

REVISIONS		
NO.	DESCRIPTION/DATE	BY

CONSTRUCTION PLANS

for

HAVEN TOWNHOMES

prepared for

SIDNEY ROAD TOWNHOMES L.L.C.

1302 PUYALLUP STREET, SUITE A
SUMNER, WA 98390

prepared by

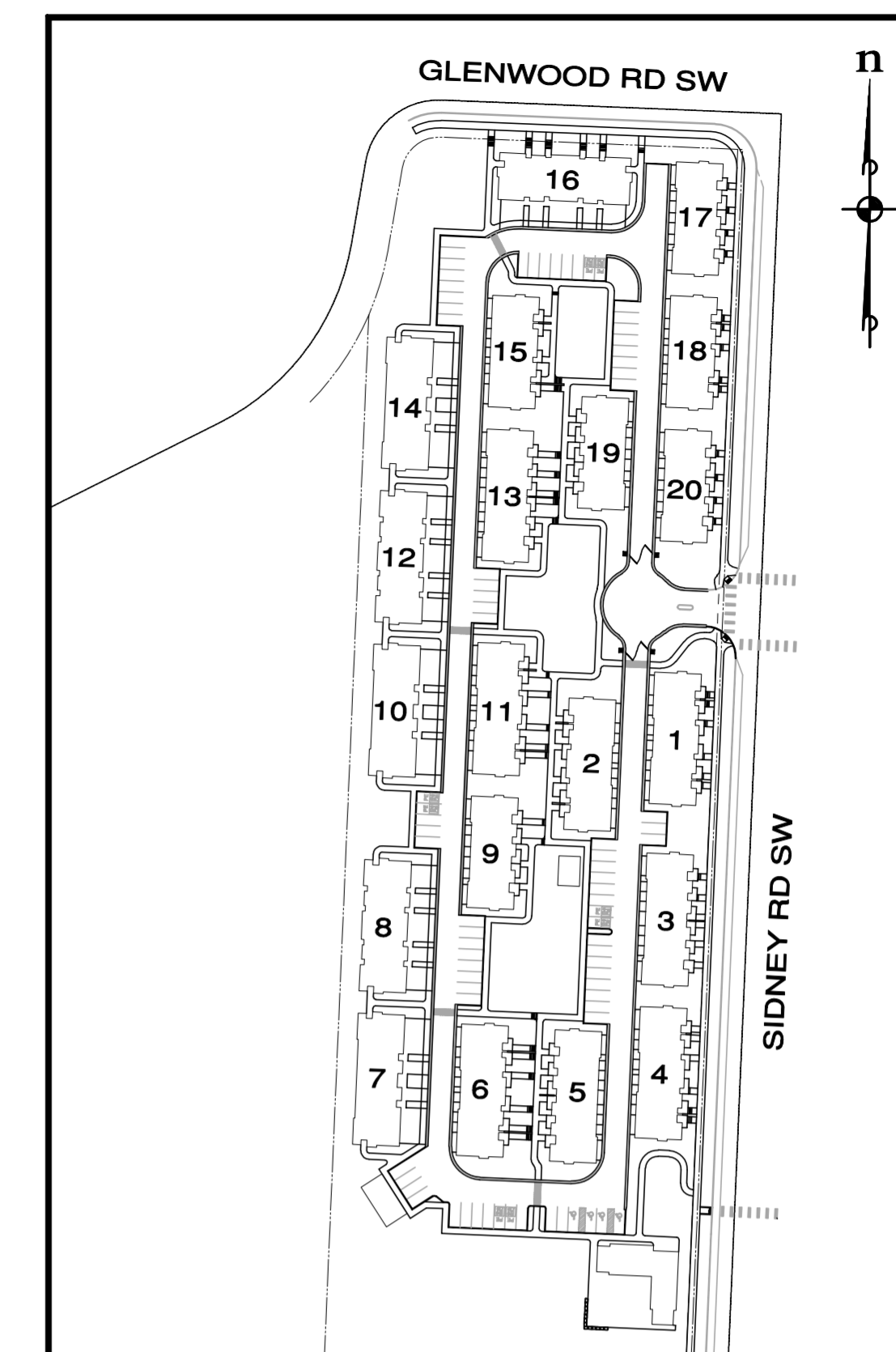


33400 8th Ave S, Suite 205
FEDERAL WAY, WASHINGTON 98003
Phone: (253) 838-6113



ESM JOB NO. 2155-002-020

SHEET 1 of 38



SITE PLAN

N.T.S.

APPROXIMATE EARTHWORK QUANTITIES

CUT = 4,000 CY
FILL = 23,000 CY
NET = 19,000 CY (FILL)
STRIPPING (ASSUMED 12") = 11,000 CY

Sheet Index

SHEET NO.	DRAWING NO.	DESCRIPTION
1	CV-01	COVER SHEET
2	EX-01	EXISTING CONDITIONS
3	DM-01	T.E.S.C. & DEMO PLAN
4 - 5	ST-01 to ST-02	HORIZONTAL & OVERALL SITE PLAN
6	LG-01	LEGEND & ABBREVIATIONS
7	NT-01	NOTES
8 - 9	GR-01 to GR-02	GRADING PLAN
10	GR-03	T.E.S.C. & GRADING DETAILS & NOTES
11 - 13	SD-01 to SD-03	ROAD & STORM PLAN
14 - 16	SD-04 to SD-06	ROAD & STORM PROFILES
17 - 18	SD-07 to SD-08	STORMTECH PLAN & SECTIONS
19 - 20	SD-09 to SD-10	ROAD & STORM DETAILS
21	SS-KEY	SEWER & WATER KEY MAP
22 - 28	SS-01 to SS-07	SEWER & WATER PLAN & PROFILES
29 - 30	SS-08 to SS-09	SEWER & WATER DETAILS
31	UT-01	COMPOSITE UTILITY PLAN
32 - 33	FR-01 to FR-02	FRONTAGE IMPROVEMENTS
34 - 38	DT-01 to DT-05	DETAILS & NOTES

OWNER/DEVELOPER

SIDNEY ROAD TOWNHOMES L.L.C.
1302 PUYALLUP STREET, SUITE A
SUMNER, WA 98390
CONTACT: YEORYIA ANASTASIOU
PHONE: (206) 233-9600

ARCHITECT

BCRA
2106 PACIFIC AVENUE, SUITE 300
TACOMA, WA 98402
CONTACT: JOSEPH RYDMAN
PHONE: (253) 627-4395

ENGINEER/SURVEYOR

ESM CONSULTING ENGINEERS, L.L.C.
33400 8TH AVENUE SOUTH #205
FEDERAL WAY, WA 98003
CONTACT: LAURA BARTENHAGEN, PE
PHONE: (253) 838-6113
FAX: (253) 838-7104

GEOTECHNICAL ENGINEER

EARTH SOLUTIONS NW, LLC
15365 NE 90TH STREET, SUITE 100
REDMOND, WA 98052
CONTACT: KYLE CAMPBELL, PE
PHONE: (425) 449-4704
FAX: (425) 449-4711

SITE INFORMATION

SITE ADDRESS:
4801 GLENWOOD ROAD SW
PORT ORCHARD, WA 98387
SITE AREA: 6.92 ACRES

PARCEL #

102301-1-053-2000

AREAS

ONSITE
ASPHALT = 51,732 SF (1.19 AC)
SIDEWALK = 55,325 SF (1.27 AC)
BUILDINGS = 77,134 SF (1.77 AC)
PERVIOUS = 117,267 SF (2.69 AC)
IMPERVIOUS = 184,191 SF (4.23 AC)
TOTAL = 301,458 SF (6.92 AC)

FRONTAGE
ASPHALT = 9,746 SF (0.22 AC)
SIDEWALK = 4,306 SF (0.10 AC)
PERVIOUS = 11,513 SF (0.26 AC)
IMPERVIOUS = 14,052 SF (0.32 AC)
TOTAL = 25,565 SF (0.59 AC)

DISTURBED = 295,337 SF (6.78 AC)

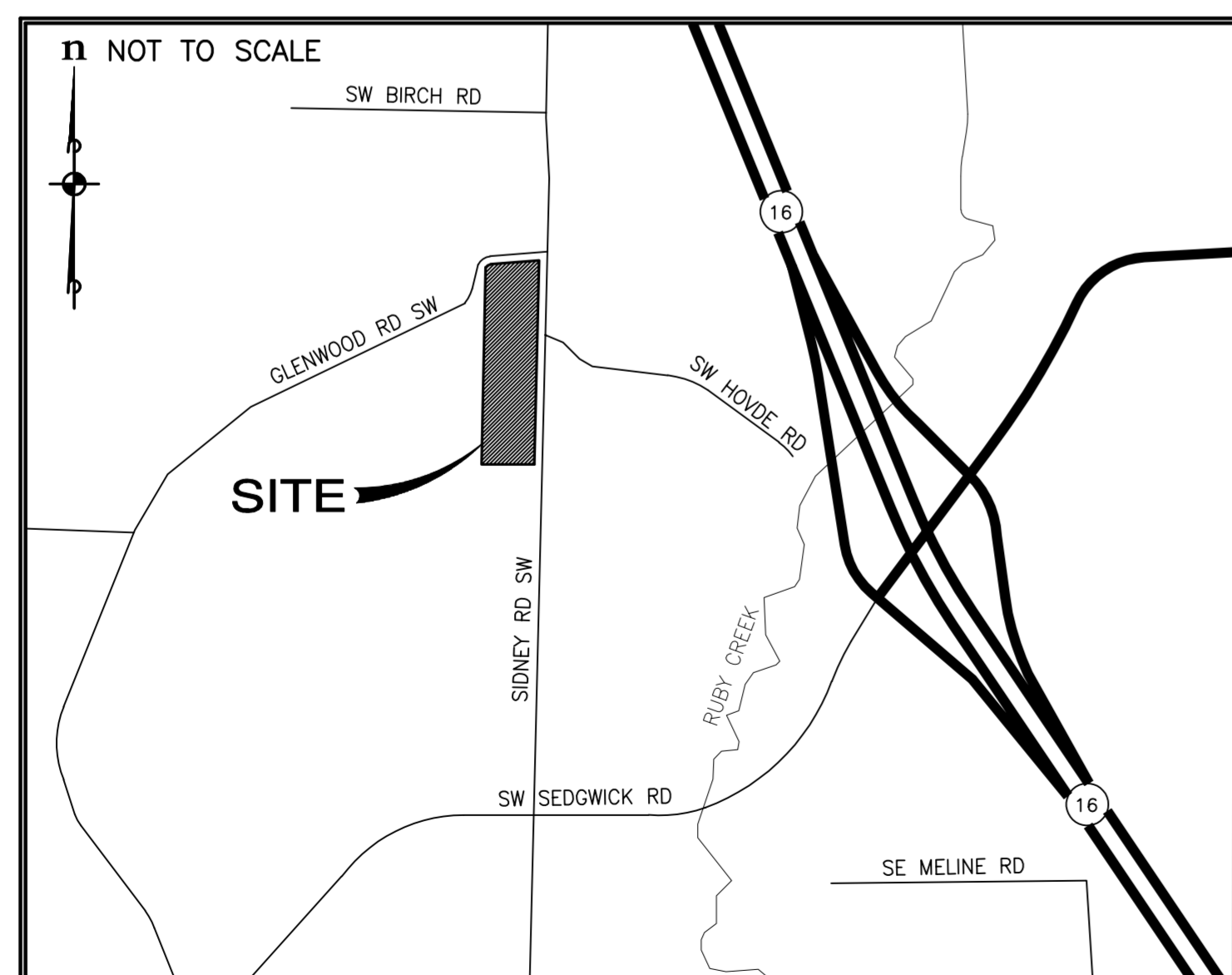
PARKING

RESIDENT PARKING REQUIRED = 210
RESIDENT PARKING PROVIDED = 228

GUEST PARKING REQUIRED = 29
GUEST PARKING PROVIDED = 77

TOTAL REQUIRED = 239
TOTAL PROVIDED = 305

Vicinity Map



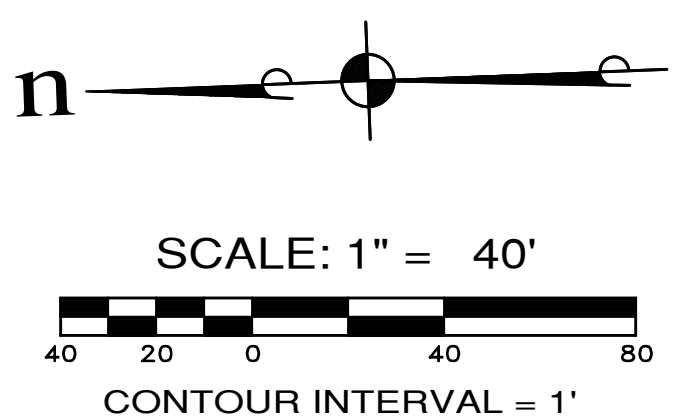
A PORTION OF NW 1/4 OF SECTION 11, T. 23 N., R. 1 E., W.M.

