BALLAST", OF THE WSDOT STANDARD SPECIFICATIONS.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANCHORING PIPE TO PREVENT FLOTATION DURING CONCRETE PLACEMENT.
4. 4-INCHES FOR PIPE 18-INCH DIAMETER AND LESS; 6-INCHES FOR PIPE GREATER THEN 18-INCH DIAMETER.
5. SEE WSDOT SECTION 9-03.9 FOR ADDITIONAL REQUIREMENTS.

CITY OF NORTH BEND

PIPE BEDDING

APPROVED:		DWG. NO.
MARK RIGOS, P.E. BY CITY	MAY 2018 DATE	S-15

THRUST BLOCK - TABLE							
MINIMUM BEARING AREA AGAINST UNDISTURBED SOIL, SQUARE FEET							
PIPE SIZE, IN	PRESSURE, PSI	A	B	C	D	E	
4	250	2.2	1.6	1.2	0.6	0.3	
6	250	5.0	3.5	2.7	1.4	0.7	
8	250	8.9	6.3	4.8	2.5	1.2	
10	250	13.9	9.8	7.5	3.8	1.9	
12	250	20.0	14.1	10.8	5.5	2.8	
14	250	27.2	19.2	14.7	7.5	3.8	
16	250	35.5	25.1	19.2	9.8	4.9	
18	250	45.0	31.8	24.3	12.4	6.2	
20	250	55.5	39.3	30.1	15.3	7.7	
24	250	80.0	56.5	43.3	22.1	11.1	



SAFE BEARING LOADS IN LB./SQ. FT.
THE SAFE BEARING LOADS GIVEN IN THE FOLLOWING TABLE ARE FOR HORIZONTAL THRUSTS WHEN THE DEPTH OF COVER OVER THE PIPE EXCEEDS 2 FEET.

SOIL	SAFE BEARING LOAD LB. PER SQ. FT.
* MUCK, PEAT, ETC.	0
SOFT CLAY	1,000
SAND	2,000
SAND & GRAVEL	3,000
SAND & GRAVEL CEMENTED WITH CLAY	4,000
HARD SHALE	10,000

* IN MUCK OR PEAT, ALL THRUSTS SHALL BE RESTRAINED BY PILES OR TIE RODS TO SOLID FOUNDATIONS OR BY REMOVAL OF MUCK OR PEAT AND REPLACEMENT WITH BALLAST OF SUFFICIENT STABILITY TO RESIST THRUST.

NOTES:

1. SQUARE FEET OF CONCRETE THRUSTS – BLOCK AREA BASED ON SAFE BEARING LOAD OF 2000 POUNDS PER SQUARE FOOT.
2. AREAS MUST BE ADJUSTED FOR OTHER SIZE PIPE, PRESSURES & SOIL CONDITIONS.
3. CONCRETE BLOCKING SHALL BE CAST IN PLACE & HAVE MINIMUM OF 1/4 SQUARE FOOT BEARING AGAINST THE FITTING.
4. BLOCK SHALL BEAR AGAINST FITTINGS ONLY & SHALL BE CLEAR OF JOINTS TO PERMIT TAKING UP OR DISMANTLING JOINT.
5. CONTRACTOR SHALL INSTALL BLOCKING ADEQUATE TO WITHSTAND FULL TEST PRESSURE AS WELL AS TO CONTINUOUSLY WITHSTAND OPERATING PRESSURE UNDER ALL CONDITIONS OF SERVICE.
6. FITTINGS AND BOLTS TO BE COVERED WITH VISQUEEN PRIOR TO CONCRETE PLACEMENT.

CITY OF NORTH BEND

CONCRETE BLOCKING

APPROVED:		DWG. NO.
MARK RIGOS, P.E. BY CITY	MAY 2018 DATE	W-1

Gray & Osborne, Inc.
CONSULTING ENGINEERS

STEPHEN JOHN CLARKE — STATE OF WASHINGTON — 31734 — REGISTERED PROFESSIONAL ENGINEER

HANS L.B. THORESON — STATE OF WASHINGTON — 24033453 — REGISTERED PROFESSIONAL ENGINEER

NORTH BEND — easy to reach. . .hard to leave

CITY OF NORTH BEND

SR 202 SHARED-USE TRAIL EXTENSION

No.	DATE	REVISION

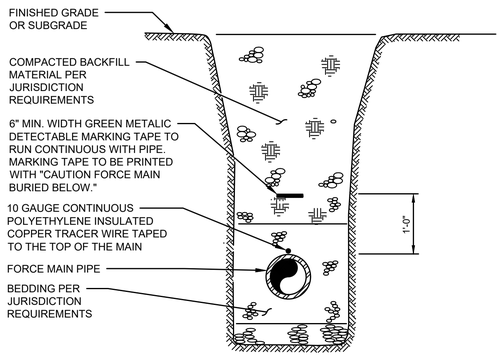
ISSUED FOR:
PRELIMINARY DESIGN SUBMITTAL

ISSUE DATE:	DEC 2024
APPROVED BY:	R.W.K.
CHECKED BY:	K.W.B.
DRAWN BY:	S.E.M.
G&O #:	24421.00
FILE:	SEWER_DET.DWG

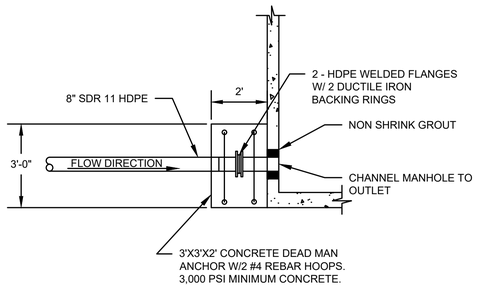
0 1" 2"
TWO INCHES AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

SEWER DETAILS

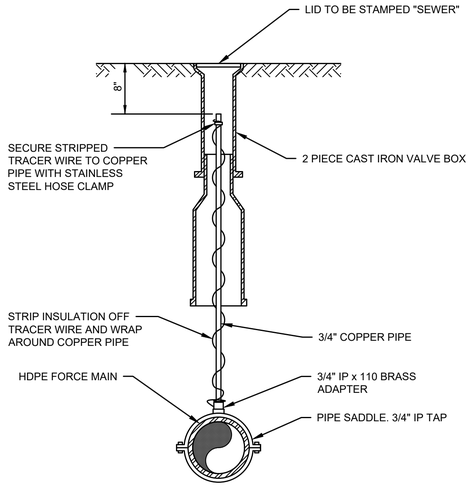
SHEET: **C2-4** OF: **46**



1 TYP **FORCE MAIN TRENCH SECTION**
NTS



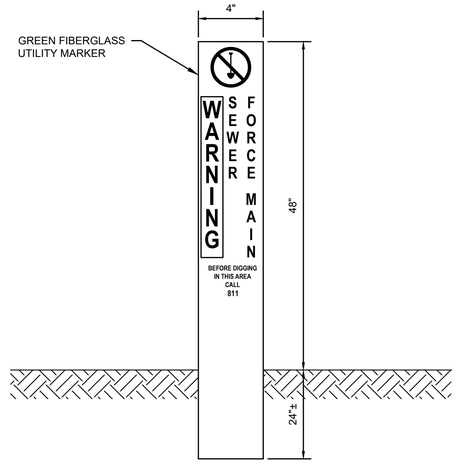
2 TYP **FORCE MAIN DISCHARGE CONNECTION**
NTS



NOTES:

1. POSITION LOCATE STATIONS OVER CENTERLINE OF FORCE MAIN.
2. PROVIDE LOCATE STATIONS AT 300' MAXIMUM SPACING INTERVALS AND AT HORIZONTAL BENDS/DEFLECTION AS NOTED ON THE PLANS.
3. IN UNPAVED AREAS, PROVIDE SEWER FORCE MAIN MARKER AT LOCATE STATION

3 TYP **LOCATE STATION**
NTS



NOTE:
1. UTILITY MARKER TO EXTEND 48" ABOVE GROUND SURFACE, BE GREEN IN COLOR, AND BE 4" WIDE.
2. ALL LETTERING TO BE WHITE, EXCEPT THAT THE WORD, "WARNING", MAY BE BLACK.

4 TYP **SEWER FORCE MAIN MARKER DETAIL**
NTS

IN DEVELOPMENT

A C2-1 **SECION**
NTS

IN DEVELOPMENT

B C2-2 **SECTION**
NTS

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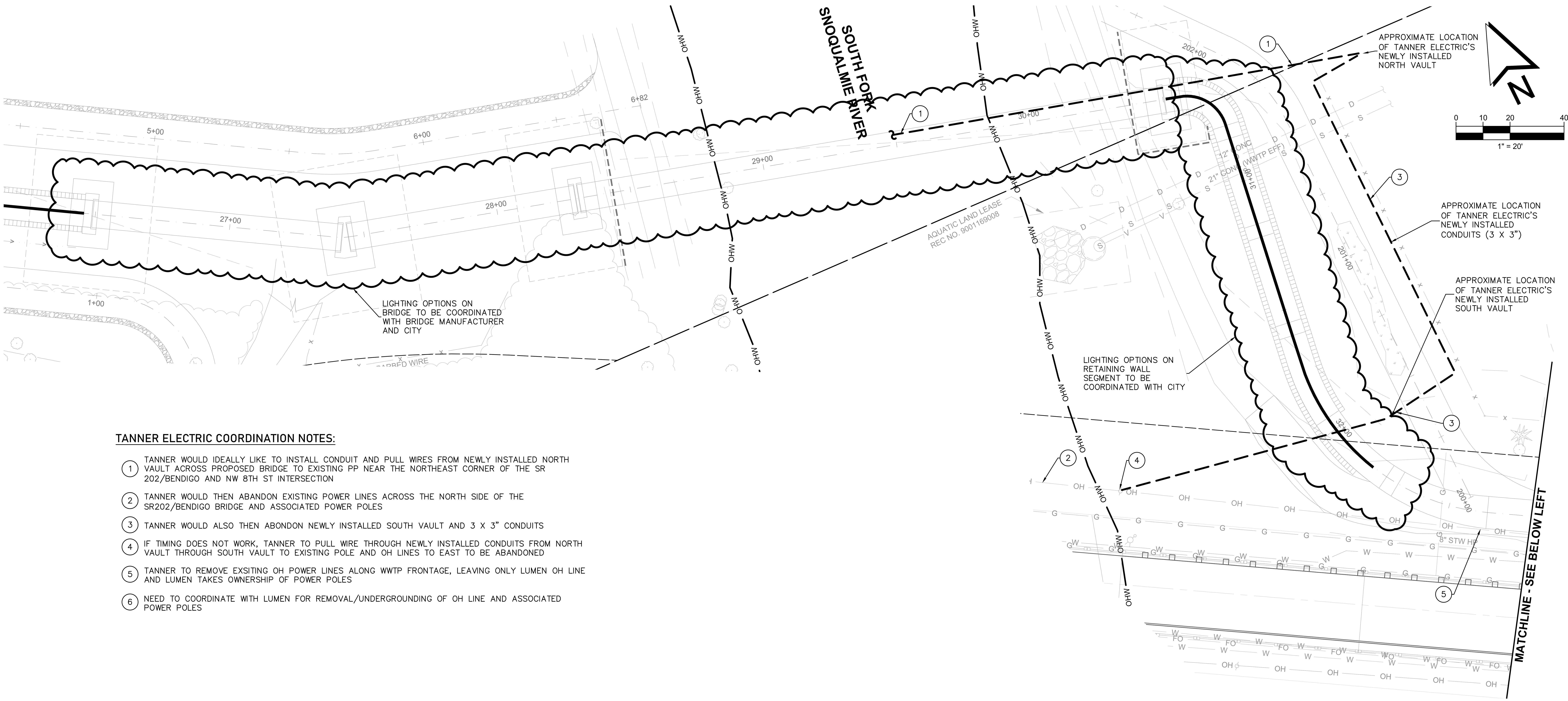
0 1" 2"
TWO INCHES AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

SEWER DETAILS

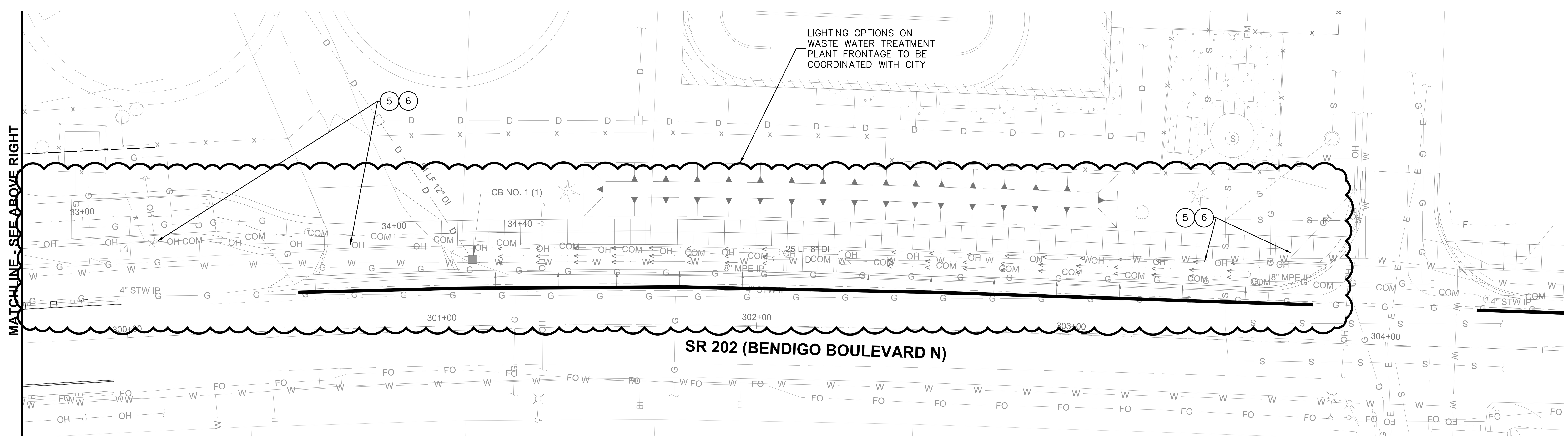
SHEET: **C2-5** OF: **46**

M:\NBEND\24421.00 SR 202 Shared Use Trail\01 Design\PLANSET\Civil\SEWER_DET.dwg, 12/20/2024 4:42 PM, KEVIN BROWN