LEGEND

- FOUND MONUMENT AS NOTED
- FOUND CORNER AS NOTED
- UTILITY POLE
- ⊕ GUY ANCHOR
- ⊕ TELEPHONE MANHOLE
- MAIL BOX
- STORM CULVERT
- SSFM- SANITARY SEWER FORCE MAIN
- P-P- OVERHEAD UTILITY LINES
- - - EDGE OF VEGETATION
- ⊗ EDGE OF WETLAND
- (L) CALLED FOR IN LEGAL DESCRIPTION
- (R4) RECORD OF SURVEY FOR SITE - RECORDING NO. 9112190082
- (R2) RECORD OF SURVEYS FOR ADJOINER TO WEST - RECORDING NOS. 8511080138, 8711120111
- ⊕ CABLE TELEPHONE RISER
- X GATE END
- ⊕ SIGN
- ⊕ STREET SIGN
- ⊕ GAS MARKER POST
- ⊕ GAS METER
- ⊕ POWER GUY ANCHOR
- ⊕ POWER METER
- ⊕ POWER POLE
- ⊕ POWER POLE WITH DROP
- ⊕ POWER POLE WITH LIGHT
- ⊕ POWER POLE WITH TRANSFORMER
- ⊕ STORM CULVERT
- ⊕ SS CLEANOUT
- ⊕ TELEPHONE RISER BOX
- ⊕ WATER FIRE HYDRANT
- ⊕ WATER HOSE BIB
- ⊕ WATER METER
- ⊕ WATER VALVE
- ▬ BUILDING LINE
- ▬ BUILDING OVERHANG
- - - DASHED CENTER LINE OF ROAD
- - - TOP OF DITCH
- - - BOTTOM OF DITCH
- - - BARBED WIRE FENCE
- - - CHAIN LINK FENCE
- - - WIRE FENCE
- - - SPLIT RAIL FENCE
- - - CABLE TV UNDERGROUND
- - - GAS LINE UNDERGROUND
- - - POWER UNDERGROUND
- - - POWER OVERHEAD
- - - SANITARY SEWER UNDERGROUND
- - - TELEPHONE UNDERGROUND
- - - WATER UNDERGROUND

SURVEY NOTES

- THIS SURVEY WAS PREPARED FOR THE EXCLUSIVE USE OF TARRAGON LLC AND FIDELITY NATIONAL TITLE COMPANY OF WASHINGTON, INC., AS TITLE COMPANY. THE RIGHT TO RELY ON OR USE THIS SURVEY DOES NOT EXTEND TO ANY UNNAMED PARTY WITHOUT EXPRESS RE-CERTIFICATION BY ESM CONSULTING ENGINEERS, L.L.C., AND/OR THE PROFESSIONAL LAND SURVEYOR WHOSE SEAL APPEARS HEREON.
- THE LEGAL DESCRIPTION HEREIN DESCRIBES THE SAME PROPERTY AS INSURED IN THE TITLE COMMITMENT DESCRIBED HEREIN.
- NO ADDRESS HAS BEEN ASSIGNED FOR THE SURVEYED PROPERTY. ADDRESS WHEN ASSIGNED WILL BE ON SIDNEY ROAD S.W., PORT ORCHARD, WA 98367.
- THE SURVEYED PROPERTY DEPICTED HEREIN LIES WITHIN FLOOD HAZARD ZONE X, AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN, AS DESIGNATED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY'S NATIONAL FLOOD INSURANCE PROGRAM FLOOD INSURANCE RATE MAP NUMBER 53035C0369E DATED NOVEMBER 4, 2010.
- THE SURVEYED PROPERTY DEPICTED AND DESCRIBED HEREON ENCLOSES A TOTAL AREA OF 116,855 SQUARE FEET (2.683 ACRES), MORE OR LESS.
- ALL TIES ARE SHOWN EITHER ALONG THE PROPERTY LINE OR PERPENDICULAR TO THE PROPERTY LINE OF THE SURVEYED PROPERTY.
- NO CORNERS HAVE BEEN SET IN CONJUNCTION WITH THIS SURVEY.
- THE SURVEYED PROPERTY ADJOINS SIDNEY ROAD S.W., A PUBLIC RIGHT OF WAY.
- THE POSITION OF SURFACE FEATURES (CATCH BASINS, LIGHTS, MANHOLES, ETC.) ARE FROM ACTUAL FIELD LOCATIONS. THE POSITIONS OF UNDERGROUND UTILITIES ARE FROM ACTUAL FIELD LOCATIONS OF VISIBLE FEATURES, PAINT MARKS BY A FIRM SPECIALIZING IN UNDERGROUND UTILITIES AND AVAILABLE CONSTRUCTION PLANS. UNDERGROUND UTILITY LOCATIONS ARE ONLY APPROXIMATE. UNDERGROUND CONNECTIONS ARE SHOWN AS STRAIGHT LINES BETWEEN VISIBLE SURFACE LOCATIONS. BENDS OR CURVES NOT SHOWN. FIELD VERIFICATION IS NECESSARY PRIOR TO OR DURING CONSTRUCTION.

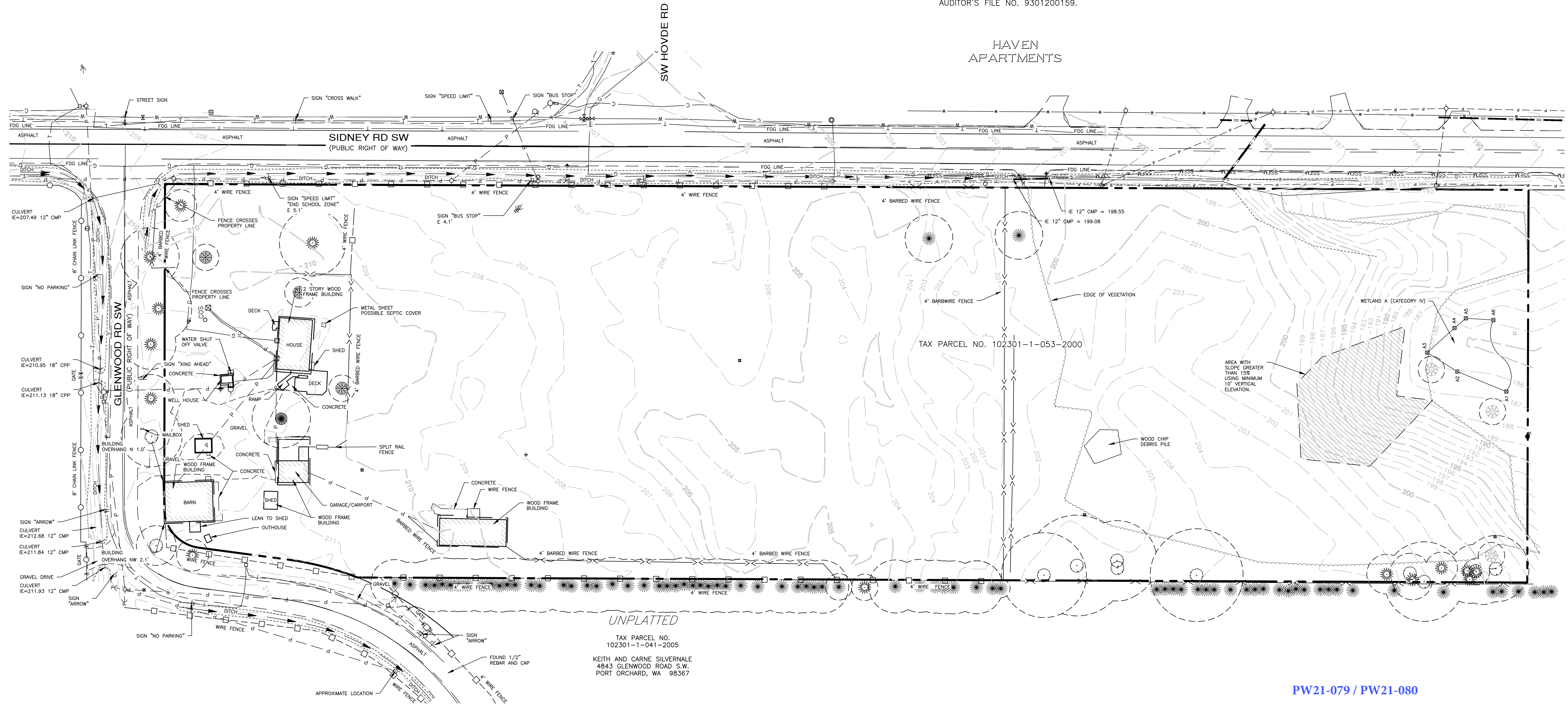


UTILITY NOTE
 LOCATIONS OF SANITARY SEWER FORCE MAIN AND WATER MAIN SHOWN HEREON ARE BASED ON CITY OF PORT ORCHARD AS-BUILT INFORMATION.

PRACTICE/PROCEDURES
 THE SURVEY WAS PERFORMED BY FIELD TRAVERSE WITH A SPECTRAL PRECISION FOCUS 30 TOTAL STATION. FINAL RESULTS MEETING OR EXCEEDING THE CURRENT TRAVERSE STANDARDS CONTAINED IN W.A.C. 332-130-090.

DESCRIPTION

THE EAST 10 ACRES OF THE NORTHEAST QUARTER OF THE NORTHEAST QUARTER OF SECTION 10, TOWNSHIP 23 NORTH, RANGE 1 EAST, W.M., IN KITSAP COUNTY, WASHINGTON:
 EXCEPT THE NORTH 40 RODS;
 EXCEPT THE SOUTH 2 ACRES;
 EXCEPT ANY PORTION OF SAID 10 ACRES LYING WEST OF THE EAST 20 RODS OF SAID NORTHEAST QUARTER OF THE NORTHEAST QUARTER;
 EXCEPT SIDNEY ROAD;
 AND EXCEPT THAT PORTION CONVEYED TO KITSAP COUNTY BY DEED RECORDED UNDER AUDITOR'S FILE NO. 9301200159.



REVISIONS		
NO.	DESCRIPTION/DATE	BY

ESM CONSULTING ENGINEERS, L.L.C.
 33400 8th Ave S, Suite 205
 Federal Way, WA 98003
 (206) 898-6113
 (206) 857-9905
 www.esmcivil.com
 Civil Engineering | Land Surveying | Project Management | Public Works | Land Planning | Landscape Architecture

SIDNEY ROAD TOWNHOMES L.L.C.
HAVEN TOWNHOMES
 CITY OF PORT ORCHARD
 EXISTING CONDITIONS
 WASHINGTON

JOB NO.: 2155-002-020
 DWG. NAME: EX-01
 DESIGNED BY: LGB
 DRAWN BY: GFF
 CHECKED BY:
 DATE: 12/03/2021
 DATE OF PRINT:
EX-01
 2 OF 38 SHEETS

PW21-079 / PW21-080

File: \\mm6\ENR\ESM-JOB\2155\002\020\plots\EX-01.dwg
 Plotted: 12/7/2021 11:08 AM
 Plotted By: Greg Fendler

CONSTRUCTION SEQUENCE

1. CONDUCT A PRE-CONSTRUCTION MEETING WITH THE PUBLIC WORKS DEPARTMENT.
2. POST "NOTICE OF CONSTRUCTION ACTIVITY" SIGN WITH NAME AND PHONE NUMBER OF THE CESCL.
3. FLAG OR FENCE CLEARING LIMITS AND SIGNIFICANT TREES.
4. GRADE AND INSTALL CONSTRUCTION ENTRANCE(S).
5. INSTALL PERIMETER PROTECTION (SILT FENCE, BRUSH BARRIER, ETC.).
6. CONSTRUCT SEDIMENT TRAP AND POND.
7. GRADE AND STABILIZE CONSTRUCTION SITE.
8. GRADE TO FILL FOR PRE-LOADING BUILDING PADS AS DIRECTED BY T. GEOTECHNICAL ENGINEER.
9. CONSTRUCT SURFACE WATER CONTROLS (INTERCEPTOR DITCHES, PIPE SLOPE DRAINS, ETC.) SIMULTANEOUSLY WITH CLEARING AND GRADING FOR PROJECT DEVELOPMENT.
10. MAINTAIN EROSION CONTROL MEASURES IN ACCORDANCE WITH THE CITY OF PORT ORCHARD STANDARDS AND MANUFACTURER'S RECOMMENDATIONS.
11. RELOCATE SURFACE WATER CONTROLS AND EROSION CONTROL MEASURES, OR INSTALL NEW MEASURES TO ENSURE THAT AS SITE CONDITIONS CHANGE THE EROSION AND SEDIMENT CONTROL IS ALWAYS IN ACCORDANCE WITH THE CITY OF PORT ORCHARD EROSION AND SEDIMENT CONTROL STANDARDS.
12. COVER ALL AREAS THAT WILL BE IDLE FOR MORE THAN SEVEN DAYS DURING THE DRY SEASON OR TWO DAYS DURING THE WET SEASON WITH STRAW, WOOD FIBER MULCH, COMPOST, PLASTIC SHEETING, OR EQUIVALENT.
13. STABILIZE ALL AREAS THAT REACH FINAL GRADE WITHIN SEVEN DAYS.
14. SEED OR SOD ANY AREAS TO REMAIN IDLE UNTIL SEED OR SOD IS ESTABLISHED.
15. UPON COMPLETION OF THE PROJECT, ALL DISTURBED AREAS MUST BE STABILIZED AND BEST MANAGEMENT PRACTICES REMOVED, IF APPROPRIATE.

TREE REMOVAL AND PROTECTION NOTE

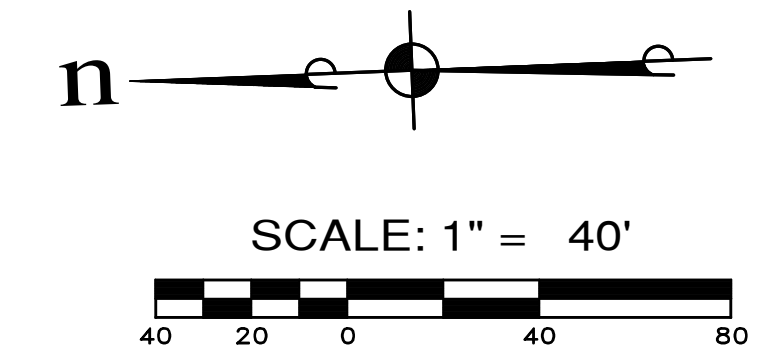
CLEARING AND GRADING FOR TREES TO BE REMOVED AND PROTECTED WILL REQUIRE THE DEVELOPER'S ARBORIST TO BE PRESENT ONSITE. FOR MORE DETAIL, SEE TREE REMOVAL AND PROTECTION MEASURES AS PRESCRIBED BY THE DEVELOPER'S ARBORIST REPORT.

SEDIMENT POND	#1
BOTTOM WIDTH	6'
BOTTOM LENGTH	102'
TOP WIDTH	48'
TOP LENGTH	144'
SIDE SLOPES	3:1 (TYP.)
OVERFLOW ELEV.	199
TOP RISER PIPE ELEV	198
BOTTOM ELEV	193
TOP BERM ELEV	200
ORIFICE DIAMETER (IN)	2.80"
RISER SIZE (IN)	12"
SURFACE AREA REQUIRED	4,625 SF
SURFACE AREA PROVIDED	4,752 SF

SEDIMENT TRAP	#1
BOTTOM WIDTH	28'
BOTTOM LENGTH	53'
TOP WIDTH	55'
TOP LENGTH	80'
SIDE SLOPES	3:1 (TYP.)
OVERFLOW ELEV.	199
BOTTOM ELEV	195.5
TOP BERM ELEV	200
SURFACE AREA REQUIRED	3,521 SF
SURFACE AREA PROVIDED	3,626 SF

LEGEND

- CLEARING LIMITS
- X X FILTER FABRIC FENCE
- INTERCEPTOR DITCH
- [Hatched Box] CONSTRUCTION ENTRANCE
- [Square Box] INLET PROTECTION
- EXISTING FEATURE TO BE REMOVED
- (X in Circle) EXISTING TREE TO BE REMOVED

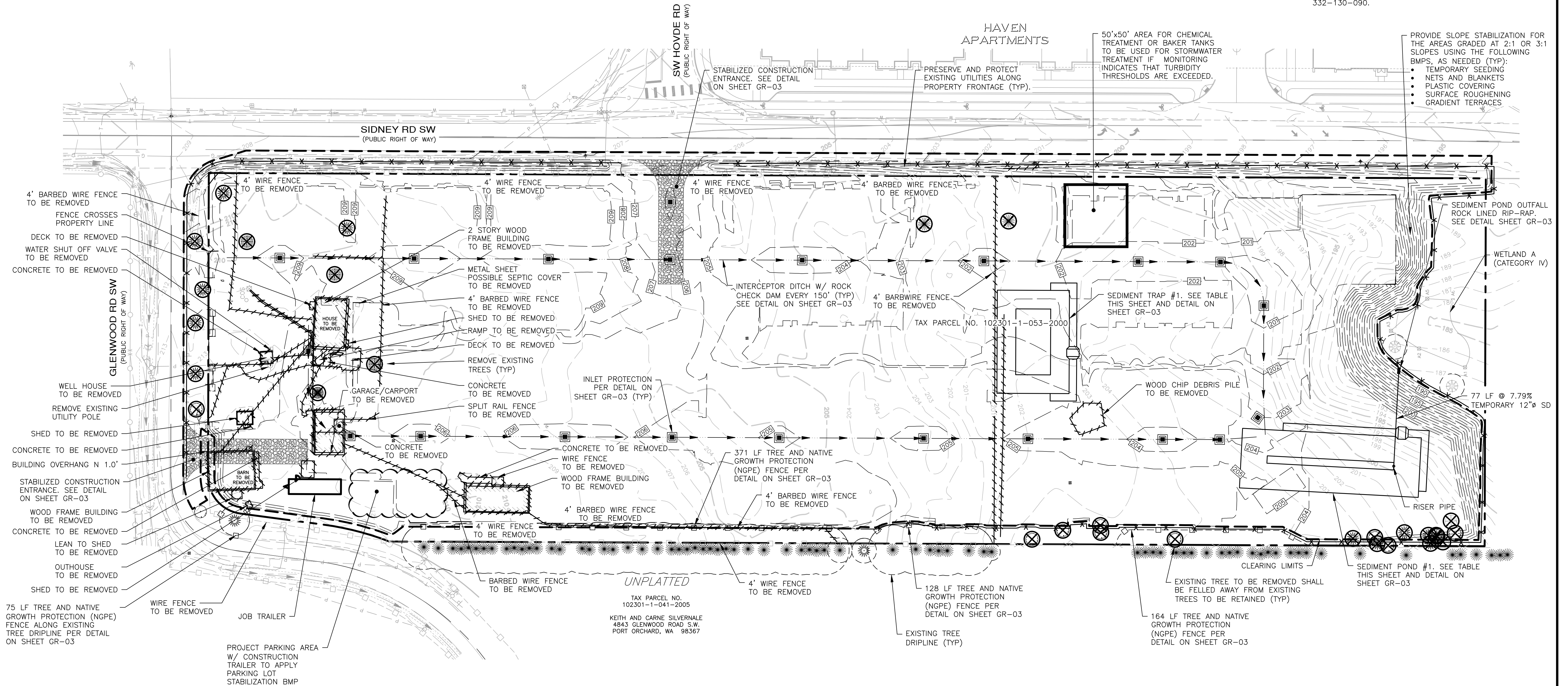


BASIS OF VERTICAL DATUM:

NATIONAL GEODETIC VERTICAL DATUM OF 1988 (NGVD29) UTILIZING THE WASHINGTON STATE REFERENCE NETWORK (WSRN)

PRACTICE/PROCEDURES

THE SURVEY WAS PERFORMED BY FIELD TRAVERSE WITH A SPECTRAL PRECISION FOCUS 30 TOTAL STATION. FINAL RESULTS MEETING OR EXCEEDING THE CURRENT TRAVERSE STANDARDS CONTAINED IN W.A.C. 332-130-090.



REVISIONS		
NO.	DESCRIPTION/DATE	BY

ESM CONSULTING ENGINEERS, LLC
 33400 8th Ave S, Suite 205
 Federal Way, WA 98003
 (206) 838-6113
 (206) 837-9905
 www.esmcivil.com
 Civil Engineering | Land Surveying | Project Management | Landscape Architecture

SIDNEY ROAD TOWNHOMES L.L.C.
HAVEN TOWNHOMES
 T.E.S.C. & DEMO PLAN
 CITY OF PORT ORCHARD WASHINGTON

JOB NO.: 2155-002-020
 DWG. NAME: DM-01
 DESIGNED BY: LGB
 DRAWN BY: GFF
 CHECKED BY:
 DATE: 12/03/2021
 DATE OF PRINT:
DM-01
 3 OF 38 SHEETS

File: \\mms\ENGR\ESM-JOB\2155\020\020\plans\DM-01.dwg
 Printed: 12/03/2021 7:48 AM
 Printed By: Greg Fendley

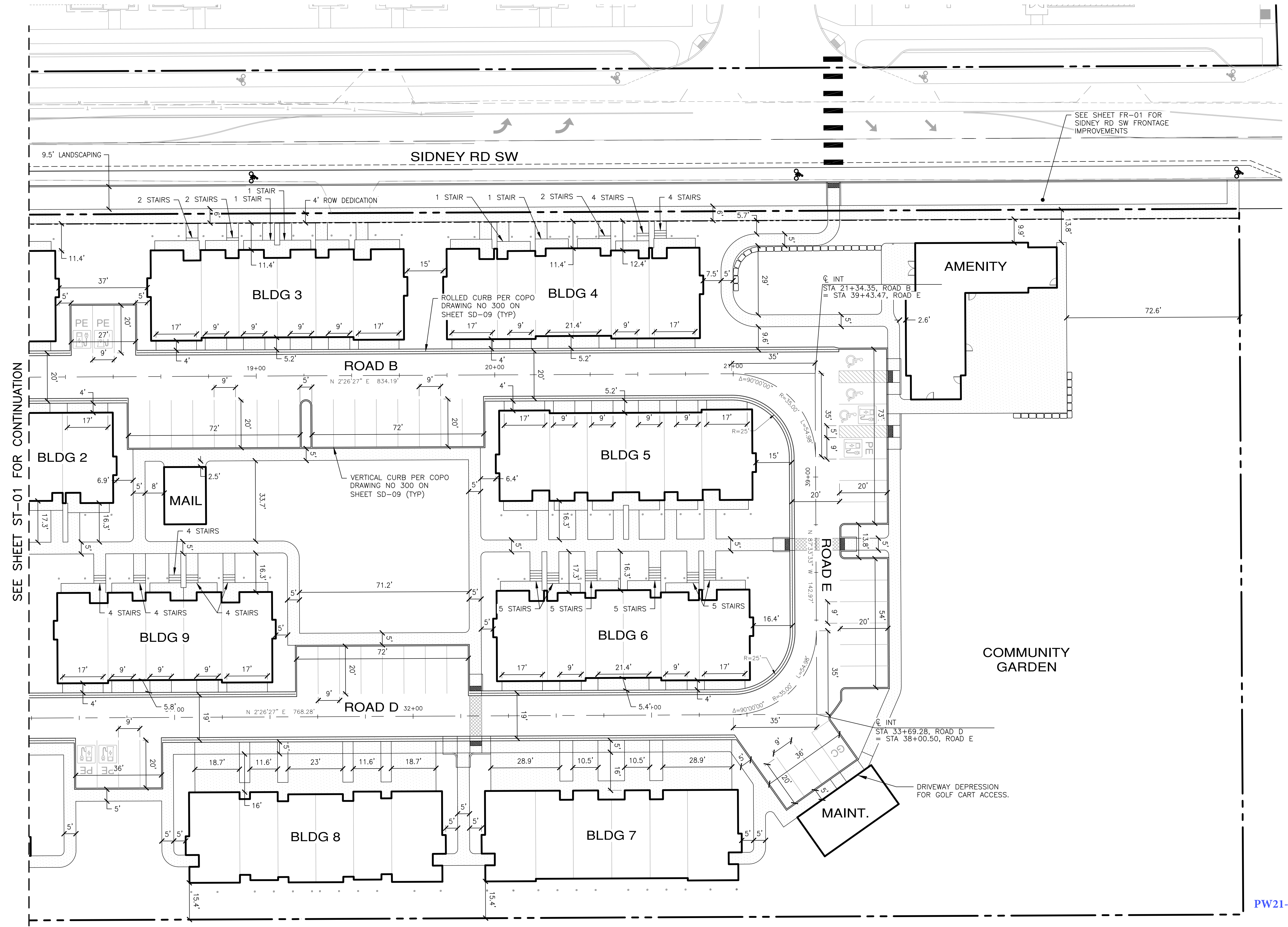
A PORTION OF NW 1/4 OF SECTION 11, T. 23 N., R. 1 E., W.M.



- LEGEND**
- CONCRETE SIDEWALK / PATIO
PER DETAIL B ON SHEET SD-09
 - CROSSWALK CONCRETE STAMP
 - ADA ACCESSIBLE STALL STRIPING

- NOTES**
1. PARKING LOT AND ROADWAY DIMENSIONS ARE TO FLOW LINE.
 2. THE TYPICAL PARKING STALL DIMENSIONS ON THIS PLAN ARE 9'x18' UNLESS NOTED OTHERWISE.

PARKING
REGULAR STALLS = 78



REVISIONS		
NO.	DESCRIPTION/DATE	BY

PAUL G. BARTENEGER
LICENSED PROFESSIONAL ENGINEER
12/09/2021

ESM CONSULTING ENGINEERS LLC
33400 8th Ave S, Suite 205
Federal Way, WA 98003

www.esmcivil.com

Civil Engineering | Land Surveying | Project Management | Landscape Architecture

SIDNEY ROAD TOWNHOMES L.L.C.

HAVEN TOWNHOMES

CITY OF PORT ORCHARD HORIZONTAL & OVERALL SITE PLAN

WASHINGTON

JOB NO.: 2155-002-020
DWG. NAME: ST-02
DESIGNED BY: LGB
DRAWN BY: GFF
CHECKED BY:
DATE: 12/10/2021
DATE OF PRINT:

ST-02

5 OF 38 SHEETS

File: \\mm\8\ENGR\ESM-JOB\2155\020\020\plans\ST-02.dwg
Plotted: 12/19/2021 1:08 PM
Plotted By: Greg Frazier

PW21-079 / PW21-080

EXISTING	PROPOSED
ROADWAY CENTERLINE	---
PROPERTY / LOT LINE	---
RIGHT-OF-WAY	---
BOUNDARY LINE	---
EASEMENT LINE	---
BUILDING SETBACK LINE	---
VERTICAL CURB AND GUTTER	---
AERIAL CONTOUR	---820---
CONTOUR	---818---
SPOT ELEVATION	+821.54
STREAM WITH BUFFER	OHW
TOP OF SLOPE	---
PROPOSED SIDEWALK	---
CATCH BASIN TYPE 1 W/GRATE	■
CATCH BASIN TYPE 1 W/SOLID LID	■
CATCH BASIN TYPE 2 W/GRATE	●
CATCH BASIN TYPE 2 W/SOLID LID	●
STORM DRAIN CLEANOUT	○
YARD DRAIN	○
DOWNSPOUT	□
ROOF DRAIN DISPERSION	---
STORM DRAIN PIPE	---
FOOTING DRAIN	---
UNREINFORCED ROCKERY	---
SANITARY SEWER MANHOLE	●
SANITARY SEWER CLEANOUT	○
SANITARY SEWER CAP	[
SANITARY SEWER PIPE	-S-
SANITARY SEWER FORCE MAIN	-FM-
6" DIA SINGLE SANITARY SIDE SEWER 0+33 (STATION ALONG MAINLINE) 21 L.F. (STUB LENGTH FROM MAIN TO CLEANOUT) 866.0 (I.E. AT CLEANOUT)	0+33 21 L.F. 866.0

T.E.S.C.

	CUT OFF SWALE
	BASIN BOUNDARY
	CLEARING LIMITS
	EXISTING CLEARING LIMITS
	N.G.P.E. FENCE
	FILTER FENCE
	ORANGE FILTER FABRIC FENCE
	STORMWATER CONVEYANCE CHANNEL (SCC)
	INTERCEPTOR DIKE/SWALE
	EXISTING CONTOUR
	GRADE BREAK LINE
	PROPOSED CONTOUR
	WETLAND BOUNDARY AND BUFFER
	PROPOSED STORM DRAINAGE
	CONSTRUCTION ENTRANCE
	ROCK CHECK DAM
	PROPOSED CB FILTER FABRIC PROTECTION
	EX. CB FILTER FABRIC PROTECTION
	STRAW BALE
	GRAVEL CONE
	RIP RAP PAD

EXISTING	PROPOSED
FIRE HYDRANT (3 PORT)	●
FIRE HYDRANT (2 PORT)	●
GATE VALVE	●
BUTTERFLY VALVE	●
CONCRETE BLOCKING	▽
WATER CAP	□
DOMESTIC / IRRIGATION METER	■
BLOWOFF ASSEMBLY	+
AIR-VAC ASSEMBLY	+
REDUCER	▼
DETECTOR CHECK VALVE	Z
CROSS	+
TEE	+
90° BEND	+
DCVA	⊗
FIRE DEPARTMENT CONNECTION	♂
WATER PIPE	-w-
GUARD POST (BOLLARD)	•
COUPLING	+
TOWER	⊗
TRANSFORMER PAD	⊗
ANCHOR	←
POWER POLE	○
STREET LIGHT	☆
POWER VAULT	P
TELE. VAULT	T
FENCE	-x-x-
SIGN	+
MAILBOX	+
BARRICADE	-x-x-
TELE. MANHOLE	⊗
GAS VALVE	⊗
GAS METER	⊗
JOINT UTILITY TRENCH	---

TRAFFIC

	STRAIGHT/RIGHT TURN ARROW
	ONLY
	HANDICAP PARKING
	LEFT TURN ARROW
	RIGHT TURN ARROW
	BIKE LANE
	STOP BAR
	TYPE III BARRICADE

SURVEY

■	SET HUB AND TACK
⊗	FOUND HUB AND TACK
●	SET REBAR AND CAP
○	FOUND REBAR AND CAP
+	SET PK-DRILL HOLE
+	FOUND PK-DRILL HOLE
+	CALC CLOSING CORNER
+	FOUND CLOSING CORNER
⊗	PROPOSED MONUMENT IN CASE
⊗	FOUND MONUMENT IN CASE
⊗	PROPOSED MONUMENT IN CASE
⊗	FOUND SURFACE MONUMENT
⊗	PROPOSED SURFACE MONUMENT
⊗	CALC SECTION CORNER
⊗	FOUND SECTION CORNER
⊗	FOUND QUARTER CORNER
⊗	CALC QUARTER CORNER
⊗	ALDER
⊗	CEDAR
⊗	COTTONWOOD
⊗	POPLAR
⊗	APPLE
⊗	FIR
⊗	WILLOW
⊗	SPRUCE
⊗	MADRONA
⊗	OAK
⊗	HEMLOCK
⊗	MAPLE
⊗	PINE