TANNER ELECTRIC COORDINATION NOTES:

1. TANNER WOULD IDEALLY LIKE TO INSTALL CONDUIT AND PULL WIRES FROM NEWLY INSTALLED NORTH VAULT ACROSS PROPOSED BRIDGE TO EXISTING PP NEAR THE NORTHEAST CORNER OF THE SR 202/BENDIGO AND NW 8TH ST INTERSECTION
2. TANNER WOULD THEN ABANDON EXISTING POWER LINES ACROSS THE NORTH SIDE OF THE SR202/BENDIGO BRIDGE AND ASSOCIATED POWER POLES
3. TANNER WOULD ALSO THEN ABONDON NEWLY INSTALLED SOUTH VAULT AND 3 X 3" CONDUITS
4. IF TIMING DOES NOT WORK, TANNER TO PULL WIRE THROUGH NEWLY INSTALLED CONDUITS FROM NORTH VAULT THROUGH SOUTH VAULT TO EXISTING POLE AND OH LINES TO EAST TO BE ABANDONED
5. TANNER TO REMOVE EXSITING OH POWER LINES ALONG WWTP FRONTAGE, LEAVING ONLY LUMEN OH LINE AND LUMEN TAKES OWNERSHIP OF POWER POLES
6. NEED TO COORDINATE WITH LUMEN FOR REMOVAL/UNDERGROUNDING OF OH LINE AND ASSOCIATED POWER POLES



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ARLINGTON, WA 98223
(360) 454-5490

PH CONSULTING
Balanced Transportation Solutions

MARIA M. TRIBELHORN, STATE OF WASHINGTON, 23027325, REGISTERED PROFESSIONAL ENGINEER
PRELIMINARY

CITY OF NORTH BEND

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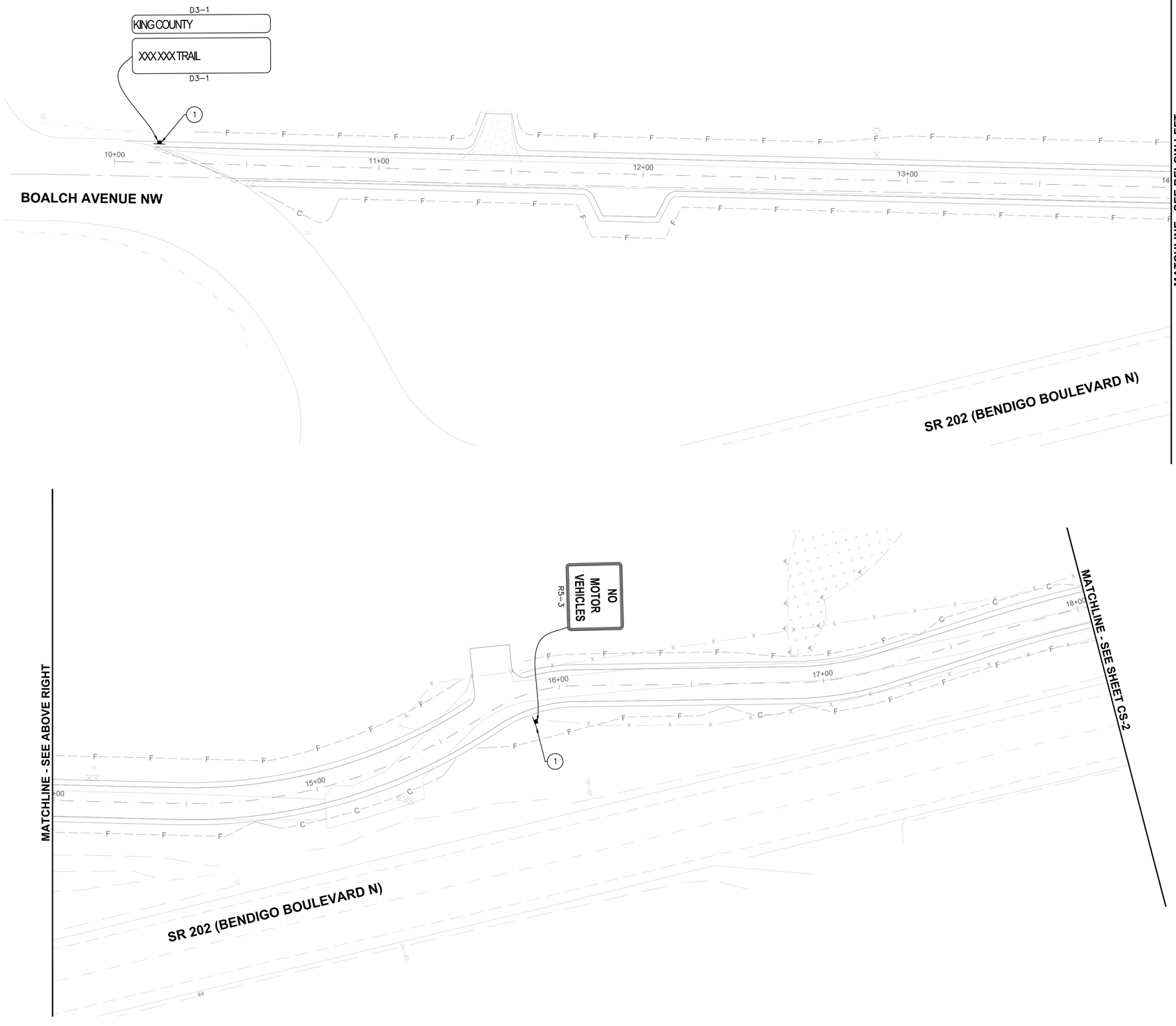
TWO INCHES AT FULL SCALE. IF NOT, SCALE ACCORDINGLY

ILLUMINATION ELECTRICAL PLAN

SHEET: IL-1 OF: 46



0 10 20 40

1" = 20'

GENERAL NOTES:

1. CONTRACTOR SHALL REMOVE ALL CONFLICTING PAVEMENT MARKINGS OUTSIDE OF OVERLAY AREA.
2. LANE WIDTHS ARE MEASURED FROM CURB FACES TO CENTER OF PAINT LINE OR BETWEEN CENTERS OF PAINT LINES AS APPLICABLE.
3. ALL PAVEMENT MARKINGS SHALL BE LAID OUT WITH SPRAY PAINT AND APPROVED BY THE CITY TRAFFIC ENGINEER OR DESIGNER BEFORE THEY ARE INSTALLED. APPROVAL SHALL REQUIRE ADVANCE NOTICE OF THREE WORKING DAYS TO EITHER HAVE FIELD LAYOUT REVIEWED AND APPROVED OR TO MAKE ARRANGEMENTS TO MEET THE CITY TRAFFIC ENGINEER OR DESIGNER ON SITE DURING CONSTRUCTION.
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CHANNELIZATION NOTES:

1. PAINTED WHITE EDGE LINE PER WSDOT STD. PLAN M–20.10.
2. 4" WIDE SOLID YELLOW PAINTED LINE PER WSDOT STD PLAN M–9.60–00.

SIGNAGE NOTES:

1. INSTALL TIMBER SIGN SUPPORT PER WSDOT STD PLAN G–22.10 & TRAFFIC SIGN PER PLAN
2. REMOVE AND DISPOSE OF EXISTING TRAFFIC POST

LEGEND:

SIGN AND POST

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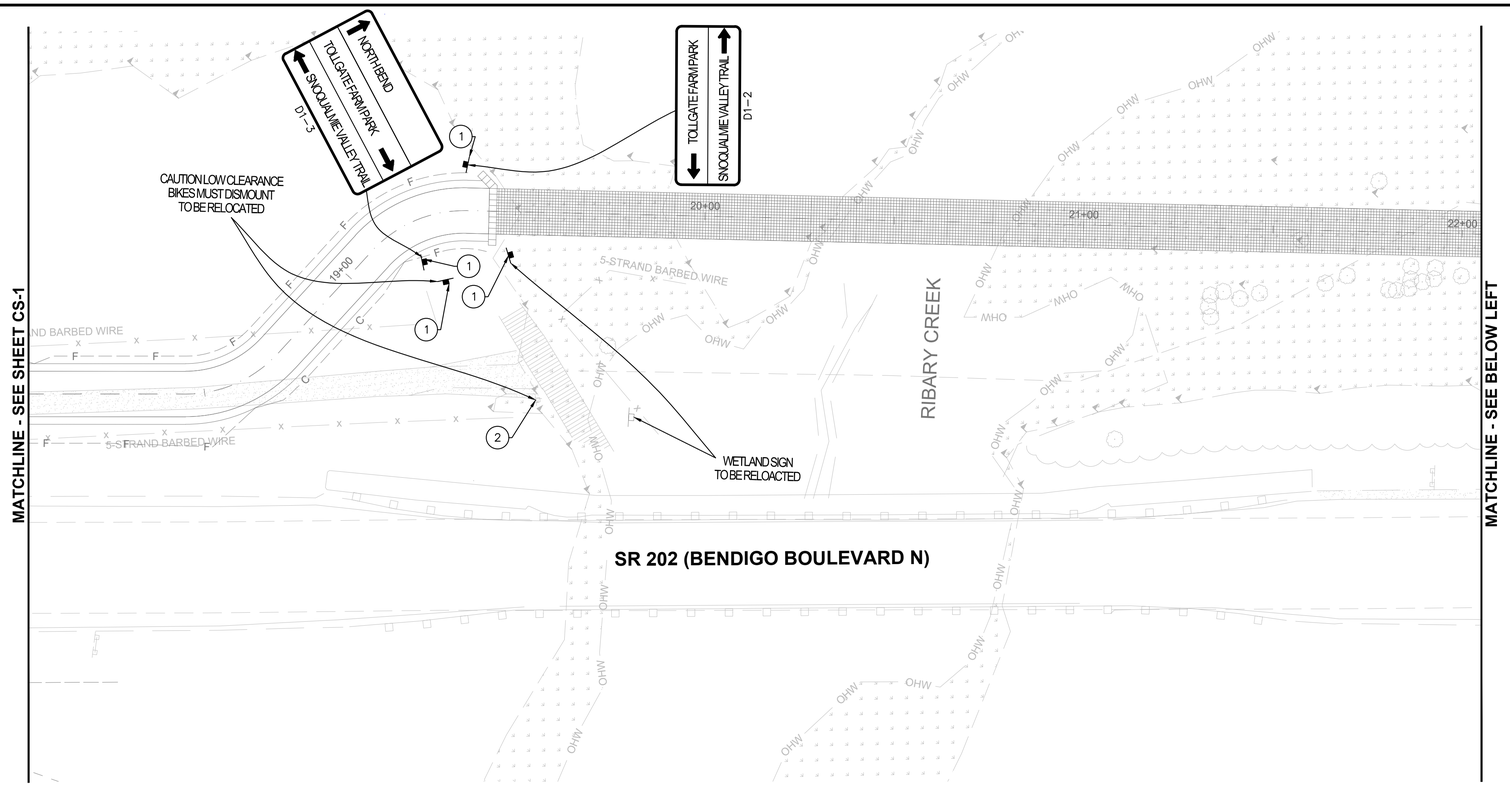
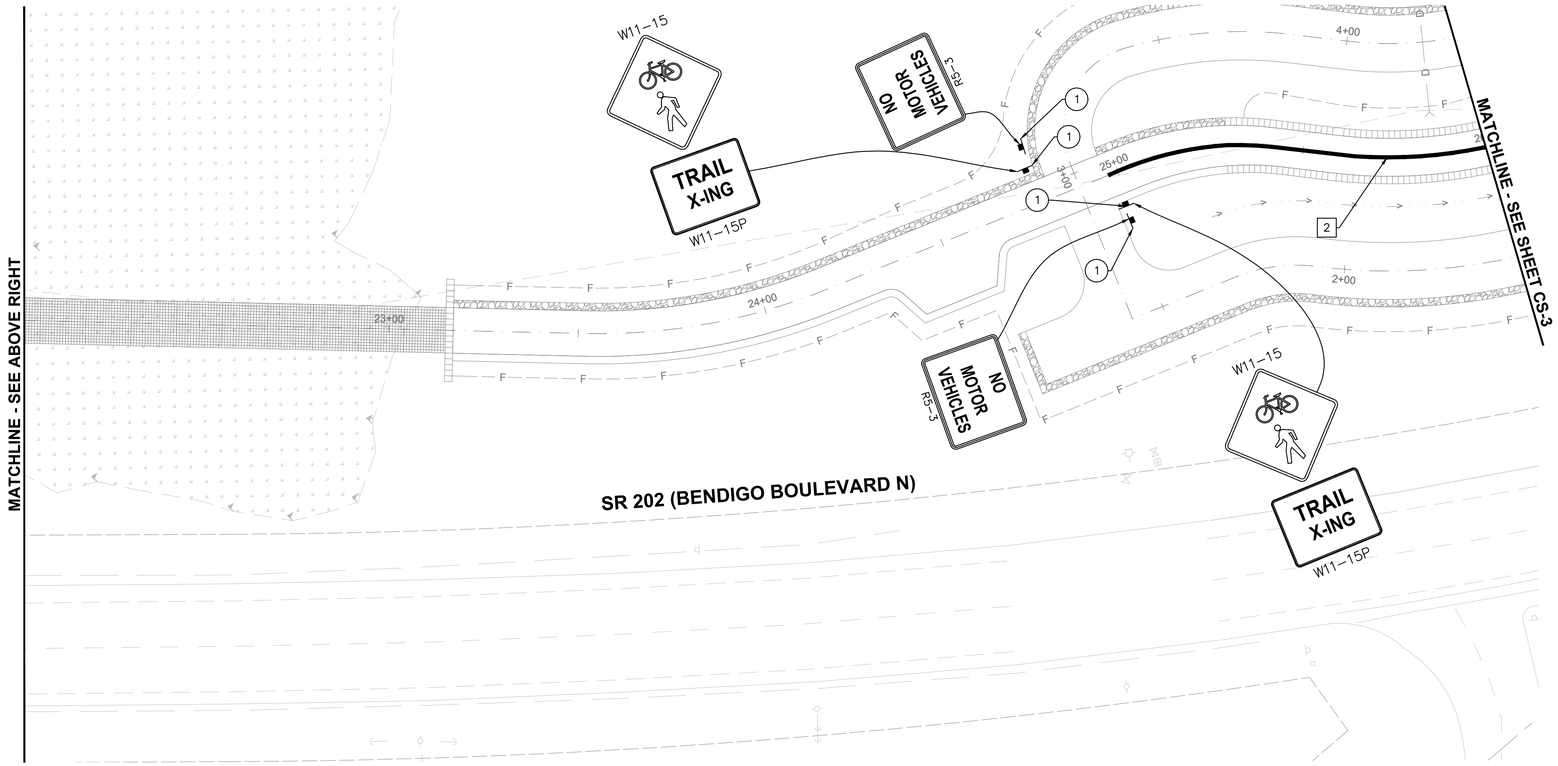
0 1" 2"