ABBREVIATIONS

AVE	AVENUE	L	LENGTH
AC	ASBESTOS CEMENT PIPE	LB	POUNDS
ADJ	ADJACENT	LF	LINEAL FEET
ALUM	ALUMINUM	MAX	MAXIMUM
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE	MFR	MANUFACTURER
AP	ANGLE POINT	MH	MANHOLE
ASPH	ASPHALT	MIN	MINIMUM
ASTM	AMERICAN SOCIETY OF TESTING AND MATERIALS	MJ	MECHANICAL JOINT
A.S.R.	AUTOMATIC SPRINKLER ROOM	MISC	MISCELLANEOUS
ASSY	ASSEMBLY	N	NORTH
BF	BLIND FLANGE	NO	NUMBER
BLDG	BUILDING	NTS	NOT TO SCALE
BLK	BLOCK	OC	ON CENTER
BO	BLOW OFF	OD	OUTSIDE DIAMETER
BOW/BW	BOTTOM OF WALL	OHW	ORDINARY HIGH WATER
BVC	BEGIN VERTICAL CURVE	PI	POINT OF INTERSECTION
BW	BACK OF WALK	PP	POWER POLE
CTR	CENTER	PVI	POINT OF INTERSECTION
CB	CATCH BASIN	PE	POLYETHYLENE
CI	CAST IRON	PERF	POINT OF VERTICAL INTERSECTION
CL/℄	CENTERLINE	PVC	POLYVINYL CHLORIDE
CLR	CLEAR	PVMT	PAVEMENT
CMP	CORRUGATED METAL PIPE	PVT	POINT OF VERTICAL TANGENCY
CO	CLEANOUT	PC	POINT OF CURVATURE
CONC	CONCRETE	PT	POINT OF TANGENCY
C	CONDUIT	QTY	QUANTITY
CONN	CONNECTION	RET	RETAINING
CONTR	CONTRACTOR	RR	RAILROAD
CONT	CONTINUED	R	RADIUS
CY	CUBIC YARDS	RED	REDUCER
CL	CLASS	REINF	REINFORCED
CF	CUBIC FEET	REQ	REQUIRED
CFS	CUBIC FEET PER SECOND	R/W	RIGHT OF WAY
DC	DEGREE OF CURVATURE	S	SOUTH
DI	DUCTILE IRON	SCH	SCHEDULE
DIA/∅	DIAMETER	SD	STORM DRAIN
DOT	DEPARTMENT OF TRANSPORTATION	SF	SQUARE FEET
DIM	DIMENSION	SHT	SHEET
DWGS	DRAWINGS	SPECS	SPECIFICATIONS
D	DRAIN	SQ	SQUARE
EOP	EDGE OF PAVEMENT	SS	SANITARY SEWER
E	EAST	STA	STATION
ELEV	ELEVATION	STD	STANDARD
EL	ELEVATION	TC	TOP OF CURB
ELEC	ELECTRICAL	T.O.S.	TOP OF SLAB
EVC	END VERTICAL CURVE	TEL	TELEPHONE
EXIST	EXISTING	THRD	THREADED
FDC	FIRE DEPARTMENT CONNECTION	THRU	THROUGH
FG	FINISH GRADE	TOW/TW	TOP OF WALL
FIG	FIGURE	TYP	TYPICAL
FIN	FINISHED	VERT	VERTICAL
FL/℄	FLOWLINE	W	WEST
FL	FLANGE	W/	WITH
FT	FEET	W/O	WITHOUT
FM	FORCE MAIN	WSS	WATER SAMPLING STATION
GA	GAUGE		
GALV	GALVANIZED		
GV	GATE VALVE		
GI	GALVANIZED IRON		
ID	INSIDE DIAMETER		
IE	INVERT ELEVATION		
IN	INCHES		

File: \\name8\ENGR\ESM-JOBES\2155\020\020\p01s\LG-01.dwg
 Plotted By: Brandon Avolio
 Printed: 12/07/2021 1:34 PM

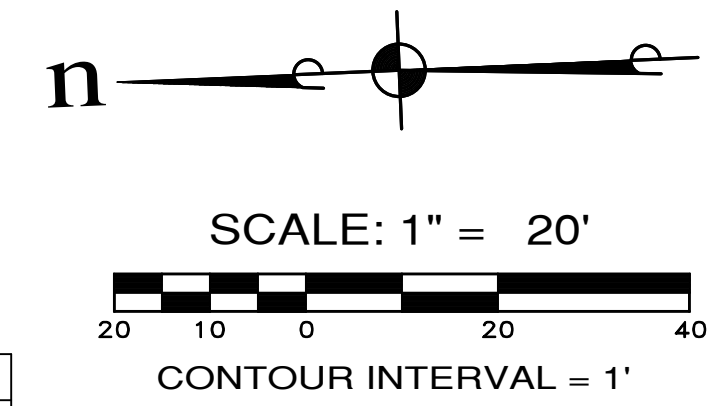
REVISIONS	NO.	DESCRIPTION/DATE	BY

ESM CONSULTING ENGINEERS L.L.C.
 FEDERAL REGISTERED ENGINEER
 33400 Rte. 5, Suite 205
 Federal Way, WA 98003
 www.esmcivil.com
 Land Surveying | Project Management | Landscape Architecture

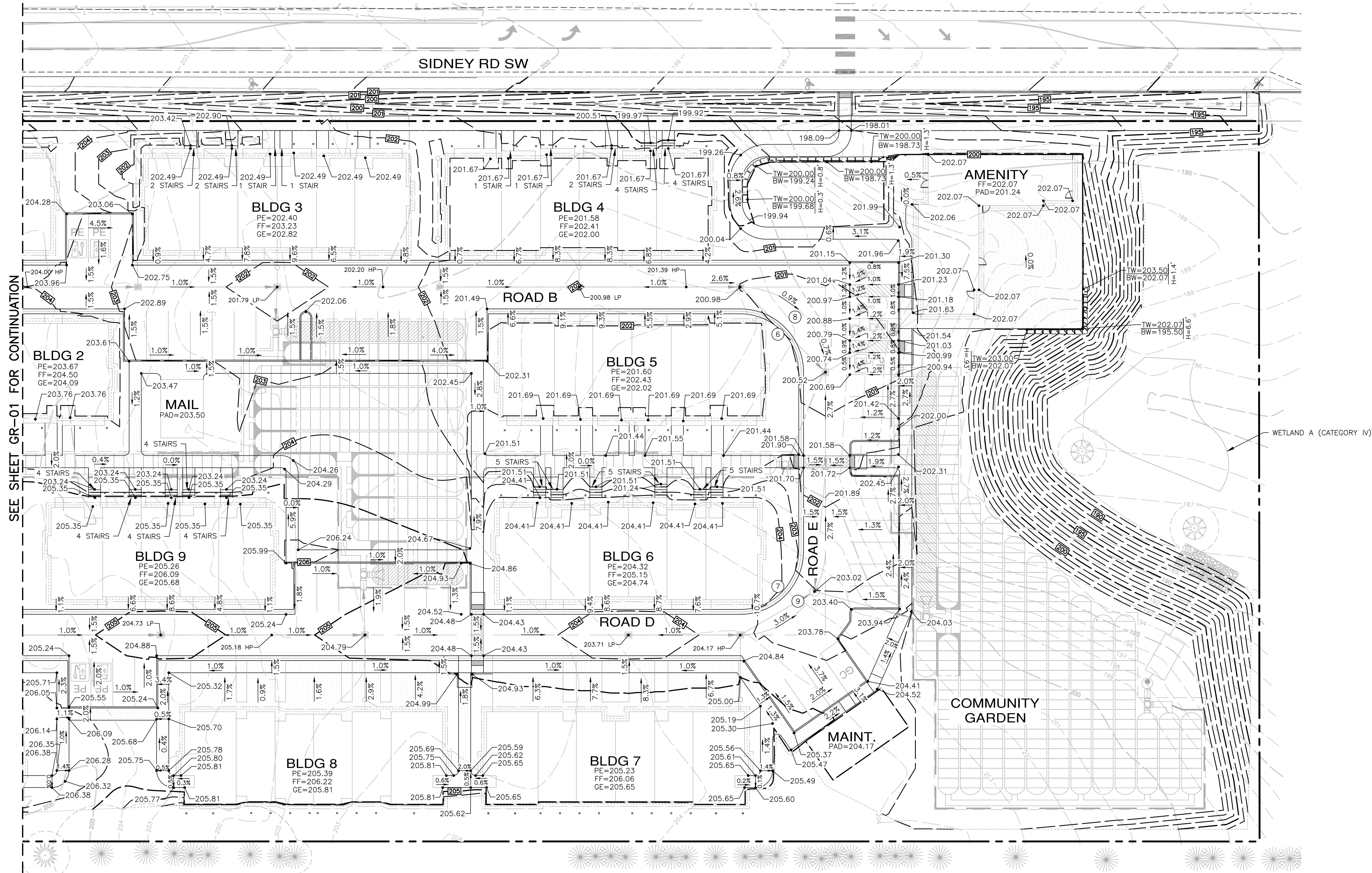
SIDNEY ROAD TOWNHOMES L.L.C.
HAVEN TOWNHOMES
 LEGEND & ABBREVIATIONS
 CITY OF PORT ORCHARD WASHINGTON

JOB NO.: 2155-002-020
 DWG. NAME: LG-01
 DESIGNED BY: LGB
 DRAWN BY: GFF
 CHECKED BY: GFF
 DATE: 12/03/2021
 DATE OF PRINT:

PW21-079 / PW21-080



⑥ CURB F TABLE			⑦ CURB F TABLE			⑧ C CURVE TABLE			⑨ C CURVE TABLE		
STATION	OFFSET	ELEV.	STATION	OFFSET	ELEV.	STATION	OFFSET	ELEV.	STATION	OFFSET	ELEV.
20+99.35	10.00' RT	201.13	33+34.28	9.50' LT	204.32	20+99.35	0.00'	200.98	33+34.28	0.00'	204.17
1/4 Δ	---	---	1/4 Δ	---	---	1/4 Δ	---	---	1/4 Δ	---	---
1/2 Δ	---	---	1/2 Δ	---	---	1/2 Δ	---	---	1/2 Δ	---	---
3/4 Δ	---	---	3/4 Δ	---	---	3/4 Δ	---	---	3/4 Δ	---	---
ECR	---	---	ECR	---	---	ECR	---	---	ECR	---	---
Δ=90°00'00" R=25.00' L=39.27'			Δ=90°00'00" R=25.00' L=39.27'			Δ=90°00'00" R=35.00' L=54.98'			Δ=90°00'00" R=35.00' L=54.98'		



SEE SHEET GR-01 FOR CONTINUATION

File: \\mm\ENR\ESM-JOB\2155\020\020\p\gr-02.dwg
 Plotted: 12/10/2021 1:10 PM
 Plotted By: Greg Fedore

REVISIONS		
NO.	DESCRIPTION/DATE	BY

ESM CONSULTING ENGINEERS, L.L.C.
 33400 8th Ave S, Suite 205
 Federal Way, WA 98003
 (206) 835-6113
 (206) 835-9905
 www.esmcivil.com
 Civil Engineering | Land Surveying | Project Management | Landscape Architecture
 Public Works | Land Planning | Landscape Architecture

SIDNEY ROAD TOWNHOMES L.L.C.
HAVEN TOWNHOMES
 GRADING PLAN
 CITY OF PORT ORCHARD
 WASHINGTON

JOB NO.: 2155-002-020
 DWG. NAME: GR-02
 DESIGNED BY: LGB
 DRAWN BY: GFF
 CHECKED BY: GFF
 DATE: 12/10/2021
 DATE OF PRINT: 12/10/2021

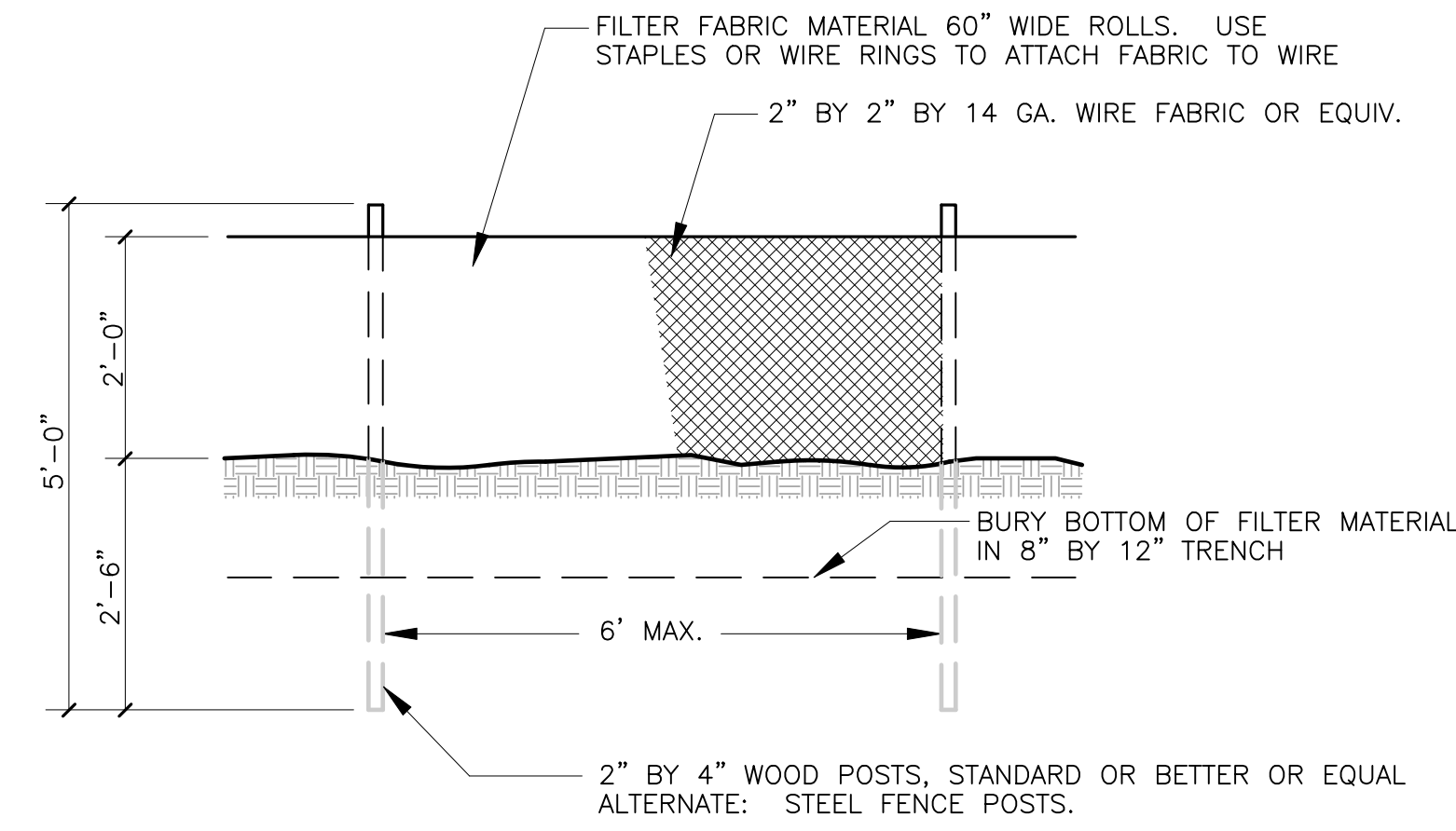
GR-02
 9 OF 38 SHEETS

EROSION AND SEDIMENT CONTROL NOTES:

- APPROVAL OF THESE TEMPORARY EROSION AND SEDIMENT CONTROL (TESC) PLANS DOES NOT CONSTITUTE AN APPROVAL OF PERMANENT ROAD OR DRAINAGE DESIGN (E.G., SIZE AND LOCATION OF ROADS, PIPES, RESTRICTORS, CHANNELS, RETENTION FACILITIES, UTILITIES, ETC.).
- THE IMPLEMENTATION OF THESE TESC PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE TESC FACILITIES IS THE RESPONSIBILITY OF THE APPLICANT/CESCL UNTIL ALL CONSTRUCTION IS APPROVED.
- THE BOUNDARIES OF THE CLEARING LIMITS SHOWN ON THESE PLANS SHALL BE CLEARLY FLAGGED BY A CONTINUOUS LENGTH OF SURVEY TAPE (OR FENCING, IF REQUIRED) PRIOR TO CONSTRUCTION. DURING THE CONSTRUCTION PERIOD, NO DISTURBANCE BEYOND THE CLEARING LIMITS SHALL BE PERMITTED. THE CLEARING LIMITS SHALL BE MAINTAINED BY THE APPLICANT/CESCL FOR THE DURATION OF CONSTRUCTION.
- STABILIZED CONSTRUCTION ENTRANCES, IN ACCORDANCE WITH STANDARD DETAILS SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES, SUCH AS CONSTRUCTED WHEEL WASH SYSTEMS OR WASH PAD, MAY BE REQUIRED TO ENSURE THAT ALL PAVED AREAS ARE KEPT CLEAN AND TRACK-OUT TO STREET RIGHT-OF-WAY DOES NOT OCCUR FOR THE DURATION OF THE PROJECT.
- THE TESC FACILITIES SHOWN ON THESE PLANS MUST BE CONSTRUCTED PRIOR TO ALL CLEARING AND GRADING TO ENSURE THAT THE TRANSPORT OF SEDIMENT TO SURFACE WATERS, DRAINAGE SYSTEMS, AND ADJACENT PROPERTIES IS REDUCED TO REQUIRED LEVELS.
- THE TESC FACILITIES SHOWN ON THESE PLANS ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE TESC FACILITIES SHALL BE UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS AND MODIFIED TO ACCOUNT FOR CHANGING SITE CONDITIONS (E.G., ADDITIONAL COVER MEASURES, ADDITIONAL SUMP PUMPS, RELOCATION OF DITCHES AND SILT FENCES, ADDITIONAL PERIMETER PROTECTION, ETC.) AS DIRECTED BY THE CITY ENGINEER.
- THE TESC FACILITIES SHALL BE INSPECTED DAILY BY THE APPLICANT/CESCL AND MAINTAINED TO ENSURE CONTINUED PROPER FUNCTIONING. WRITTEN RECORDS SHALL BE KEPT OF WEEKLY REVIEWS OF THE TESC FACILITIES AND OF SAMPLES TAKEN DURING THE WET SEASON (OCTOBER 1 TO APRIL 30) AND OF MONTHLY REVIEWS DURING THE DRY SEASON (MAY 1 TO SEPTEMBER 30).
- ANY AREAS OF EXPOSED SOILS, INCLUDING ROADWAY EMBANKMENTS, THAT WILL NOT BE DISTURBED FOR TWO DAYS DURING THE WET SEASON OR SEVEN DAYS DURING THE DRY SEASON SHALL BE IMMEDIATELY STABILIZED WITH THE APPROVED TESC METHODS (E.G., SEEDING, MULCHING, PLASTIC COVERING, ETC.).
- ANY AREA NEEDING TESC MEASURES NOT REQUIRING IMMEDIATE ATTENTION SHALL BE ADDRESSED WITHIN SEVEN (7) DAYS.
- THE TESC FACILITIES ON INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE A MONTH OR WITHIN TWENTY-FOUR (24) HOURS FOLLOWING A STORM EVENT.
- AT NO TIME SHALL MORE THAN ONE (1) FOOT OF SEDIMENT BE ALLOWED TO ACCUMULATE WITHIN A CATCH BASIN. ALL CATCH BASINS AND CONVEYANCE LINES SHALL BE CLEANED PRIOR TO FINAL INSPECTION. THE CLEANING OPERATION SHALL NOT FLUSH SEDIMENT-LADEN WATER INTO A DOWNSTREAM SYSTEM.
- ANY PERMANENT FLOW CONTROL FACILITY USED AS A TEMPORARY SETTLING BASIN SHALL BE MODIFIED WITH THE NECESSARY EROSION CONTROL MEASURES AND SHALL PROVIDE ADEQUATE STORAGE CAPACITY. IF THE FACILITY IS TO FUNCTION ULTIMATELY AS AN INFILTRATION SYSTEM, THE TEMPORARY FACILITY MUST BE GRADED SO THAT THE BOTTOM AND SIDES ARE AT LEAST THREE (3) FEET ABOVE THE FINAL GRADE OF THE PERMANENT FACILITY.
- WHERE STRAW MULCH FOR TEMPORARY EROSION CONTROL IS REQUIRED, IT SHALL BE APPLIED AT A MINIMUM THICKNESS OF 2 TO 3 INCHES.
- PRIOR TO THE BEGINNING OF THE WET SEASON (OCTOBER 1), ALL DISTURBED AREAS SHALL BE REVIEWED TO IDENTIFY WHICH AREAS CAN BE SEEDED IN PREPARATION FOR THE WINTER RAINS. DISTURBED AREAS SHALL BE SEEDED WITHIN ONE WEEK OF THE BEGINNING OF THE WET SEASON. A SKETCH MAP OF THOSE AREAS TO BE SEEDED AND THOSE AREAS TO REMAIN UNCOVERED SHALL BE SUBMITTED TO THE CITY OF PORT ORCHARD CITY ENGINEER. THE INSPECTOR CAN REQUIRE SEEDING OF ADDITIONAL AREAS IN ORDER TO PROTECT SURFACE WATERS, ADJACENT PROPERTIES, OR DRAINAGE FACILITIES.

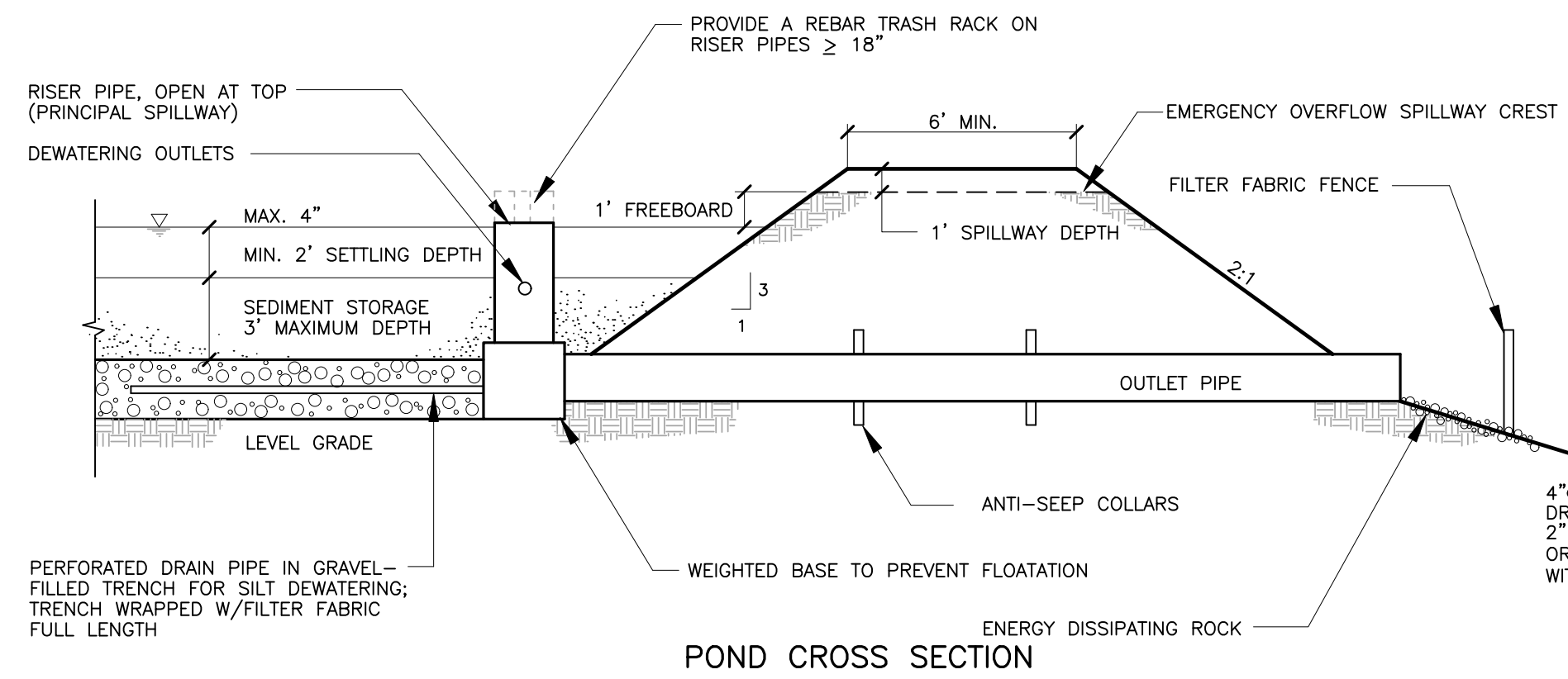
WET WEATHER SPECIAL PROVISIONS

- ALLOWED TIME THAT A DISTURBED AREA MAY REMAIN UNWORKED WITHOUT COVER MEASURES IS REDUCED TO TWO CONSECUTIVE WORKING DAYS, RATHER THAN SEVEN.
- STOCKPILES AND STEEP CUT AND FILL SLOPES ARE TO BE PROTECTED IF UNWORKED FOR MORE THAN 12 HOURS.
- COVER MATERIALS SUFFICIENT TO COVER ALL DISTURBED AREAS SHALL BE STOCKPILED ON SITE.
- ALL AREAS THAT ARE TO BE UNWORKED DURING THE WET SEASON SHALL BE SEEDED WITHIN ONE WEEK OF THE BEGINNING OF THE WET SEASON.
- MULCH IS REQUIRED TO PROTECT ALL SEEDED AREAS.
- FIFTY LINEAR FEET OF SILT FENCE (AND THE NECESSARY STAKES) PER ACRE OF DISTURBANCE MUST BE STOCKPILED ON SITE.
- PARKING LOT STABILIZATION SHALL BE PROVIDED.
- CONSTRUCTION PHASING AND MORE CONSERVATIVE BMPs (INCLUDING CHEMICAL TREATMENT) MUST BE EVALUATED AND APPLIED IF THE PROPOSED BMPs ARE FAILING.