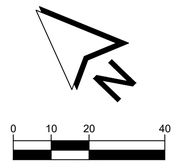
TWO INCHES AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

CHANNELIZATION & SIGNAGE PLAN

SHEET: **CS-1** OF: **46**







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CHANNELIZATION NOTES:

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2. 4" WIDE SOLID YELLOW PAINTED LINE PER WSDOT STD PLAN M-9.60-00.

SIGNAGE NOTES:

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LEGEND:

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PRELIMINARY

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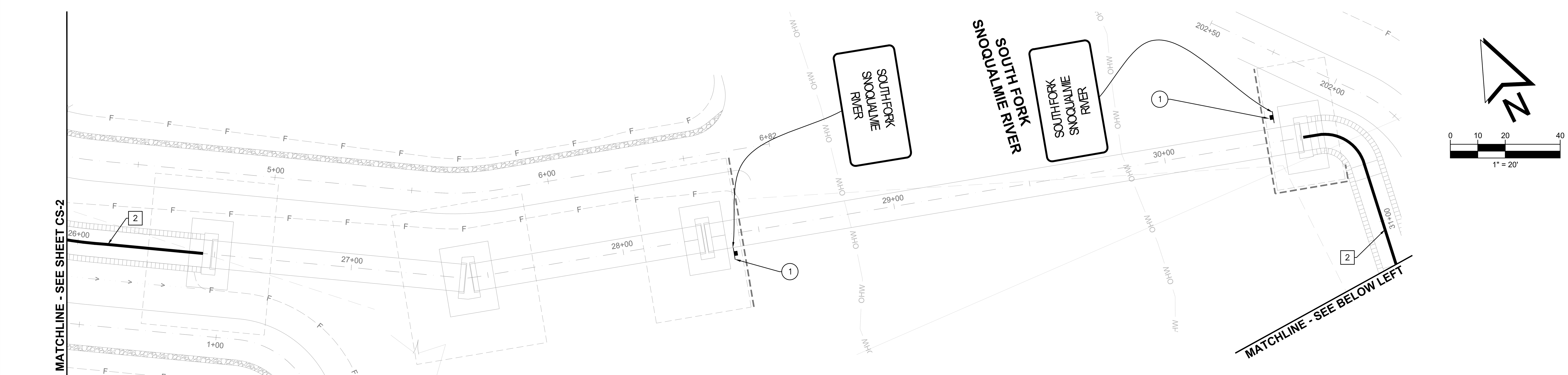
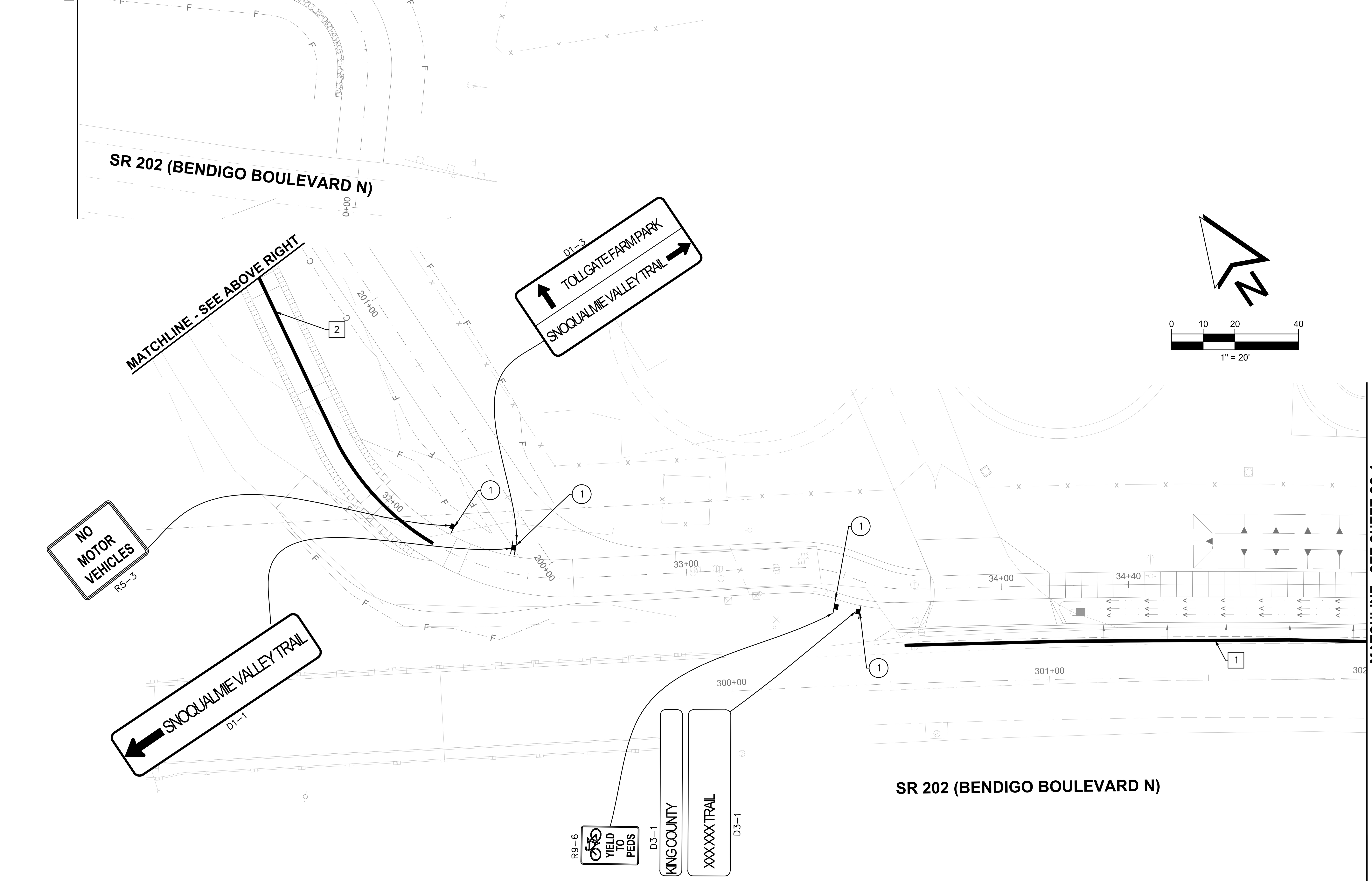
0 1" 2"
TWO INCHES AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

CHANNELIZATION & SIGNAGE PLAN

SHEET: **CS-2** OF: **46**





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LEGEND:

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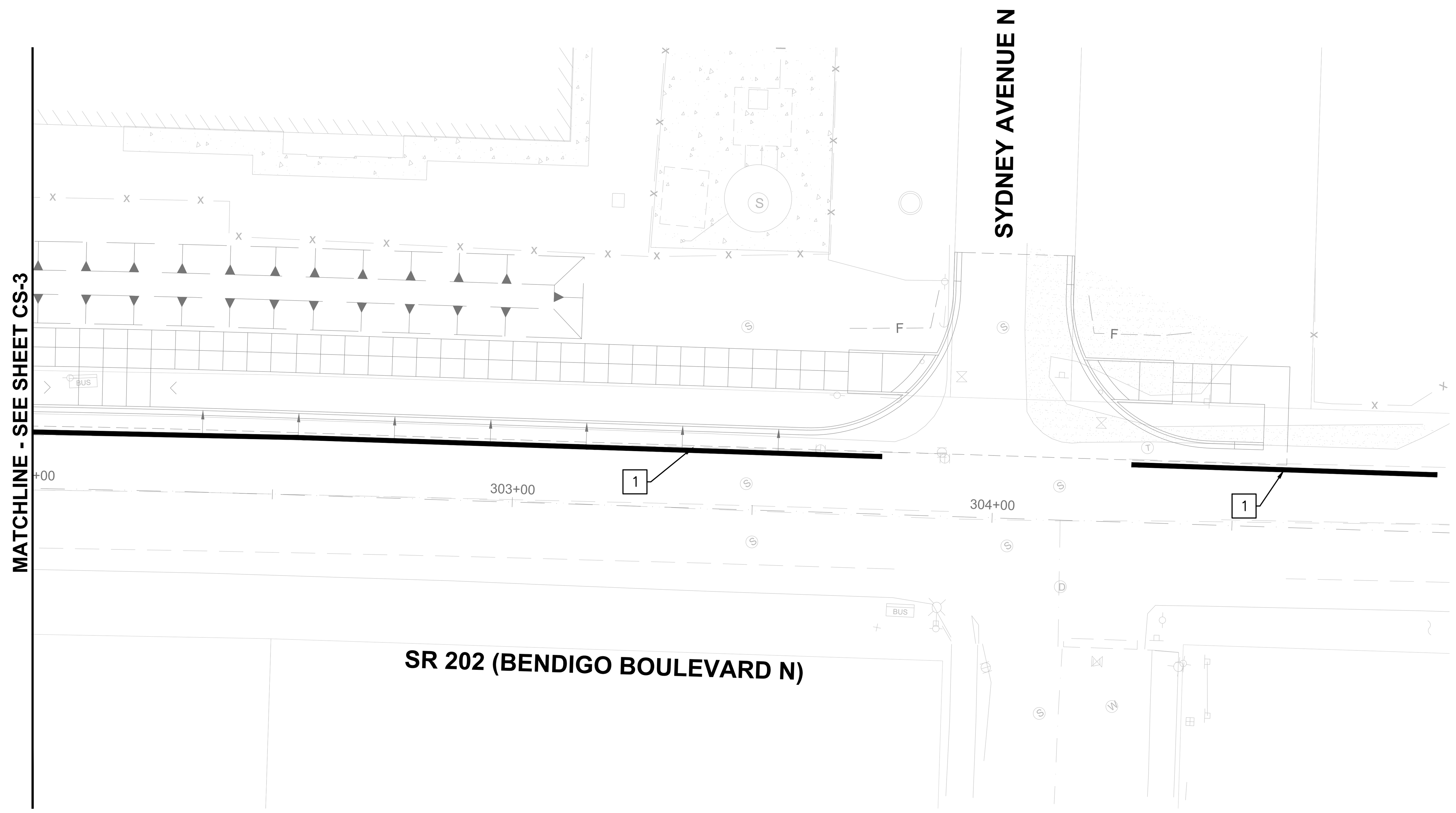
0 1" 2"
TWO INCHES AT FULL SCALE. IF NOT, SCALE ACCORDINGLY

CHANNELIZATION & SIGNAGE PLAN

SHEET: CS-3 OF: 46



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1" = 20'

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CHANNELIZATION & SIGNAGE PLAN

GENERAL STRUCTURAL NOTES

GENERAL
THE GENERAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND SITE CONDITIONS BEFORE STARTING WORK. THE ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCY. USE DETAIL MARKED "TYPICAL" WHEREVER APPLICABLE. CHANGES, OMISSIONS OR SUBSTITUTIONS ARE NOT PERMITTED WITHOUT WRITTEN APPROVAL OF THE ENGINEER. REFER TO THE SPECIFICATIONS FOR FURTHER REQUIREMENTS. DO NOT SCALE THE DRAWINGS.

ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE CURRENT EDITIONS OF THE AASHTO STANDARD SPECIFICATION FOR HIGHWAY BRIDGES AND AASHTO GUIDE SPECIFICATION FOR THE DESIGN OF PEDESTRIAN BRIDGES.

THE DESIGN, ADEQUACY AND SAFETY OF ERECTION BRACING, SHORING, TEMPORARY SUPPORTS, ETC., IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR, AND HAS NOT BEEN CONSIDERED BY THE ENGINEER OF RECORD. THE CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE PRIOR TO ITS COMPLETION. THE CONTRACTOR SHALL PROVIDE THE NECESSARY BRACING TO PROVIDE STABILITY PRIOR TO THE COMPLETION OF THE STRUCTURE.

THE GENERAL NOTES APPLY TO ALL STRUCTURES UNLESS NOTED OTHERWISE (U.N.O.). LOCATION AND SIZE OF ANCHOR BOLTS FOR SPECIFIC EQUIPMENT SHALL BE SPECIFIED BY THE VENDOR. CONTRACTOR SHALL COORDINATE LOCATIONS OF STRUCTURAL OPENINGS, PENETRATIONS AND EMBEDDED ITEMS WITH THE MECHANICAL, ARCHITECTURAL, ELECTRICAL, PLUMBING AND VENTILATION SECTIONS OF THE DRAWINGS AND WITH SUPPLIERS AND SUBCONTRACTORS AS MAY BE REQUIRED.

SHOP DRAWINGS
SHOP DRAWINGS, WHERE REQUIRED, SHALL BE CHECKED AND APPROVED BY THE GENERAL CONTRACTOR PRIOR TO SUBMITTING FOR ENGINEER REVIEW. SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW OF DESIGN INTENT, PRIOR TO FABRICATION. GENERAL CONTRACTOR IS RESPONSIBLE FOR VERIFICATION AND COORDINATION OF DIMENSIONS AND DETAILS FOR EACH SUBCONTRACTOR.

DESIGN LOADS

BRIDGE DEAD LOAD	PER MANUFACTURER
BRIDGE LIVE LOAD	90 PSF
BRIDGE VEHICULAR LOAD	10,000 LBS

WIND:

DESIGN WIND SPEED	110 MPH
SERVICE WIND SPEED	76 MPH
WIND EXPOSURE CATEGORY	C

SEISMIC:

SITE CLASS	D
PGA	0.377
Ss	0.835 g
S1	0.337 g

FOUNDATION DATA PER GEOTECHNICAL REPORT BY PanGEO, INC. DATED NOVEMBER 26, 2024.

SERVICE LIMIT STATE NOMINAL BEARING RESISTANCE..... 3,000 PSF
STRENGTH AND EXTREME LIMIT STATE NOMINAL BEARING RESISTANCE..... 20,000 PSF

ABOVE ARE ASSUMED PER DATA PROVIDED,
CONTRACTOR MUST VERIFY IN FIELD.

EXTEND ALL EXTERIOR FOOTINGS 2'-0" MINIMUM BELOW FINISHED GRADE. UNO (UNLESS NOTED OTHERWISE), BOTTOM OF ALL FOOTINGS TO BEAR ON NATIVE, INORGANIC, UNDISTURBED SOIL. NO FOOTING SHALL BEAR HIGHER THAN 1 VERTICAL TO 1.5 HORIZONTAL SLOPE ABOVE ANY EXCAVATION, EXISTING OR PLANNED. CONTRACTOR SHALL PROVIDE TEMPORARY SHORING TO PREVENT MOVEMENT OF WALLS IF BACKFILL IS PLACED BEFORE FLOOR SYSTEM IS IN PLACE. THERE SHALL BE 95% COMPACTION (ASTM D1557 MODIFIED PROCTOR DENSITY) OF ALL BACKFILL SOIL UNDER SLABS ON GRADE.

CAST-IN-PLACE CONCRETE
CONCRETE SHALL HAVE THE FOLLOWING PROPERTIES:
28-DAY STRENGTH f'c=4,000 PSI
AIR ENTRAINMENT: 5%-7%
MAXIMUM SLUMP: 3" FOR SLABS FOOTINGS, 4" FOR WALLS, COLUMNS AND BEAMS. CONSTRUCTION TO BE IN ACCORDANCE WITH ACI 318.

SUBMIT MIX DESIGN FOR REVIEW AND PROVIDE NOT LESS THAN 6 SACKS OF CEMENT PER CUBIC YARD FOR ALL CONCRETE WITH MAXIMUM W/C=0.45.

REINFORCING STEEL
WELDED WIRE FABRIC (W.W.F.): ASTM A82 AND A185
DEFORMED BARS: ASTM A615, GRADE 60 (GRADE 40 FOR #3).
UNLESS OTHERWISE NOTED ON THESE DRAWINGS, MINIMUM CONCRETE COVER FOR REINFORCING BARS SHALL BE AS FOLLOWS:
- CONCRETE CAST AGAINST SOIL=3".
- FORMED CONCRETE AGAINST SOIL=2".
- WALLS, COLUMNS AND BEAMS EXPOSED TO WATER, SEWAGE & WEATHER=2".
- WALLS, COLUMNS AND BEAMS DRY CONDITION=1 1/2".

PROVIDE 2-#5 MIN. U.N.O. TRIM BARS AROUND ALL OPENINGS IN CONCRETE WALLS OR SLAB EXTENDING 2'-6" PAST CORNERS, TYP. AT TIME OF CONCRETE PLACEMENT, REINFORCING SHALL BE FREE OF MUD, OIL, OR OTHER NONMETALLIC COATINGS THAT MAY DECREASE BOND.

WELDING OF REINFORCING BARS SHALL CONFORM TO ANSI/AWS D1.4.
WHERE PERMITTED, LOW HYDROGEN WELDING RODS SHALL BE USED FOR ALL WELDING OF REINFORCING BARS. SPECIAL INSPECTION IS REQUIRED FOR ALL FIELD WELDING.

SUBMIT SHOP DRAWINGS OF REINFORCING STEEL FOR REVIEW BY THE ENGINEER PRIOR TO FABRICATION. REINFORCING SHALL BE DETAILED IN ACCORDANCE WITH ACI 315 AND 318 (LATEST EDITION).

STRUCTURAL STEEL AND MISCELLANEOUS METALS
"W" SHAPES: ASTM A992, Fy=50 KSI.
"HP" SHAPES: ASTM A572, Fy=50, KSI.
CHANNELS, ANGLES, PLATES, AND BARS: ASTM A36, Fy=36 KSI.
PIPE: ASTM A53 OR A501, Fy=35 KSI MINIMUM.
TUBING: ASTM A500, GRADE B, Fy=46 KSI.

ALL BOLTS FOR CONNECTIONS IN SUBMERGED CONDITION SHALL BE: ASTM F593C OR F593D STAINLESS STEEL (SS) BOLTS. ALL OTHERS SHALL BE GALVANIZED ASTM F3125 GRADE A325 BOLTS HIGH STRENGTH BOLTS (H.S.B.), U.N.O. AS ASTM A307 MACHINE BOLTS (M.B.). WHERE HIGH STRENGTH BOLTS ARE USED, THEY SHALL BE INSTALLED WITH LOAD INDICATOR DEVICES (LOAD INDICATOR WASHERS OR SNAP-OFF HEADS).

ADHESIVE ANCHORS: HILTI HIT-RE 500 V3 OR APPROVED EQUAL, U.N.O. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.

HEADED ANCHOR STUDS (H.A.S.): ASTM A108, Fy=50 KSI, END WELDED PER MANUFACTURER'S RECOMMENDATIONS.
ALL ANCHOR BOLTS AND THREADED RODS: ASTM F1554, U.N.O., ASTM A193 GRADE B8 WHERE STAINLESS STEEL IS NOTED. ALL ANCHOR BOLTS MUST BE ACCURATELY PLACED IN THEIR FINAL LOCATION PRIOR TO POURING CONCRETE, "WET STICKING" OF ANCHOR BOLTS IS NOT ALLOWED.

WELDING ELECTRODES OR WIRES: AWS A5.1 OR A5.5, E70XX; AWS A5.17, E70S-X; AWS A5.20, E7XT-X.
FOR ALL SHOP WELDS AND FIELD WELDS OF ALL LATERAL RESISTING ELEMENTS, ELECTRODES SHALL BE E7O WITH A MINIMUM SPECIFIED CVN OF 20 FT-LBS AT -20 DEGREES FAHRENHEIT. ALL WELDS SHALL BE 3/16" MINIMUM U.N.O.

ERECTION AND FABRICATION IN ACCORDANCE WITH AISC "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS." WELDING SHALL CONFORM TO AWS "STRUCTURAL WELDING CODE - STEEL". ALL WELDING SHALL BE PERFORMED BY AWS/WABO CERTIFIED WELDERS.

ALL COLUMNS AND BEAMS TO BE FROM UNSPLICED LENGTHS U.N.O. ON THE DRAWINGS. SUBMIT SHOP DRAWINGS SHOWING SIZES, DIMENSIONS AND REQUIRED CONNECTION DETAILS FOR REVIEW BY THE ENGINEER PRIOR TO FABRICATION.

FRP GRATING
GRATING SHALL BE FIBERGLASS REINFORCED PLASTIC. GRATING BAR SIZES AND SPACING, OVERALL DIMENSIONS, CUTOUTS FOR OBSTRUCTIONS AND DIRECTIONS OF BEARING BARS SHALL BE AS INDICATED ON THE PLANS. GRATING SHALL SAFELY SUSTAIN:
- UNIFORMLY DISTRIBUTED LOAD: 100 PSF
- MAXIMUM DEFLECTION: 1/4 INCH

WOOD
SAWN LUMBER: HEM-FIR #1 OR BETTER, U.N.O. WWPA GRADING RULES. ALL DIMENSIONS NOTED ARE NOMINAL. WOOD BEARING ON OR WITHIN 1" OF CONCRETE OR CMU OR WITHIN 6" OF EARTH SHALL BE TREATED WITH AN APPROVED PRESERVATIVE. ALL NAILS ARE TO BE "COMMON." ALL NAILS IN TREATED TIMBER SHALL BE GALVANIZED. ALL FRAMING CONNECTORS NOTED ARE PER SIMPSON STRONG TIE COMPANY INC. OR ENGINEER APPROVED EQUAL. SEE MANUFACTURER'S REQUIREMENTS.

TREATED LUMBER SHALL BE BRANDED WITH A QUALITY CONTROL AGENCY MARK BY AMERICAN WOOD PROTECTION ASSOCIATION.

Gray & Osborne, Inc.
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MYRON J. BASDEN
STATE OF WASHINGTON
46334
STRUCTURAL ENGINEER
PROFESSIONAL ENGINEER

ALEX M.W QUINN
STATE OF WASHINGTON
21019150
REGISTERED
PROFESSIONAL ENGINEER

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FILE:	S_STND.DWG

0 1" 2"
TWO INCHES AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

GENERAL STRUCTURAL NOTES

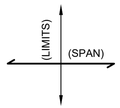
SHEET: **S-1** OF: **3**

M:\NBEND\24421.00 SR 202 Shared Use Trail\01 Design\PLANSET\Structural\S_STND.dwg, 12/20/2024 6:54 PM, RUSSELL HORITA

SUPPLEMENTAL STRUCTURAL ABBREVIATIONS:

ABV	ABOVE
AFF	ABOVE FINISH FLOOR
ADD'L	ADDITIONAL
ADJ	ADJACENT
AL	ALUMINUM
APPRX	APPROXIMATE
ARCH	ARCHITECTURAL
@	AT
BEL	BELOW
BF	BRACED FRAME
BM	BEAM
BN	BOUNDRY NAIL
BNDRY	BOUNDRY
BO	BOTTOM OF
BOS	BOTTOM OF SLAB
BOT	BOTTOM
BRDG	BRIDGE(ING)
BRG	BEARING
CAM	CAMBER(ED)
CANT	CANTILEVER(ED)
CDF	CONTROLLED DENSITY FILL
CG	CENTER OF GRAVITY
CIP	CAST IN PLACE
CJ	CONTROL JOINT
CJP	COMPLETE JOINT PENETRATION
COL	COLUMN
CONST	CONSTRUCTION
CONT	CONTINUOUS
CTSK	COUNTERSINK
D	DEPTH
d	PENNY (NAILS)
DBL	DOUBLE
DF	DOUGLAS FIR
DIAG	DIAGONAL
DIAPH	DIAPHRAGM
do	DITTO (DO OVER)
DWG	DRAWING
DWL	DOWEL
EA	EACH
EF	EACH FACE
EJ	EXPANSION JOINT
EMBD	EMBED(MENT)
EN	EDGE NAIL
ENG	ENGINEER
EQ	EQUAL
ES	EACH SIDE
EXIST	EXISTING MEMBER
EXT	EXTERIOR
FFE	FINISHED FLOOR ELEVATION
FN	FACE NAIL
FND	FOUNDATION
FO	FACE OF
FRM'G	FRAMING
FS	FAR SIDE
FTG	FOOTING
GA	GAUGE
GB	GRADE BEAM
GLB	GLUE-LAMINATED BEAM
HAS	HEADER ANCHOR STUDS
HDR	HEADER
HF	HEM-FIR
HGR	HANGER
HSB	HIGH STRENGTH BOLT (A325 UNO)
HSS	HOLLOW STRUCTURAL STEEL
IBC	INTERNATIONAL BUILDING CODE
IF	INSIDE FACE
INT	INTERIOR
JST	JOIST
K	KIPS (1000 POUNDS)
LAT	LATERAL
LDGR	LEDGER
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LS	LAG SCREW
LSL	LAMINATED STRAND LUMBER
LT WT	LIGHT WEIGHT
LVL	LAMINATED VENEER LUMBER
MAS	MASONRY
MAT'L	MATERIAL
MB	MACHINE BOLT (A307)
MFR	MANUFACTURER
MRF	MOMENT RESISTING FRAME
MTL	METAL
(N)	NEW MEMBER
NS	NEAR SIDE
OH	OVERHANG
ORNT	ORIENTATE (ION)
PAR	PARALLEL
P/C	PRECAST CONCRETE
PERP	PERPENDICULAR
PSL	PARALLEL STRAND LUMBER
PT	PRESSURE TREAT(ED)
P/T	POST TENSIONED
QTY	QUANTITY
REF	REFERENCE
REINF	REINFORCEMENT
SHT	SHEET
SHTG	SHEATHING
SIM	SIMILAR
SKW	SKEW(ED)
SPC	SPACING
SS	STAINLESS STEEL
STGR	STAGGER
STIFF	STIFFENER
STIRR	STIRRUP
STRUC	STRUCTURE(AL)
SYM	SYMMETRICAL
T	TOP
T&G	TONGUE AND GROOVE
TMPRY	TEMPORARY
TN	TOE NAIL
TO	TOP OF
TOS	TOP OF SLAB
TRANS	TRANSVERSE
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
VFY	VERIFY
WHS	WELDED HEADED STUD
WP	WORK POINT
WS	WESTERN SPECIES
WTS	WELDED THREADED STUD
X-STG	EXTRA STRONG
XX-STG	DOUBLE EXTRA STRONG

STRUCTURAL LEGEND



GRATING OR STRUCTURAL SPAN

DIFFERENCE IN ELEVATIONS

ELEVATION TARGET (REF.)