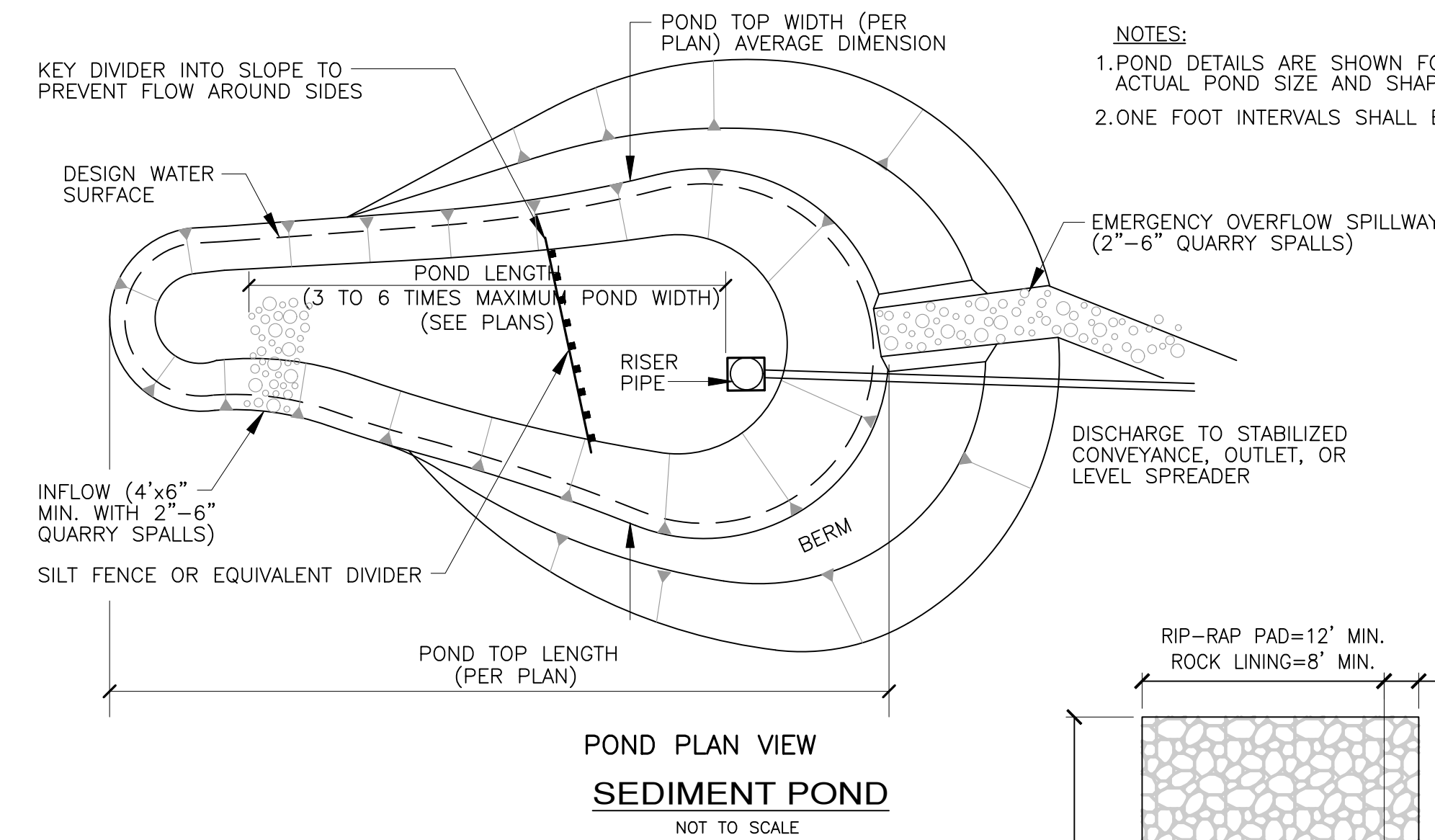


TYPICAL FILTER FENCE DETAIL

NOT TO SCALE

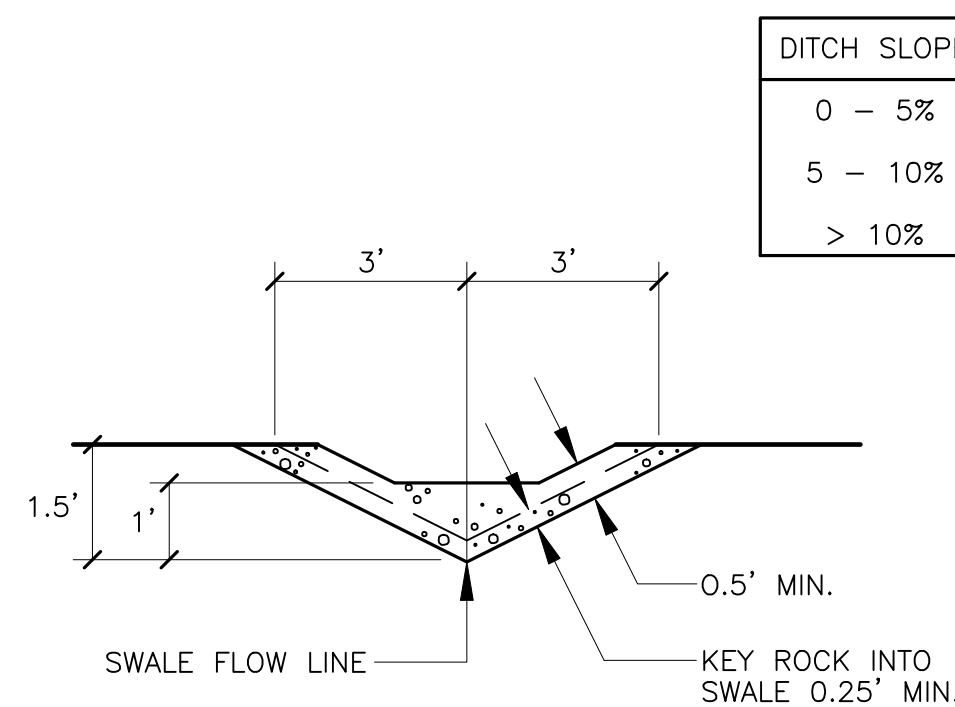


POND CROSS SECTION



**POND PLAN VIEW
SEDIMENT POND**

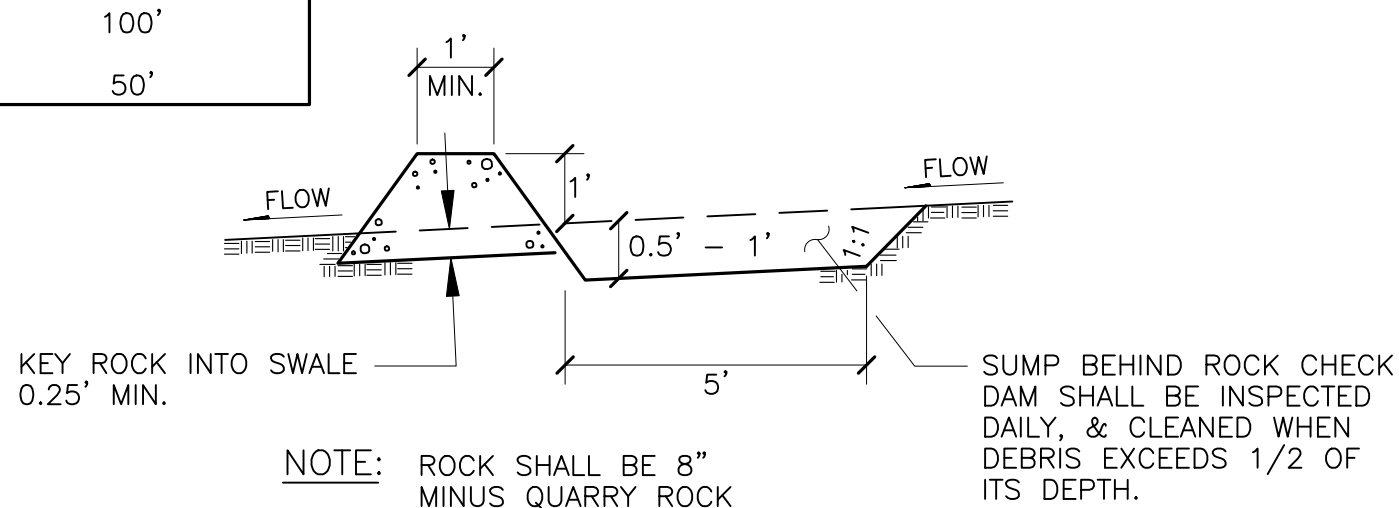
NOT TO SCALE



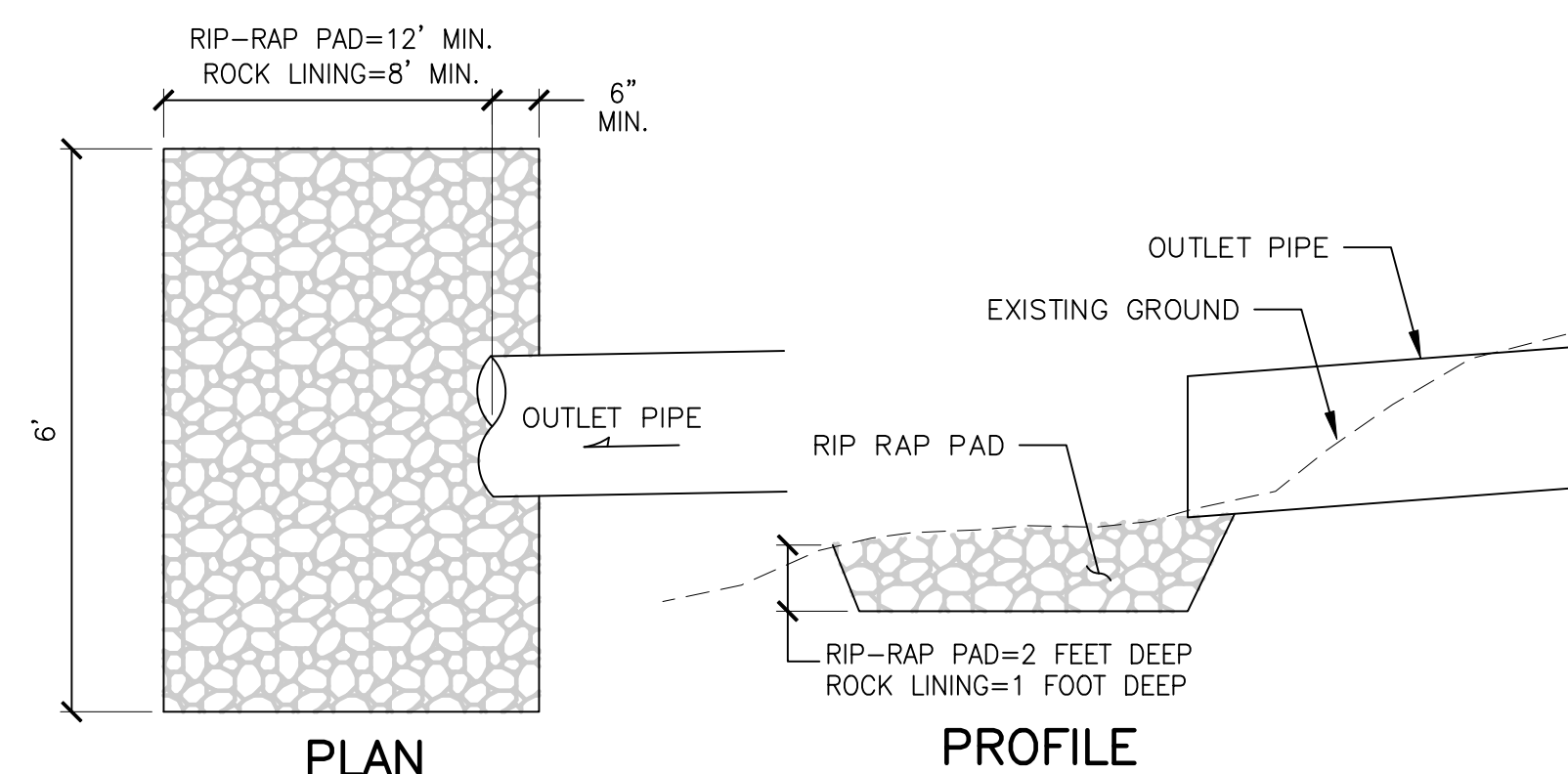
INTERCEPTOR DITCH X-SECTION & ROCK CHECK DAM

INTERCEPTOR DITCH w/ ROCK CHECK DAM

NOT TO SCALE



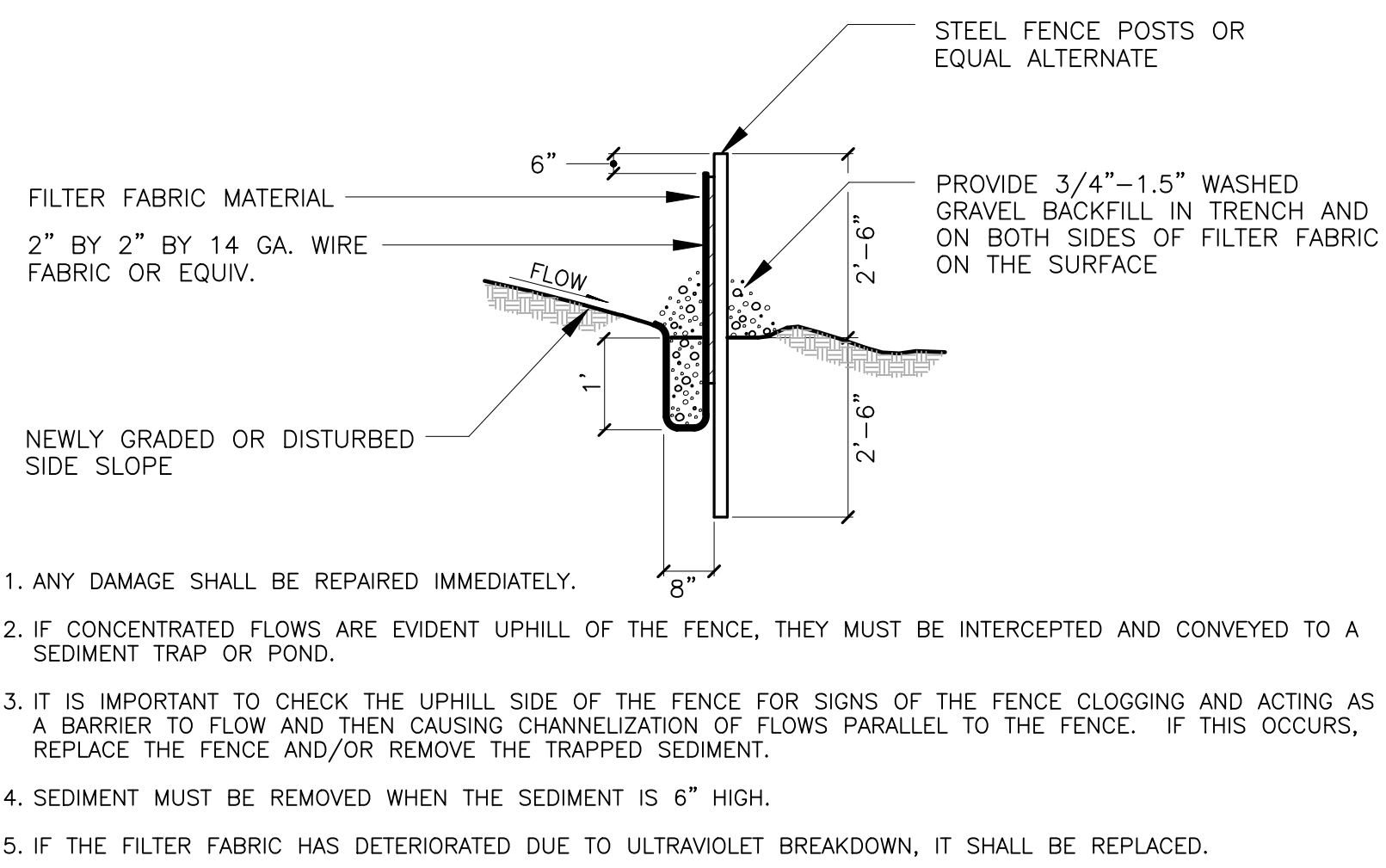
ROCK CHECK DAM X-SECTION



- ROCK LINING SHALL BE QUARRY SPALLS WITH GRADATION AS FOLLOW:
 PASSING 8-INCH SQUARE SIEVE: 100%
 PASSING 3-INCH SQUARE SIEVE: 40 TO 60% MAXIMUM
 PASSING 3/4-INCH SQUARE SIEVE: 0 TO 10% MAXIMUM
- RIP-RAP SHALL BE REASONABLY WELL GRADED WITH GRADATION AS FOLLOWS:
 MAXIMUM STONE SIZE: 24 INCHES (NOMINAL DIAMETER)
 MEDIAN STONE SIZE: 16 INCHES
 MINIMUM STONE SIZE: 4 INCHES