HANDRAILING

REMOVABLE HANDRAIL

℄ CENTERLINE

℄ PLATE

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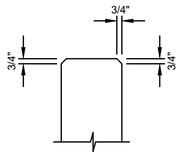
0 1" 2"
TWO INCHES AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

SPECIAL INSPECTION SCHEDULE, SUPPLEMENTAL STRUCTURAL ABBREVIATIONS, AND STRUCTURAL LEGEND

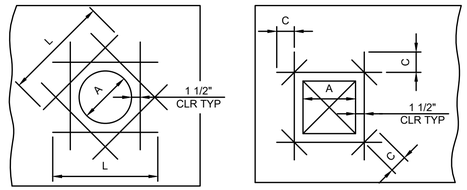
SHEET: **S-2** OF: **3**

REINF	LAP
#4	2'-4"
#5	3'-0"
#6	3'-6"
#7	4'-3"
#8	4'-10"
#9	5'-3"
#10	6'-6"
#11	8'-0"

1 TYP — **TYP LAP SCHEDULE**
NOT TO SCALE



2 TYP — **TYP CHAMFER DETAIL**
NOT TO SCALE

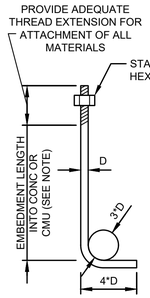


TYPE I **TYPE II**

TYPE I			TYPE II	
OPENING SIZE (A)	MINIMUM BAR LENGTH (L)	BAR SIZE	(C)	BAR SIZE
0" - 12"	3' - 9"	#5	1' - 0"	MATCH VERTICAL BARS OR LARGEST BAR IN SLABS OR WALKWAYS
13" - 18"	4' - 9"	#6	1' - 3"	
19" - 24"	6' - 9"	MATCH VERTICAL BARS OR LARGEST BAR IN SLABS OR WALKWAYS	2' - 6"	
25" - 36"	7' - 9"		2' - 6"	
36" →	8' - 9"		2' - 6"	

NOTE:
1. ALL BARS, EACH FACE. USE THESE BAR SIZES UNLESS OTHERWISE NOTED.

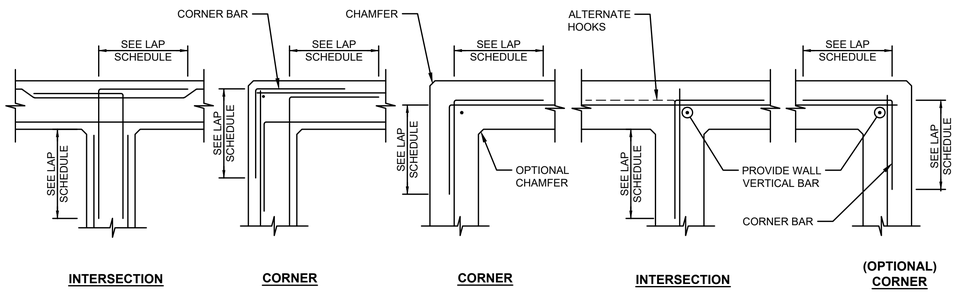
3 TYP — **TYP PENETRATION REINFORCING DETAIL**
NOT TO SCALE



BOLT DIA. "D"	MINIMUM EMBEDMENT	
	ANCHOR BOLTS IN HORIZ SURFACE	ANCHOR BOLTS IN VERT SURFACE
1/2"	8"	7"
5/8"	8"	7"
3/4"	12"	7"
7/8"	12"	8"
1"	14"	9"
1 1/8"	14"	10"

NOTE:
ANCHOR BOLT EMBEDMENT IN VERTICAL SURFACE APPLIES TO CONCRETE ONLY.

4 TYP — **TYP ANCHOR BOLT DETAIL**
NOT TO SCALE



5 TYP — **TYP REINFORCING @ WALL INTERSECTION DETAIL**
NOT TO SCALE

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0 1" 2"
TWO INCHES AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

TYPICAL DETAILS

SHEET: **S-3** OF: **3**

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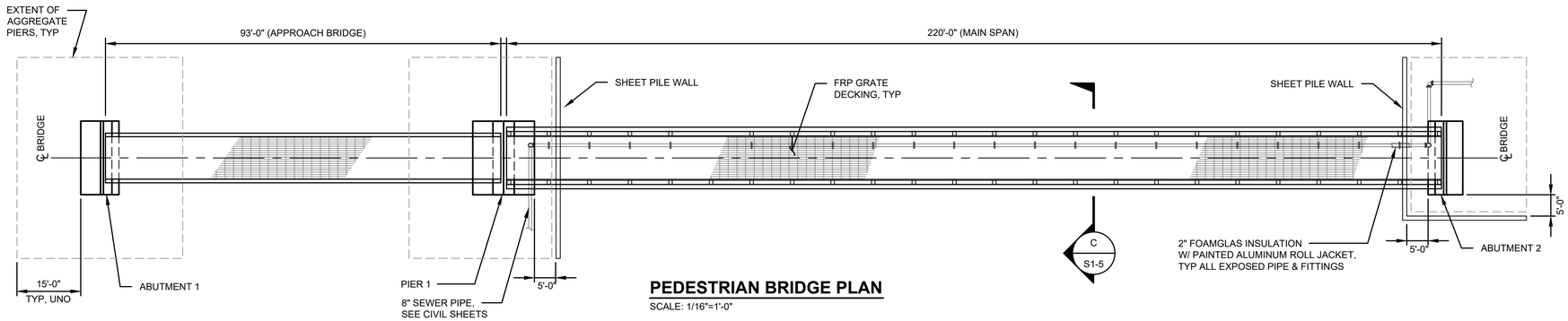
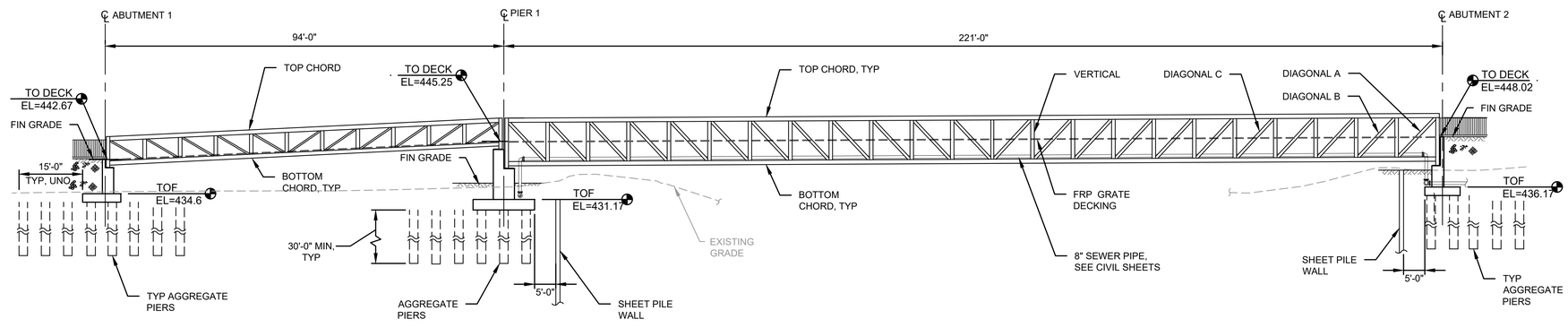


PEDESTRIAN BRIDGE PLAN

SCALE: 1/16"=1'-0"



ELEVATION

SCALE: 1/16"=1'-0"

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0 1" 2"
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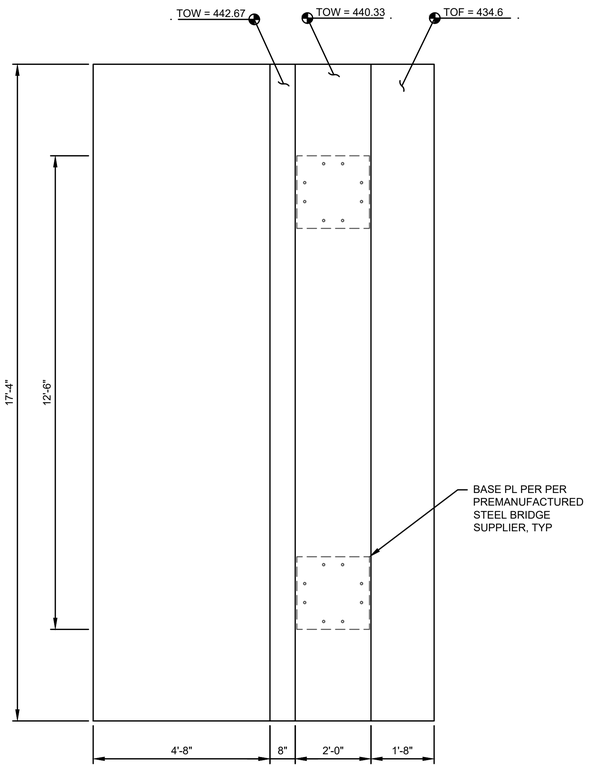
IF NOT, SCALE ACCORDINGLY

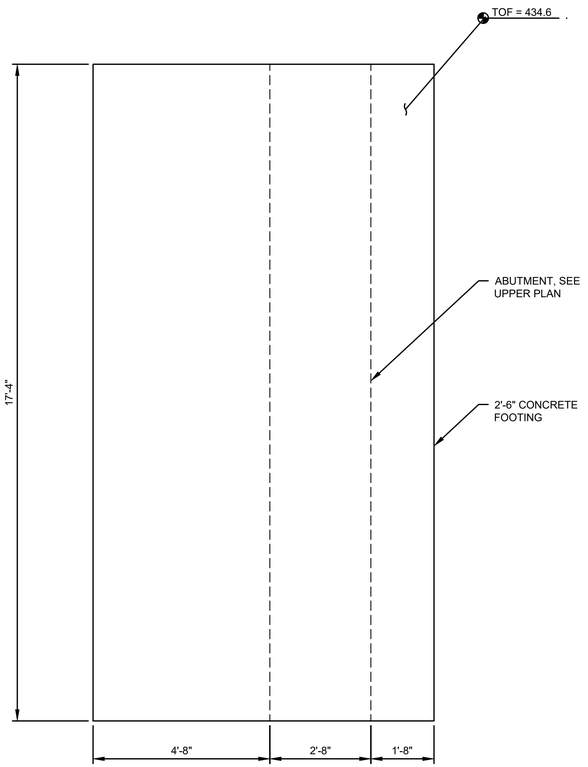
MAIN BRIDGE SPAN PLAN AND APPROACH BRIDGE SPAN PLAN

SHEET: **S1-1** OF: **5**



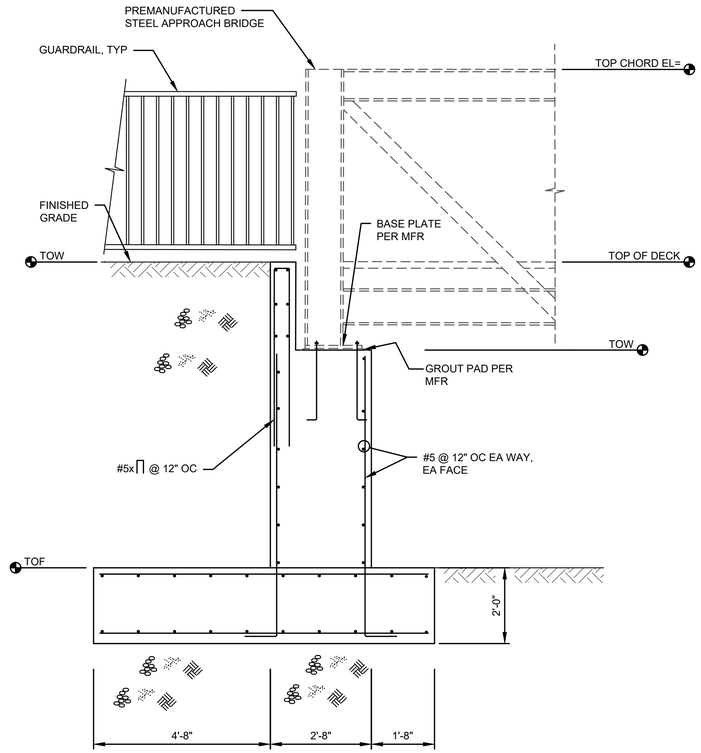
ABUTMENT 1 UPPER PLAN

SCALE: 1/2"=1'-0"