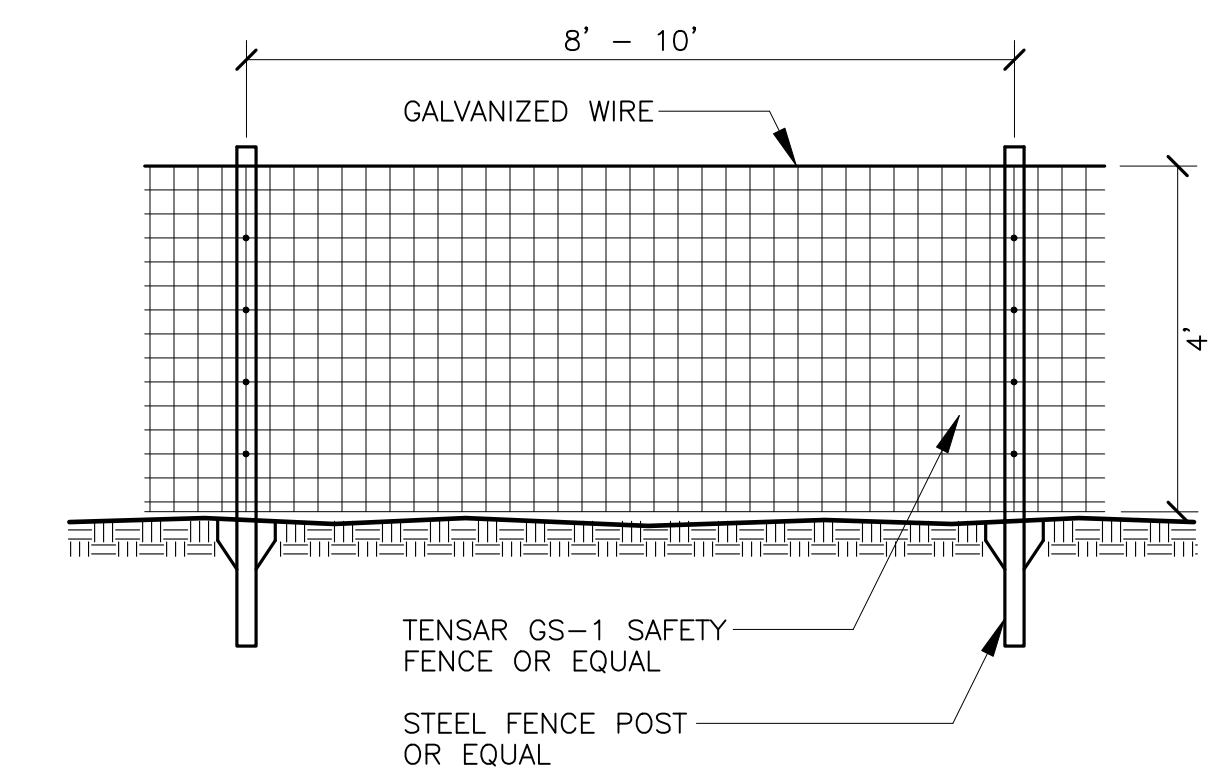
OUTFALL ROCK LINED RIP-RAP PAD DETAIL

NOT TO SCALE



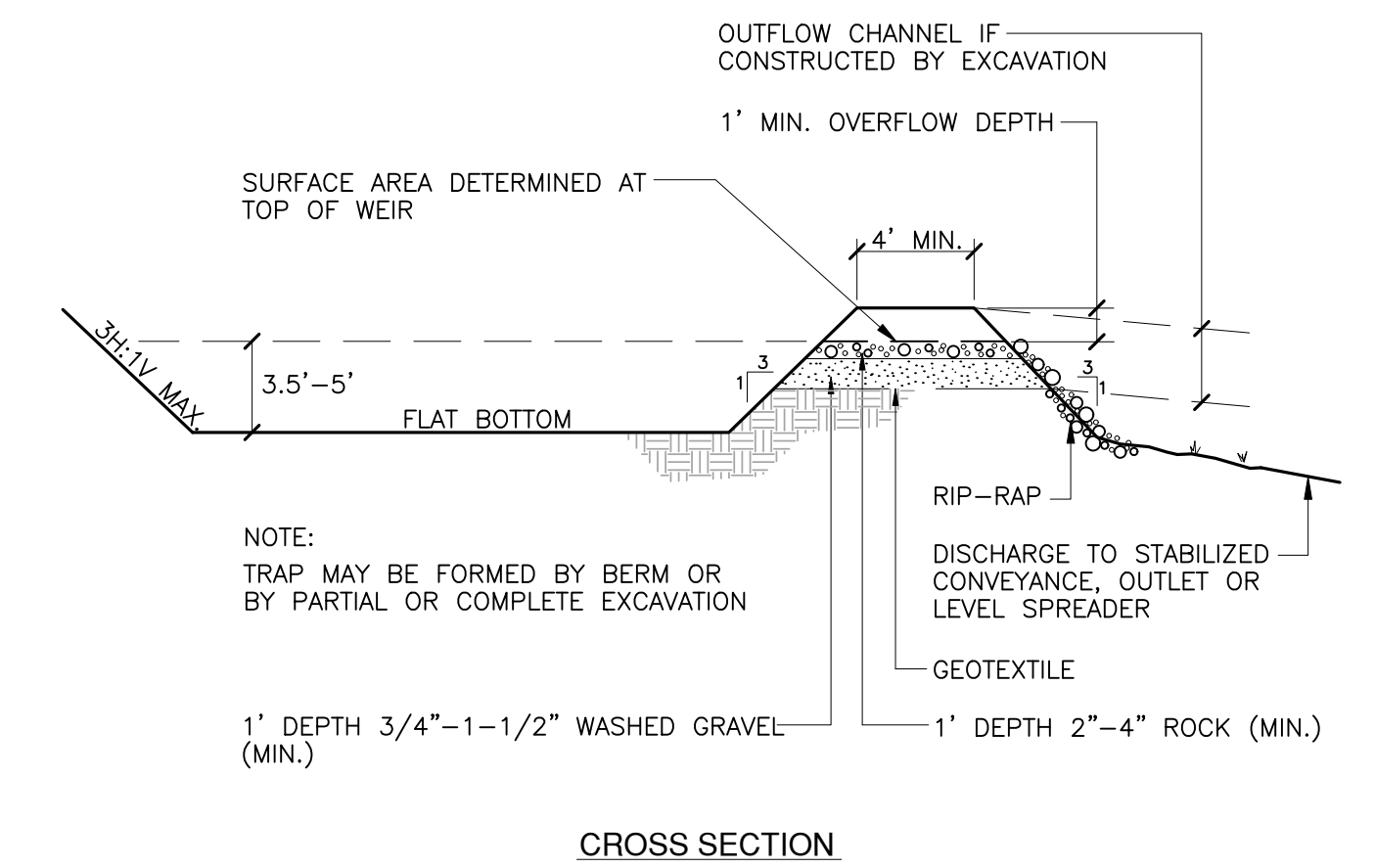
ROCK-LINED CONSTRUCTION ENTRANCE DETAIL

NOT TO SCALE

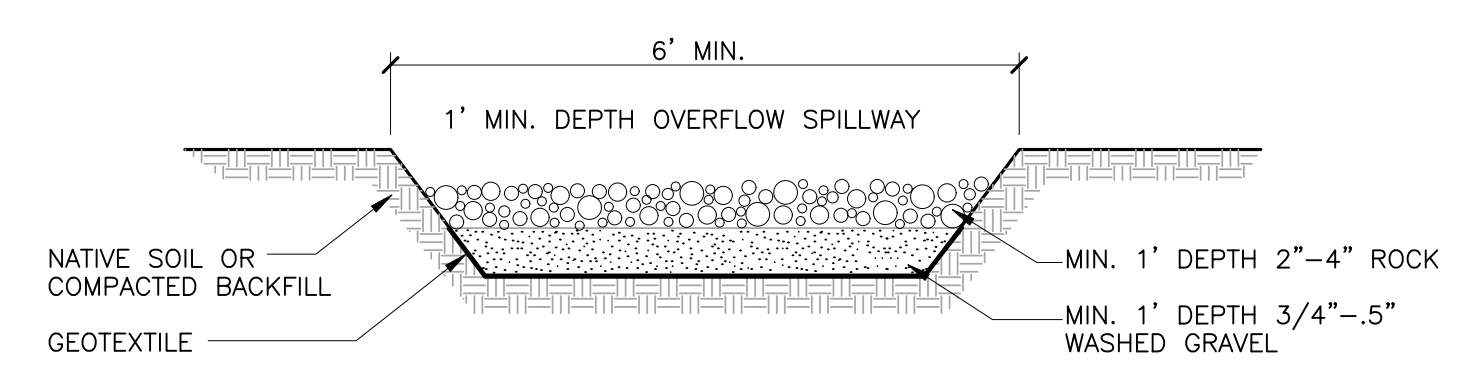


TYPICAL N.G.P.E. FENCE DETAIL

NOT TO SCALE



CROSS SECTION



TRAP OUTLET

- MAINTENANCE STANDARDS**
- SEDIMENT SHALL BE REMOVED FROM THE TRAP WHEN IT REACHES 1 FOOT IN DEPTH.
 - ANY DAMAGE TO THE TRAP EMBANKMENTS OR SLOPES SHALL BE REPAIRED.

SEDIMENT TRAP

NOT TO SCALE

REVISIONS		
NO.	DESCRIPTION/DATE	BY

ESM CONSULTING ENGINEERS L.L.C.
 33400 8th Ave S, Suite 205
 Federal Way, WA 98003
 (206) 836-6113
 (206) 837-9900
 www.esmcivil.com
 Civil Engineering | Land Surveying | Project Management | Landscape Architecture

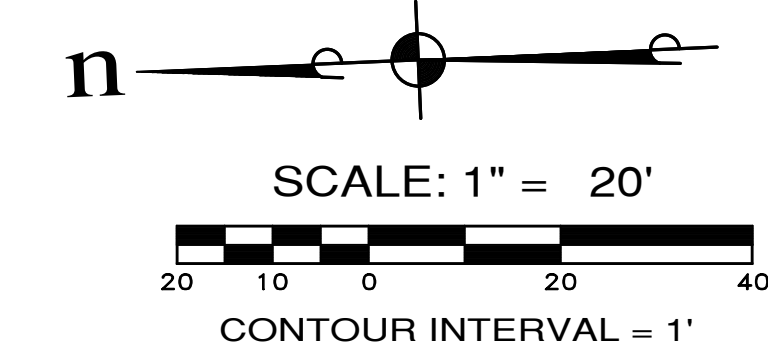
WASHINGTON

SIDNEY ROAD TOWNHOMES L.L.C.
HAVEN TOWNHOMES
 CITY OF PORT ORCHARD T.E.S.C. & GRADING DETAILS & NOTES

JOB NO.:	2155-002-020
DWG. NAME:	GR-03
DESIGNED BY:	LGB
DRAWN BY:	GFF
CHECKED BY:	GFF
DATE:	12/03/2021
DATE OF PRINT:	

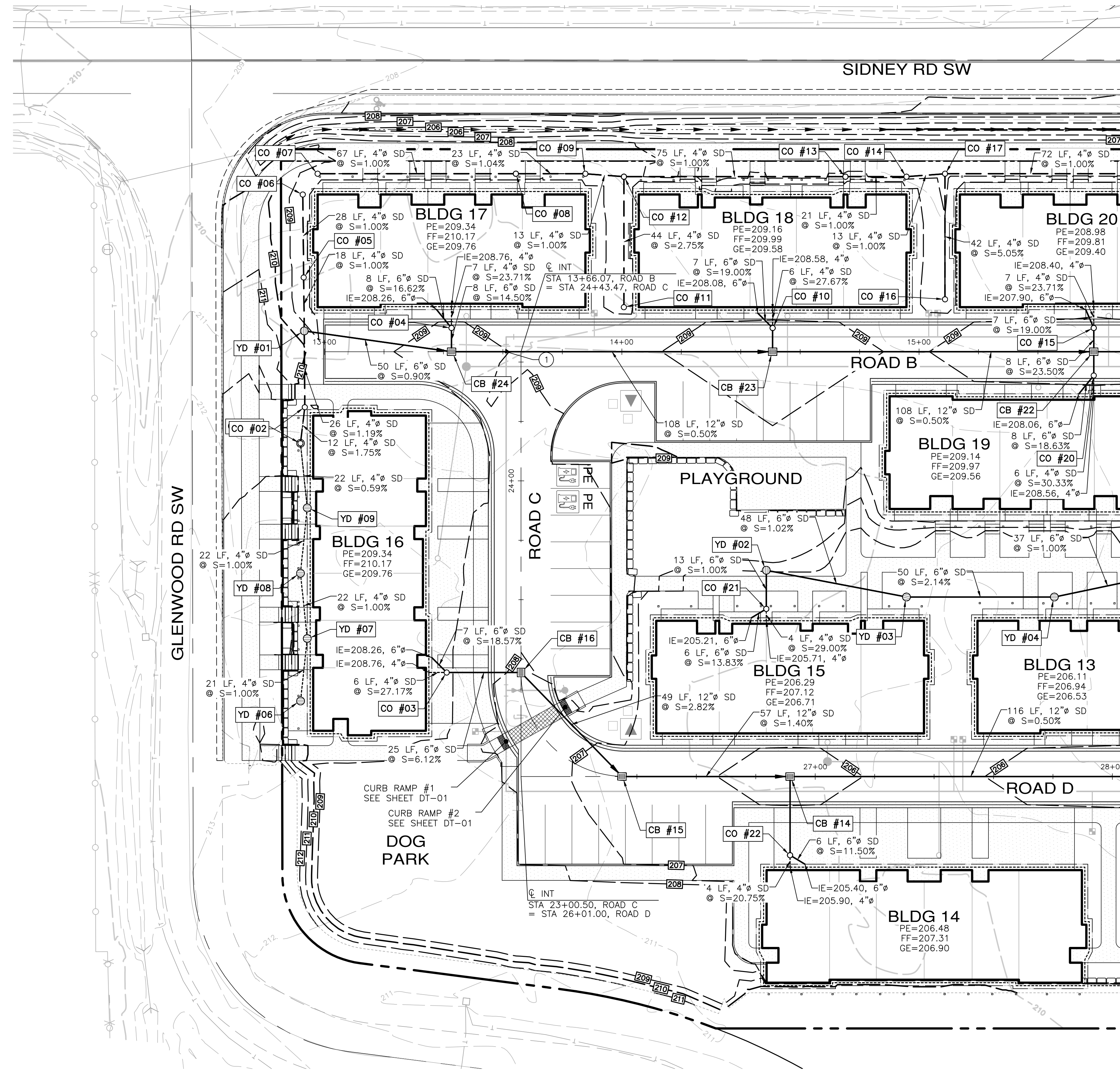
File: \\smc\ENGR\ESM-JOB\2155\020\020\plans\GR-03.dwg
 Plotted By: Brandon Avolio
 Printed: 12/7/2021 12:36 PM

A PORTION OF NW 1/4 OF SECTION 11, T. 23 N., R. 1 E., W.M.