ABUTMENT 1 FOOTING PLAN

SCALE: 1/2"=1'-0"



A / - **ABUTMENT 1 SECTION**

SCALE: 1/2"=1'-0"

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0 1" 2"
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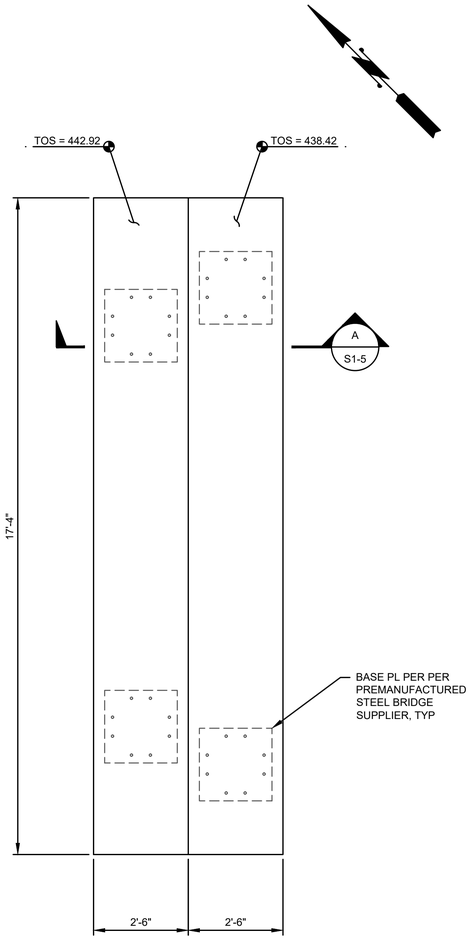
IF NOT, SCALE ACCORDINGLY

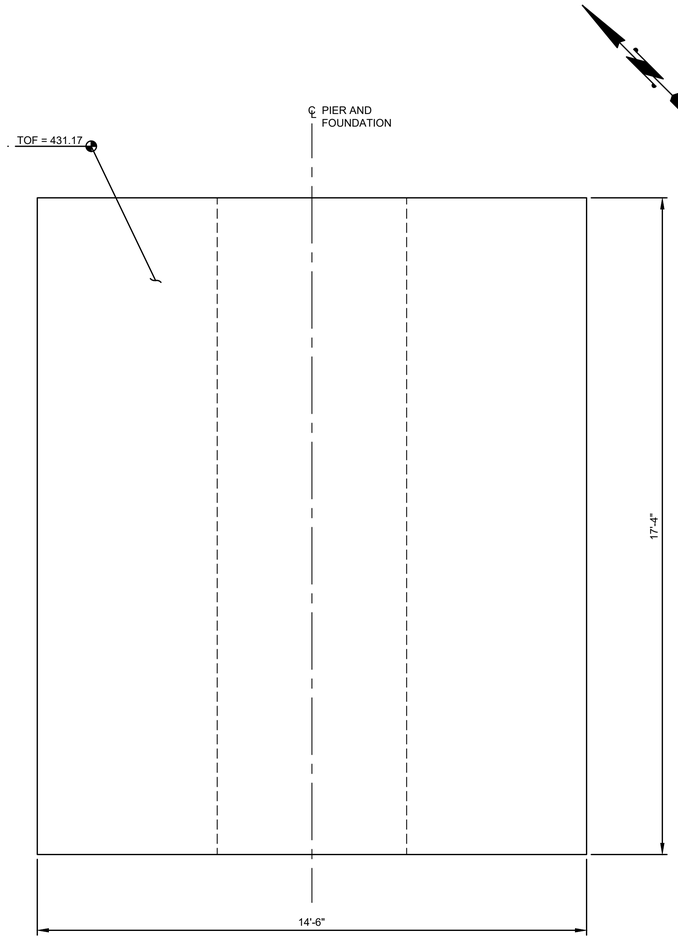
ABUTMENT 1 UPPER PLAN, FOOTING PLAN, AND SECTION

SHEET: **S1-2** OF: **5**



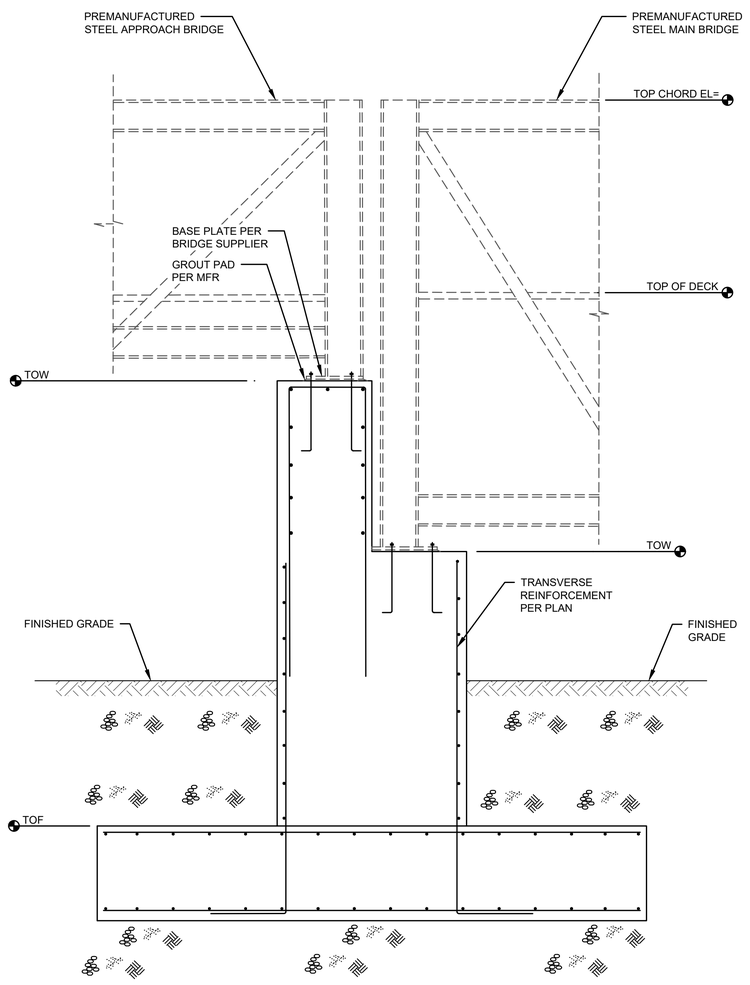
PIER 1 UPPER PLAN

SCALE: 1/2"=1'-0"



PIER 1 FOUNDATION PLAN

SCALE: 1/2"=1'-0"



A
-

PIER 1 SECTION

SCALE: 1/2"=1'-0"

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0 1" 2"
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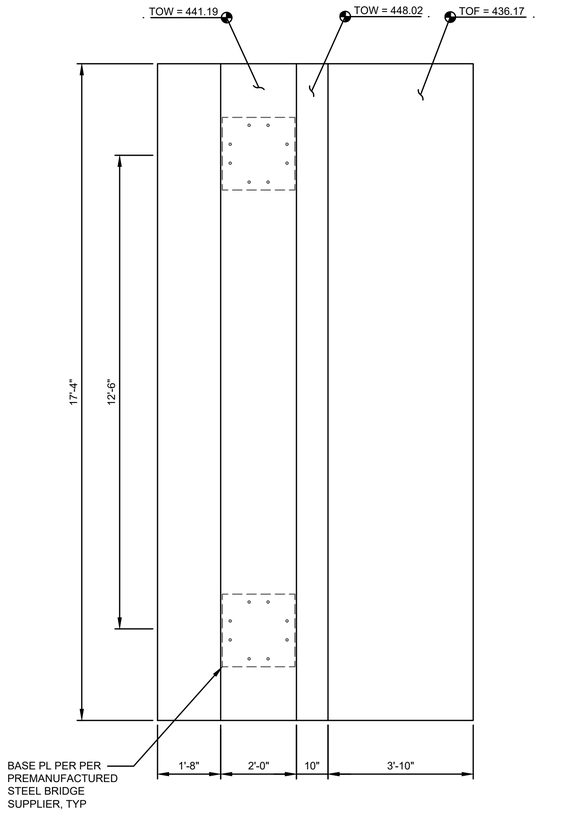
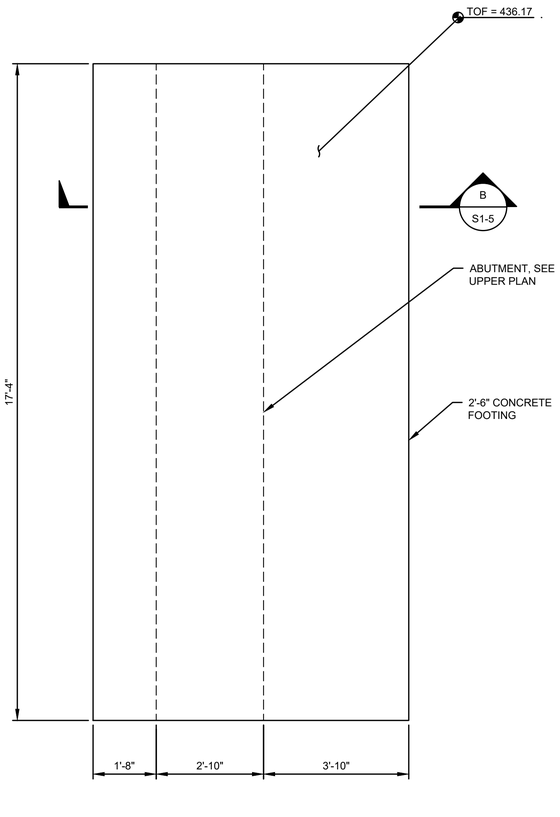
PIER 1 UPPER PLAN, FOUNDATION PLAN, AND SECTION

SHEET: **S1-3** OF: **5**



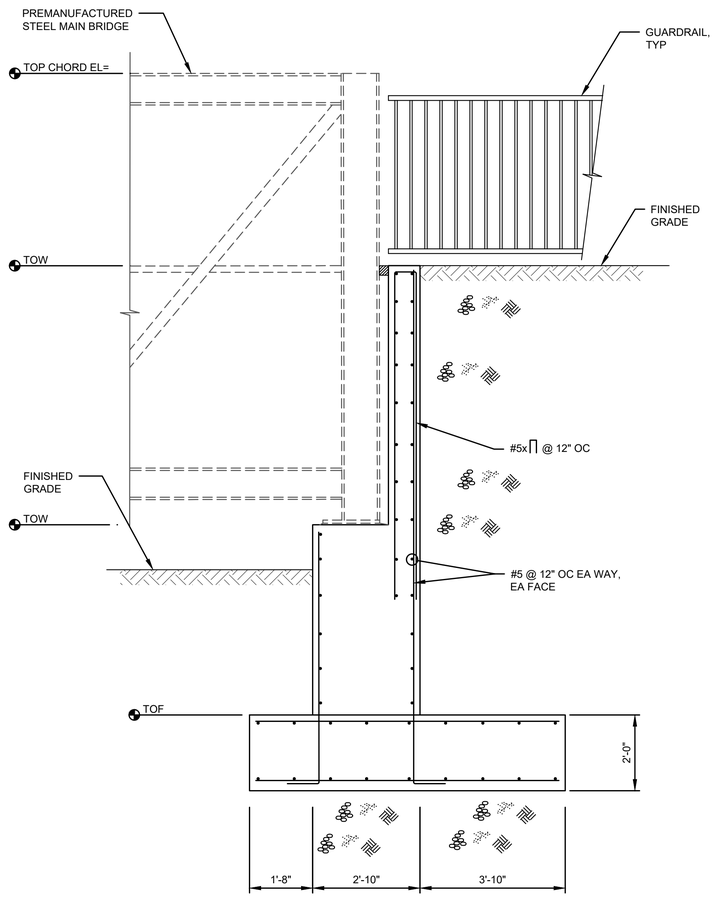
ABUTMENT 2 UPPER PLAN

SCALE: 1/2"=1'-0"



ABUTMENT 2 FOUNDATION PLAN

SCALE: 1/2"=1'-0"



A
-

ABUTMENT 2 SECTION

SCALE: 1/2"=1'-0"

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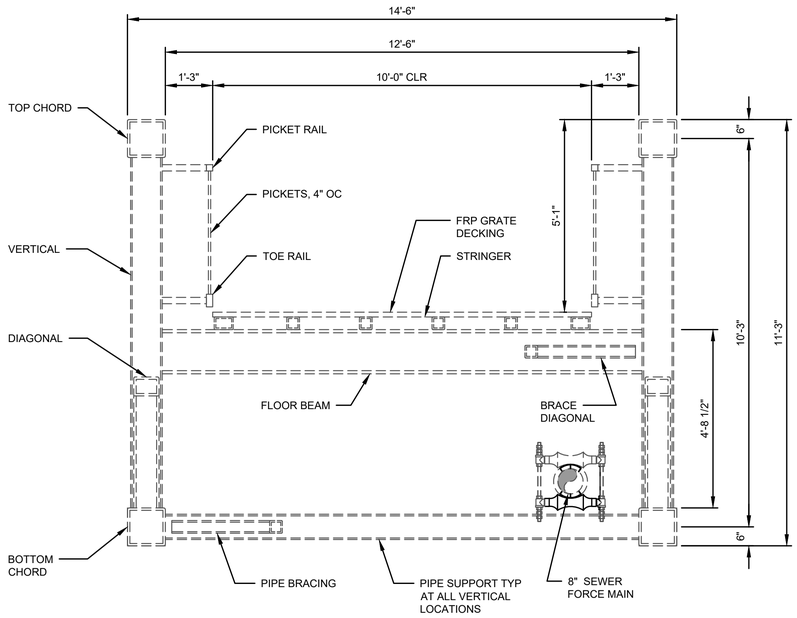
IF NOT, SCALE ACCORDINGLY

ABUTMENT 2 UPPER PLAN, FOUNDATION PLAN, AND SECTION

SHEET: **S1-4** OF: **5**



C
S1-1

MAIN SPAN SECTION

SCALE: 1/2"=1'-0"

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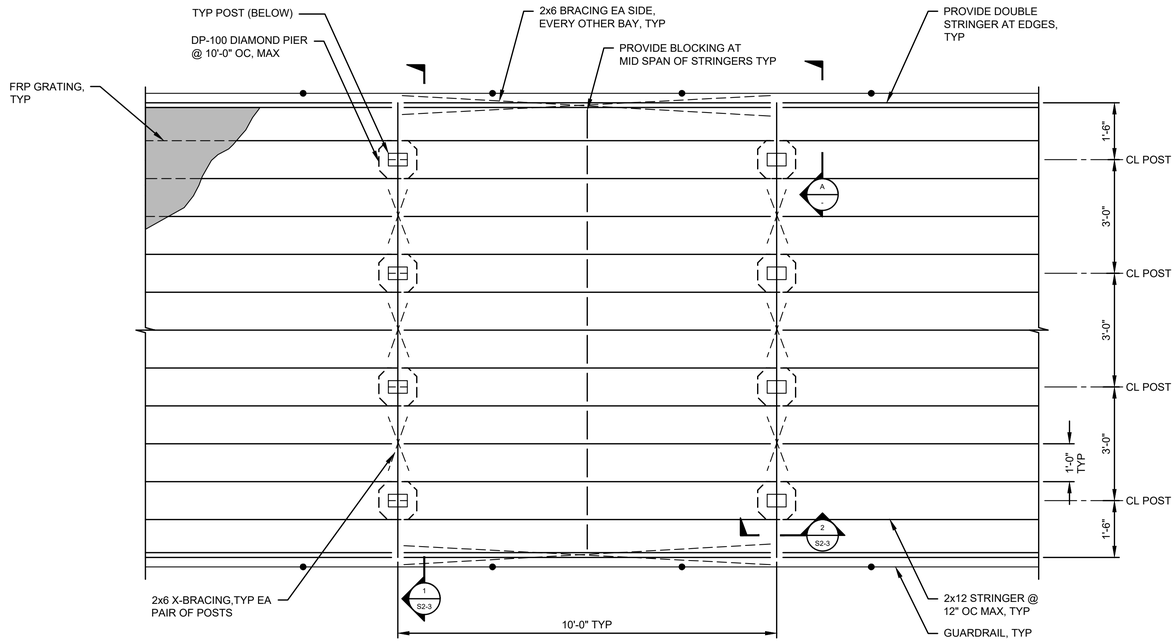
0 1" 2"
TWO INCHES AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

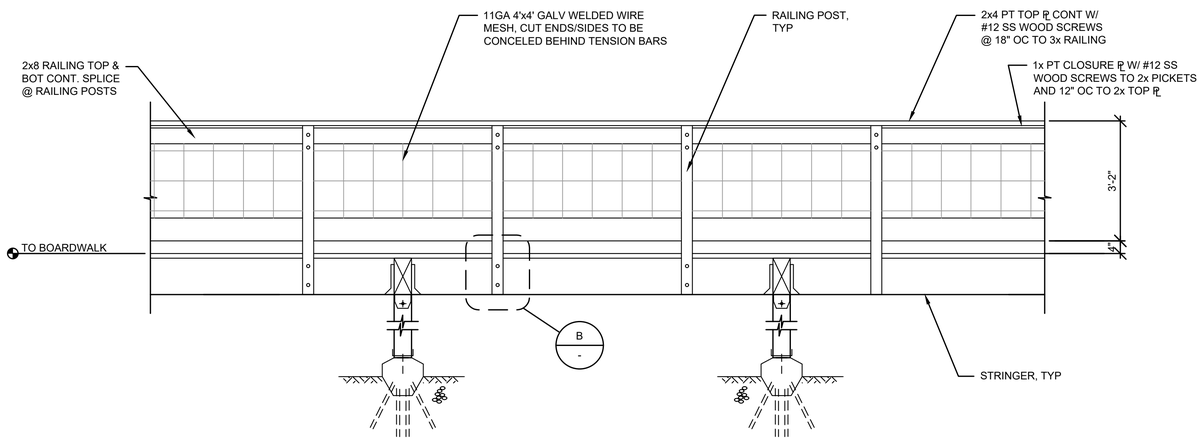
MAIN SPAN WEST ABUTMENT SECTION, MAIN SPAN EAST ABUTMENT SECTION, AND DETAIL

SHEET: **S1-5** OF: **5**



TYP BOARDWALK FRAMING PLAN

SCALE: 1/2"=1'-0"

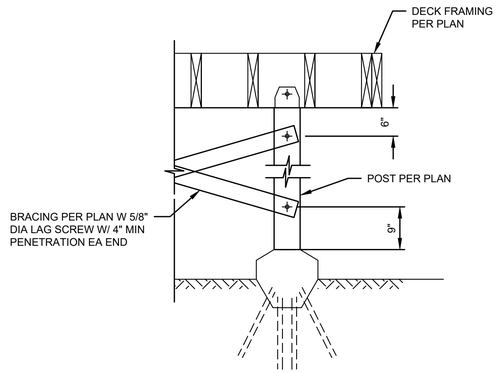


BOARDWALK W/ WOOD RAILING ELEVATION

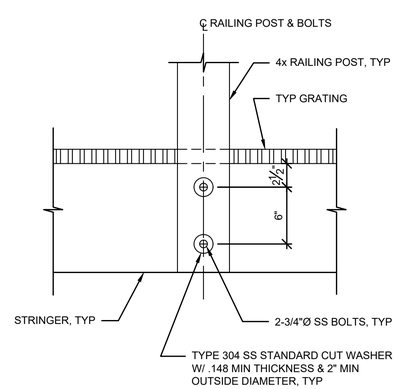
SCALE: 1/2"=1'-0"

NOTES:

1. SEE SHEET S-1 GENERAL STRUCTURAL NOTES.
2. DIMENSIONS SHOWN ON STRUCTURAL PLANS SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO START OF CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY.



A
-
SECTION
SCALE: 3/4"=1'-0"



B
-
DETAIL
SCALE: 1 1/2"=1'-0"

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STATE OF WASHINGTON
36319
REGISTERED
PROFESSIONAL ENGINEER

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CITY OF NORTH BEND

SR 202 SHARED-USE TRAIL EXTENSION

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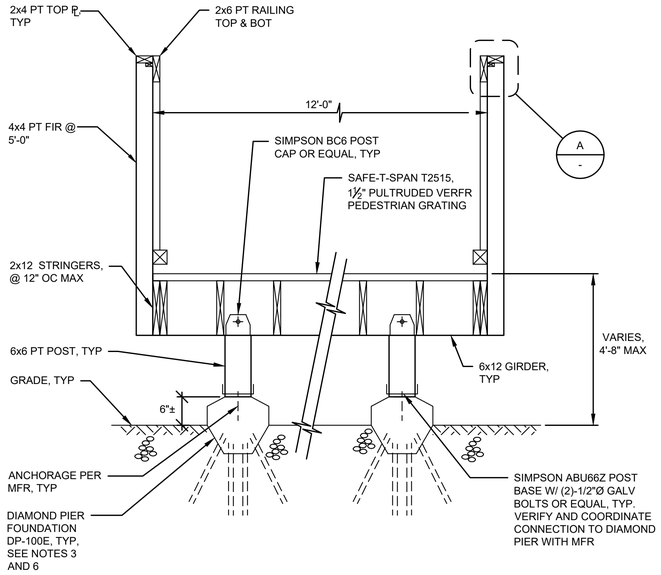
CHECKED BY:	K.W.B.
DRAWN BY:	S.E.M.
G&O #:	24421.00
FILE:	S2_RCRK_BRDG_PLN.DWG

0 1" 2"
TWO INCHES AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

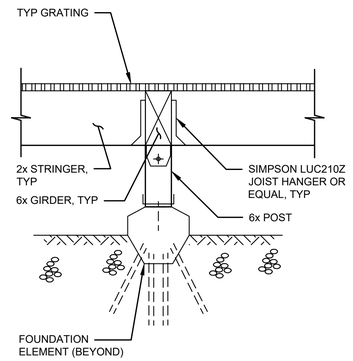
BOARDWALK FRAMING PLAN, ELEVATION, AND DETAILS

SHEET: **S2-1** OF: **2**



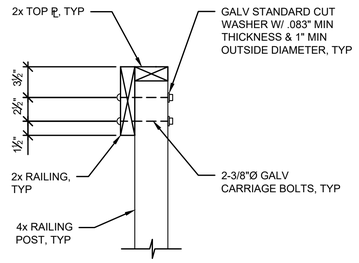
1 / S2-2 **TYPICAL DIAMOND PIER FOUNDATION BOARDWALK SECTION**

SCALE: 3/4"=1'-0"



2 / S2-2 **SECTION**

SCALE: 3/4"=1'-0"



A / - **DETAIL**

SCALE: 1 1/2"=1'-0"

NOTES:

1. SEE SHEETS S-1 AND S-2 FOR GENERAL STRUCTURAL NOTES AND TYPICAL DETAILS.
2. DIMENSIONS SHOWN ON STRUCTURAL PLANS MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO START OF CONSTRUCTION. ANY DISCREPANCIES SHOULD BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY.
3. MAXIMUM SPACING OF FOUNDATION ELEMENTS ALONG THE LENGTH OF THE BOARDWALK SHALL BE 10'-0", TYPICAL, UNO.
4. ALL FASTENERS AND FRAMING HARDWARE SHALL BE GALVANIZED.
5. DIAMOND PIER DESIGN IS THE RESPONSIBILITY OF THE CONTRACTOR. DIAMOND PIER PILE CAPACITY IN COMPRESSION SHALL BE AT LEAST 3 KIPS.
6. SEE C-SHEETS FOR LOCATIONS OF BOARDWALK SECTIONS.

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ALEX M.W. QUINN — STATE OF WASHINGTON — 21019150 — REGISTERED — PROFESSIONAL ENGINEER

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FILE:	S_BWALK_DET.DWG

0 — 1" — 2"

TWO INCHES AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

BOARDWALK TYPICAL SECTION AND DETAILS

SHEET: **S2-2** OF: **2**

BUFFER DATA

LONGITUDINAL BUFFER SPACE = B

SPEED (MPH)	20/25	30	35	40	45	50	55	60	65	70
LENGTH (feet)	155	200	250	305	360	425	495	570	645	730

TRANSPORTABLE ATTENUATOR ROLL AHEAD DISTANCE = R

HOST VEHICLE WEIGHT 9,900 TO 22,000 lbs.			HOST VEHICLE WEIGHT > 22,000 lbs.		
< 45 MPH	45–55 MPH	> 55 MPH	< 45 MPH	45–55 MPH	> 55 MPH
100'	123'	172'	74'	100'	150'

PROTECTIVE VEHICLE (WORK VEHICLE) = R

NO SPECIFIED DISTANCE REQUIRED

SIGN SPACING = X (1)

FREEWAYS & EXPRESSWAYS	55 / 70 MPH	1500' ±
RURAL HIGHWAYS	60 / 65 MPH	800' ±
RURAL ROADS	45 / 55 MPH	500' ±
RURAL ROADS & URBAN ARTERIALS	35 / 40 MPH	350' ±
RURAL ROADS & URBAN ARTERIALS RESIDENTIAL & BUSINESS DISTRICTS	25 / 30 MPH	200' ± (2)
URBAN STREETS	25 MPH OR LESS	100' ± (2)

(1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERCHANGE RAMPS, AT-GRADE INTERSECTIONS AND DRIVEWAYS.
(2) THIS SPACING MAY BE REDUCED IN URBAN AREAS TO FIT ROADWAY CONDITIONS.

CHANNELIZATION DEVICE SPACING (feet)

MPH	TAPER	TANGENT
50/70	40	80
35/45	30	60
20/30	20	40

MINIMUM SHOULDER TAPER LENGTH = L/3 (feet)

SHOULDER WIDTH (feet)	Posted Speed (mph)			
	25	30	35	40
6'	40	40	60	60
8'	40	40	60	90
10'	40	60	90	90
12'	50	60	90	110
14'	50	70	100	125

USE A MINIMUM OF 3 DEVICES TAPER FOR SHOULDER LESS THAN 8'

MINIMUM LANE CLOSURE TAPER LENGTH = L (feet)

LANE WIDTH (feet)	Posted Speed (mph)			
	25	30	35	40
10	105	150	205	270
11	115	165	225	295
12	125	180	245	320

TRAFFIC CONTROL NOTES WILL BE UPDATED BASED ON THE TRAFFIC CONTROL PLANS DEVELOPED FOR THIS PROJECT

NOTES:

1. ALL SIGNS SHALL BE 48" X 48", UNLESS OTHERWISE SHOWN. ALL SIGNS SHALL BE BLACK ON ORANGE, UNLESS OTHERWISE SHOWN.
2. SIGN SPACING MAY BE REDUCED IN URBAN AREAS TO FIT ROADWAY CONDITIONS.
3. PROTECTIVE VEHICLE – FOR SPEEDS 40 MPH OR LESS, MAY USE A WORK VEHICLE STRATEGICALLY PLACED TO PROTECT WORK AREA.
4. EXTEND CHANNELIZING DEVICE TAPER ACROSS SHOULDER.
5. A MINIMUM 48" WIDE PEDESTRIAN ROUTE SHALL BE MAINTAINED AT ALL TIMES OR AN EQUIVALENT DETOUR ROUTE SHALL BE PROVIDED. ROUTE SHALL BE IN ACCORDANCE WITH WSDOT FIELD GUIDE FOR ACCESSIBLE PUBLIC RIGHT OF WAY.
6. SIGN SPACING SHOWN ON THE PLANS MAY BE ADJUSTED IN THE FIELD TO ACCOMMODATE INTERSECTIONS, DRIVEWAYS, VISIBILITY AND OTHER FEATURES.
7. ALL SIGNS NOT MOUNTED ON BARRICADES MAY BE MOUNTED ON TRIPODS IF CLEARLY VISIBLE TO TRAFFIC AND DO NOT OBSTRUCT MINIMUM WIDTH OF PEDESTRIAN ROUTE. OTHERWISE SIGNS SHALL BE MOUNTED ON 4"X4" WOOD POSTS. THE MINIMUM HEIGHT, MEASURED VERTICALLY FROM THE BOTTOM OF THE SIGN TO THE SIDEWALK, OF SIGNS INSTALLED ABOVE SIDEWALKS SHALL BE SEVEN (7) FEET.
8. ALL CHANNELIZATION DEVICES SHALL BE CONES OR TUBULAR MARKERS UNLESS OTHERWISE SPECIFIED.
9. PLANS SHOW MINIMUM SIGNAGE TO DIRECT VEHICULAR TRAFFIC AROUND THE CONSTRUCTION AREA. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING AND INSTALLING ALL ADDITIONAL SIGNAGE AND OTHER DEVICES NECESSARY TO SAFELY DIRECT VEHICULAR AND PEDESTRIAN TRAFFIC THROUGH AND AROUND THE CONSTRUCTION AREAS AS NECESSARY TO ACCOMMODATE CONSTRUCTION ACTIVITIES.
10. LANE CLOSURES ARE ONLY ALLOWED PER SPECIFICATIONS.
11. CONTRACTOR SHALL STAGE WORK TO MAINTAIN ACCESS TO AND EGRESS FROM ALL PROPERTIES AT ALL TIMES UNLESS OTHERWISE SPECIFIED. AT NO TIME SHALL A COMPLETE CLOSURE BE ALLOWED UNLESS OTHERWISE SPECIFIED OR EXPRESS PERMISSION PROVIDED BY THE ENGINEER.
12. CONTACT AND COORDINATE WITH IMPACTED TRANSIT AGENCIES PRIOR TO IMPLEMENTING ANY CLOSURES. SEE SPECIAL PROVISIONS SECTION 1-07.
13. IF A SIGNAL IS PRESENT, IT SHALL BE SET TO "RED FLASH MODE" OR TURNED OFF DURING FLAGGING OPERATIONS OR TRAFFIC CONTROL PROVIDED BY UNIFORMED POLICE OFFICER (UPO).
14. FOR SPEED LIMIT OF 30 MPH OR LESS USE SIGN W1-3 IN LIEU OF SIGN W1-4.
15. FLAGGERS SHALL ESCORT PEDESTRIANS AS NEEDED FOR SAFETY.
16. WHEN TRAFFIC IS DIRECTED ONTO GROOVED PAVEMENT, OVER AN ABRUPT BUMP OR NEXT TO AN ABRUPT LANE EDGE, THE W21-1701 SIGN SHALL BE USED TO WARN MOTORCYCLES OF THE CONDITIONS.
17. ADA PATHWAYS SHALL BE MAINTAINED. IF WORKZONE IS IN THE SIDEWALK, A DEDICATED FLAGGER SHALL ESCORT PEDESTRIANS THROUGH THE WORK AREA. SEE SHEET TC5 FOR MORE INFORMATION ON PEDESTRIAN TRAFFIC CONTROL.
18. WHEN TRAFFIC CONTROL OBSTRUCTS PARKING, NO PARKING SIGNS SHALL BE INSTALLED 72 HOURS IN ADVANCE OF CLOSURE.
19. IF TRAFFIC CONTROL OBSTRUCTS TRANSIT STOP, CONTRACTOR SHALL ATTEMPT TO KEEP TRANSIT STOP OPEN. IF NOT FEASIBLE TO KEEP TRANSIT STOP OPEN, CONTRACTOR SHALL COORDINATE WITH KING COUNTY METRO TO TEMPORARILY RELOCATE TRANSIT STOP. MINIMUM 10 DAYS NOTICE SHALL BE PROVIDED.
20. SEE SPECIAL PROVISIONS FOR ADDITIONAL REQUIREMENTS.
21. ROAD WORK AHEAD SIGNS SHALL BE INSTALLED ON ALL SIDE STREETS AND ALLEYS WHEN TRAFFIC CONTROL CROSSES THEM.
22. TAPERS MAY CROSS DRIVEWAYS BUT MAY NOT CROSS INTERSECTING ROADWAYS.
23. COVER EXISTING SIGNS THAT CONFLICT WITH TEMPORARY TRAFFIC CONTROL.

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PH CONSULTING
Balanced Transportation Solutions

MARIA M. TRIBELHORN
STATE OF WASHINGTON
REGISTERED PROFESSIONAL ENGINEER
PRELIMINARY

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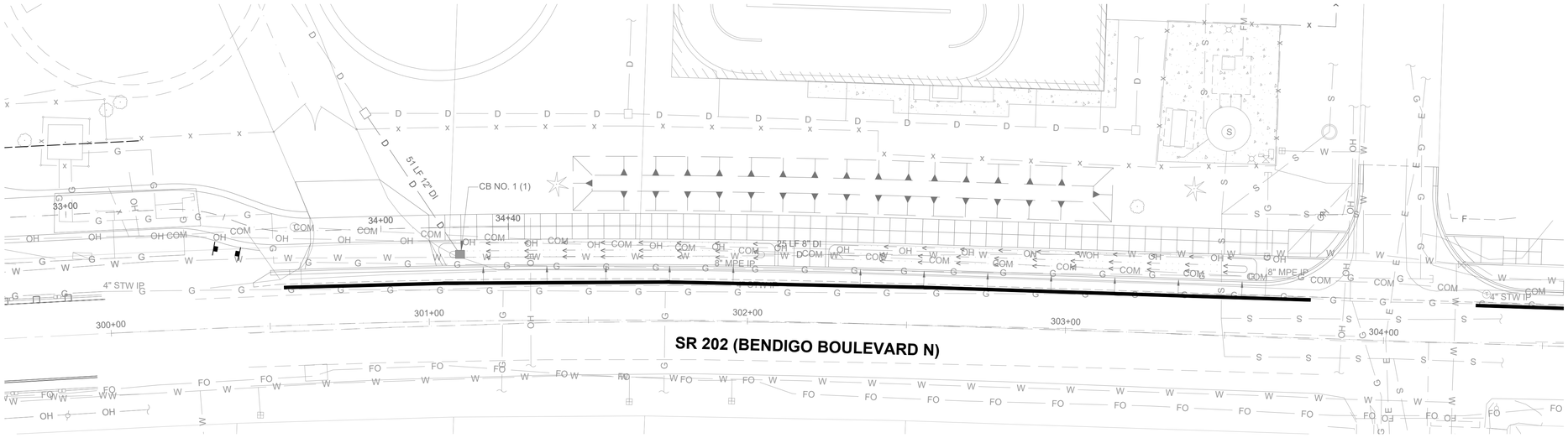
0 1" 2"
TWO INCHES AT FULL SCALE. IF NOT, SCALE ACCORDINGLY

TRAFFIC CONTROL PLAN



TRAFFIC CONTROL PLANS TO BE DEVELOPED WHERE THE WORK WILL IMPACT THE PUBLIC RIGHT-OF-WAY

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MARIA M. TRIBE MORAN
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0 1" 2"
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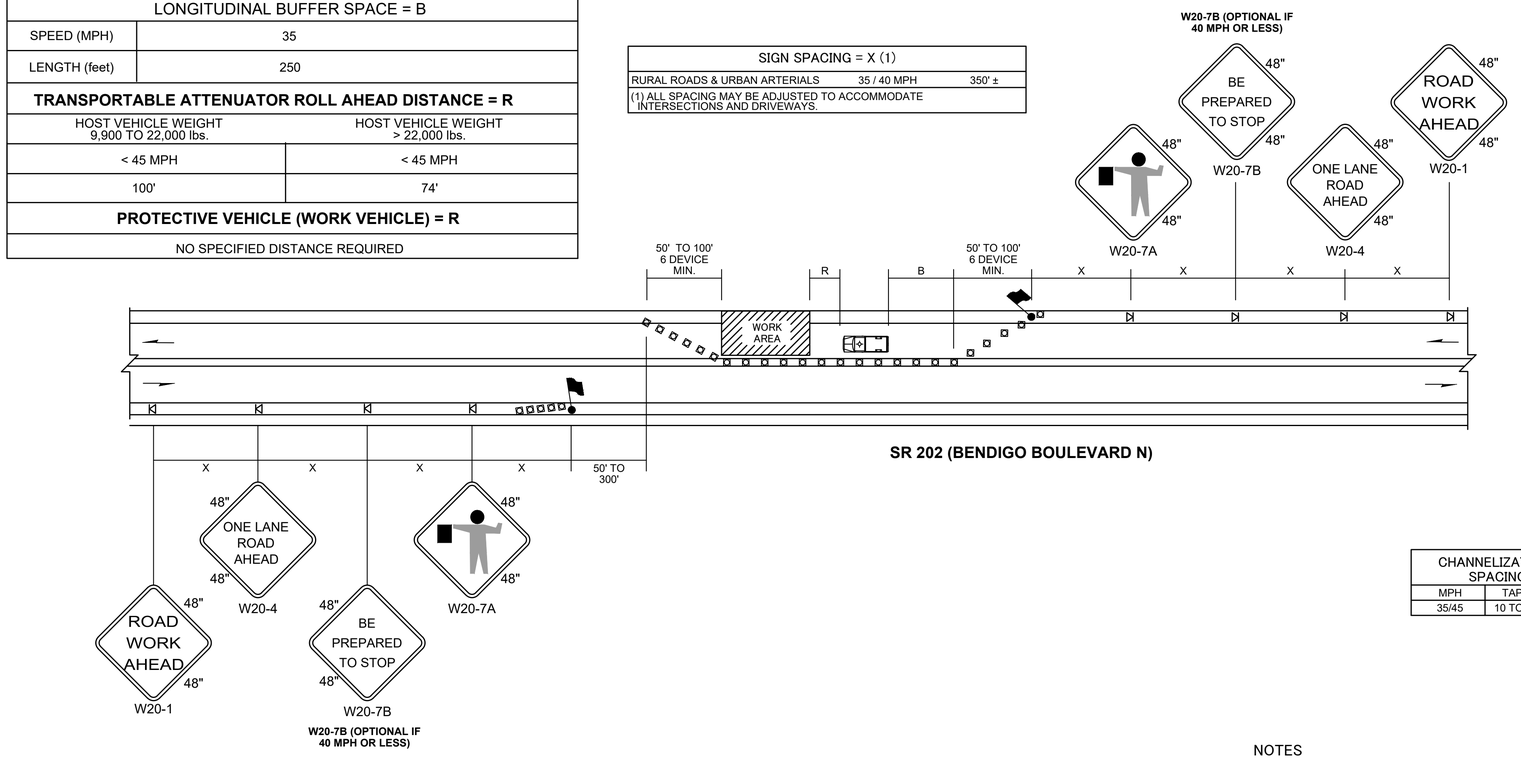
IF NOT, SCALE ACCORDINGLY

TRAFFIC CONTROL PLAN

SHEET: **TC-2** OF: **46**

BUFFER DATA	
LONGITUDINAL BUFFER SPACE = B	
SPEED (MPH)	35
LENGTH (feet)	250
TRANSPORTABLE ATTENUATOR ROLL AHEAD DISTANCE = R	
HOST VEHICLE WEIGHT 9,900 TO 22,000 lbs.	HOST VEHICLE WEIGHT > 22,000 lbs.
< 45 MPH	< 45 MPH
100'	74'
PROTECTIVE VEHICLE (WORK VEHICLE) = R	
NO SPECIFIED DISTANCE REQUIRED	

SIGN SPACING = X (1)		
RURAL ROADS & URBAN ARTERIALS	35 / 40 MPH	350' ±
(1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERSECTIONS AND DRIVEWAYS.		



LEGEND

- FLAGGING STATION
- TEMPORARY SIGN LOCATION
- CHANNELIZING DEVICES
- PROTECTIVE VEHICLE

CHANNELIZATION DEVICE SPACING (FEET)		
MPH	TAPER	TANGENT
35/45	10 TO 20	60

NOTES

1. ALL SIGNS ARE BLACK ON ORANGE.
2. EXTENDING THE CHANNELIZING DEVICE TAPER ACROSS SHOULDER IS RECOMMENDED.
3. NIGHT WORK REQUIRES ADDITIONAL ROADWAY LIGHTING AT FLAGGING STATIONS. SEE THE **STANDARD SPECIFICATIONS** FOR ADDITIONAL DETAILS.
4. SEE **SPECIAL PROVISIONS** FOR WORK HOUR RESTRICTIONS.

ONE-LANE, TWO-WAY WITH FLAGGERS TRAFFIC CONTROL DETAIL

NTS

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KEVIN W. BROWN — STATE OF WASHINGTON — 39319 — REGISTERED PROFESSIONAL ENGINEER

YVONNE B. PAWTOWSKI — STATE OF WASHINGTON — 41853 — REGISTERED PROFESSIONAL ENGINEER

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0 1" 2"
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TRAFFIC CONTROL PLANS