UTILITY CROSSING TABLE

N: 189369.51
 E: 1190639.82
 PROPOSED 12" SD BOTTOM=205.55
 PROPOSED 8" WA TOP=204.55
 CLEARANCE=1.00'



STRUCTURE NAME:	DETAILS:
CB #14, TYPE 1 STA 26+91.54, 0.00'	RIM=205.75 IE IN=202.75, 12" (N) IE IN=203.25, 6" (W) IE OUT=202.75, 12" (S)
CB #15, TYPE 1 STA 26+35.00, 0.00'	RIM=206.55 IE IN=203.55, 12" (NE) IE OUT=203.55, 12" (S)
CB #16, TYPE 1 STA 23+35.50, 0.00'	RIM=207.93 IE IN=205.43, 6" (N) IE OUT=204.93, 12" (SW)
CB #22, TYPE 1 STA 15+58.78, 0.00'	RIM=208.45 IE IN=204.69, 6" (N) IE IN=204.19, 12" (E) IE IN=204.69, 6" (W) IE OUT=204.19, 12" (S)
CB #23, TYPE 1 STA 14+50.74, 0.00'	RIM=208.63 IE IN=204.73, 12" (N) IE IN=205.23, 6" (E) IE OUT=204.73, 12" (S)
CB #24, TYPE 1 STA 13+42.70, 0.00'	RIM=208.81 IE IN=205.77, 6" (N) IE IN=205.77, 6" (E) IE OUT=205.27, 12" (S)

STRUCTURE NAME:	DETAILS:
YD #01 N: 189437.06 E: 1190649.71	RIM=209.36 IE IN=206.39, 4" (W) IE IN=206.39, 4" (E) IE OUT=206.22, 6" (S)
YD #02 N: 189285.18 E: 1190562.61	RIM=207.14 IE IN=204.25, 6" (W) IE OUT=204.25, 6" (S)
YD #03 N: 189238.45 E: 1190551.61	RIM=206.30 IE IN=203.76, 6" (N) IE OUT=203.76, 6" (S)
YD #04 N: 189188.74 E: 1190549.49	RIM=206.16 IE IN=202.69, 6" (N) IE OUT=202.69, 6" (S)
YD #06 N: 189443.61 E: 1190525.31	RIM=209.58 IE IN=207.69, 4" (E) IE OUT=207.69, 4" (E)
YD #07 N: 189440.47 E: 1190546.24	RIM=209.65 IE IN=207.48, 4" (W) IE OUT=207.48, 4" (E)
YD #08 N: 189441.81 E: 1190568.28	RIM=209.56 IE IN=207.26, 4" (W) IE OUT=207.26, 4" (E)
YD #09 N: 189438.59 E: 1190590.16	RIM=209.68 IE IN=207.04, 4" (W) IE OUT=207.04, 4" (E)

STRUCTURE NAME:	DETAILS:
CO #01 N: 189439.95 E: 1190611.98	RIM=209.57 IE IN=206.91, 4" (W) IE OUT=206.91, 4" (E)
CO #02 N: 189437.97 E: 1190624.04	RIM=209.72 IE IN=206.70, 4" (W) IE OUT=206.70, 4" (E)
CO #03 N: 189394.08 E: 1190532.80	RIM=209.17 IE IN=206.96, 6" (NE) IE IN=207.13, 4" (N) IE OUT=206.96, 6" (S)
CO #04 N: 189387.52 E: 1190648.60	RIM=208.93 IE IN=206.93, 6" (NE) IE IN=207.10, 4" (E) IE OUT=206.93, 6" (W)
CO #05 N: 189436.49 E: 1190667.70	RIM=208.44 IE IN=206.57, 4" (E) IE OUT=206.57, 4" (W)
CO #06 N: 189435.61 E: 1190695.60	RIM=208.35 IE IN=206.85, 4" (W)
CO #07 N: 189430.31 E: 1190702.38	RIM=208.00 IE OUT=206.50, 4" (S)
CO #08 N: 189363.68 E: 1190699.54	RIM=208.00 IE IN=205.83, 4" (N) IE OUT=205.83, 4" (S)
CO #09 N: 189340.31 E: 1190698.55	RIM=208.00 IE IN=205.59, 4" (N) IE OUT=205.59, 4" (S)
CO #10 N: 189279.58 E: 1190643.99	RIM=208.75 IE IN=206.75, 6" (NE) IE IN=206.92, 4" (E) IE OUT=206.75, 6" (W)
CO #11 N: 189329.28 E: 1190653.12	RIM=208.17 IE OUT=206.67, 4" (E)
CO #12 N: 189327.41 E: 1190697.00	RIM=208.17 IE IN=205.46, 4" (W) IE IN=205.46, 4" (N) IE OUT=205.46, 4" (S)
CO #13 N: 189252.93 E: 1190693.82	RIM=208.06 IE IN=204.71, 4" (N) IE OUT=204.71, 4" (S)
CO #14 N: 189232.41 E: 1190692.95	RIM=207.75 IE IN=204.50, 4" (N) IE OUT=204.50, 4" (S)
CO #15 N: 189171.64 E: 1190639.39	RIM=208.57 IE IN=206.74, 4" (E) IE IN=206.57, 6" (E) IE OUT=206.57, 6" (W)
CO #16 N: 189221.22 E: 1190651.16	RIM=207.99 IE OUT=206.49, 4" (E)
CO #17 N: 189219.42 E: 1190693.39	RIM=207.60 IE IN=204.37, 4" (W) IE IN=204.37, 4" (N) IE OUT=204.37, 4" (S)
CO #20 N: 189172.32 E: 1190623.41	RIM=208.57 IE IN=206.57, 6" (NW) IE IN=206.74, 4" (W) IE OUT=206.57, 6" (E)
CO #21 N: 189285.73 E: 1190549.62	RIM=206.36 IE IN=204.38, 6" (NW) IE IN=204.55, 4" (W) IE OUT=204.38, 6" (E)
CO #22 N: 189281.27 E: 1190466.44	RIM=206.71 IE IN=204.71, 6" (SW) IE IN=205.07, 4" (W) IE OUT=204.71, 6" (E)

SEE SHEET SD-02 FOR CONTINUATION

REVISIONS		
NO.	DESCRIPTION/DATE	BY

ESM CONSULTING ENGINEERS, L.L.C.
 33400 Rte. Ave. S., Suite 205
 Federal Way, WA 98003

www.esmcivil.com

Professional Engineer
 Land Planning
 Project Management
 Landscape Architecture
 Civil Engineering
 Public Works

SIDNEY ROAD TOWNHOMES L.L.C.

HAVEN TOWNHOMES

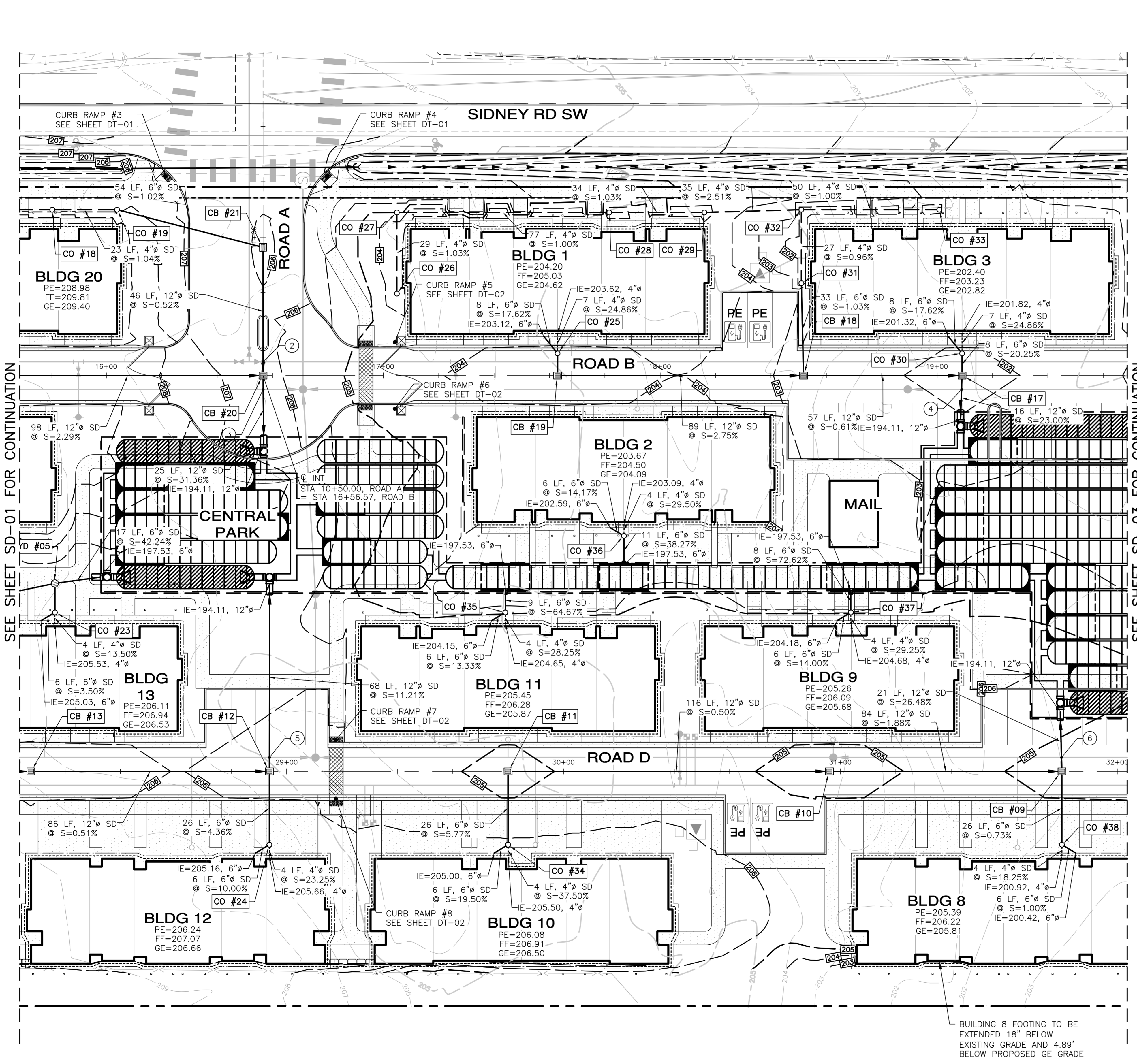
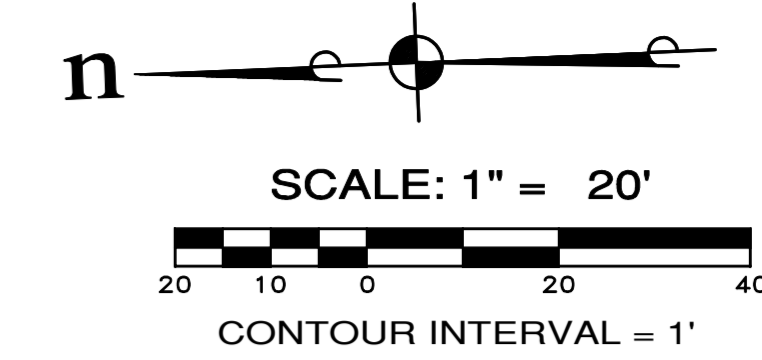
CITY OF PORT ORCHARD ROAD & STORM DRAINAGE PLAN

WASHINGTON

JOB NO.:	2155-002-020
DWG. NAME:	SD-01
DESIGNED BY:	LGB
DRAWN BY:	GFF
CHECKED BY:	
DATE:	12/03/2021
DATE OF PRINT:	

File: \\sm\ENR\ESM-JOB\2155\020\020\plans\SD-01.dwg
 Plotted: 12/03/2021 10:28 AM
 Plotted By: Greg Fedore

A PORTION OF NW 1/4 OF SECTION 11, T. 23 N., R. 1 E., W.M.



UTILITY CROSSING TABLE

- N: 189074.07
E: 1190632.23
PROPOSED 12" SD BOTTOM=201.98
PROPOSED 8" WA TOP=200.98
CLEARANCE=1.00'
- N: 189074.45
E: 1190622.24
PROPOSED 12" SD BOTTOM=201.65
PROPOSED 8" SS TOP=193.55
CLEARANCE=8.10'
- N: 188822.42
E: 1190611.50
PROPOSED 12" SD BOTTOM=197.03
PROPOSED 8" SS TOP=193.74
CLEARANCE=3.29'
- N: 189077.86
E: 1190489.29
PROPOSED 12" SD BOTTOM=201.61
PROPOSED 8" SS TOP=193.97
CLEARANCE=7.64'
- N: 188792.05
E: 1190477.11
PROPOSED 12" SD BOTTOM=198.51
PROPOSED 8" SS TOP=195.01
CLEARANCE=3.50'

STRUCTURE NAME:	DETAILS:
CB #09, TYPE 1 STA 31+80.00, 0.00'	RIM=204.79 IE IN=199.67, 12" (N) IE IN=200.17, 6" (W) IE OUT=199.67, 12" (E)
CB #10, TYPE 1 STA 30+96.04, 0.00'	RIM=204.73 IE IN=201.25, 12" (N) IE OUT=201.25, 12" (S)
CB #11, TYPE 1 STA 29+79.96, 0.00'	RIM=204.83 IE IN=202.33, 6" (W) IE OUT=201.83, 12" (S)
CB #12, TYPE 1 STA 28+93.79, 0.00'	RIM=205.69 IE IN=201.73, 12" (N) IE IN=201.91, 6" (W) IE OUT=201.73, 12" (E)
CB #13, TYPE 1 STA 28+07.63, 0.00'	RIM=205.49 IE IN=202.17, 12" (N) IE OUT=202.17, 12" (S)
CB #17, TYPE 1 STA 19+09.00, 0.00'	RIM=201.79 IE IN=197.79, 12" (N) IE IN=198.29, 6" (E) IE OUT=197.79, 12" (W)
CB #18, TYPE 1 STA 30+86.70, 142.97' LT	RIM=202.51 IE IN=198.14, 12" (N) IE IN=198.64, 6" (E) IE OUT=198.14, 12" (S)
CB #19, TYPE 1 STA 17+62.93, 0.00'	RIM=203.59 IE IN=201.09, 6" (E) IE OUT=200.59, 12" (S)
CB #20, TYPE 1 STA 16+56.57, 0.00'	RIM=206.32 IE IN=201.95, 12" (E) IE IN=201.95, 12" (N) IE OUT=201.95, 12" (W)
CB #21, TYPE 1 STA 10+96.32, 0.00'	RIM=205.94 IE IN=202.69, 6" (N) IE OUT=202.19, 12" (W)

STRUCTURE NAME:	DETAILS:
CO #18 N: 189147.79 E: 1190690.34	RIM=207.60 IE IN=203.65, 4" (N) IE OUT=203.65, 4" (S)
CO #19 N: 189124.42 E: 1190689.34	RIM=207.60 IE IN=203.41, 4" (N) IE OUT=203.24, 6" (S)
CO #23 N: 189153.04 E: 1190544.96	RIM=206.19 IE IN=204.82, 6" (NW) IE IN=204.99, 4" (W) IE OUT=204.82, 6" (E)
CO #24 N: 189079.20 E: 1190457.82	RIM=206.52 IE IN=204.56, 6" (NW) IE IN=204.73, 4" (W) IE OUT=203.05, 6" (E)
CO #25 N: 188967.67 E: 1190630.70	RIM=203.71 IE IN=201.71, 6" (NE) IE IN=201.88, 4" (E) IE OUT=201.71, 6" (W)
CO #26 N: 188924.74 E: 1190654.75	RIM=203.21 IE OUT=201.71, 4" (E)
CO #27 N: 188923.50 E: 1190684.04	RIM=205.00 IE IN=201.41, 4" (W) IE OUT=201.41, 4" (S)
CO #28 N: 188946.86 E: 1190680.77	RIM=203.22 IE IN=200.64, 4" (N) IE OUT=200.64, 4" (S)
CO #29 N: 188912.51 E: 1190679.31	RIM=203.21 IE IN=200.29, 4" (N) IE OUT=200.29, 4" (S)
CO #30 N: 188821.73 E: 1190624.48	RIM=201.91 IE IN=199.91, 6" (NE) IE IN=200.08, 4" (E) IE OUT=199.91, 6" (W)
CO #31 N: 188878.63 E: 1190652.30	RIM=201.41 IE IN=199.15, 4" (E) IE OUT=198.98, 6" (W)
CO #32 N: 188877.50 E: 1190678.82	RIM=201.41 IE IN=199.41, 4" (S) IE IN=199.41, 4" (N) IE OUT=199.41, 4" (W)
CO #33 N: 188827.73 E: 1190676.70	RIM=201.41 IE OUT=199.91, 4" (N)
CO #34 N: 188993.11 E: 1190454.15	RIM=206.15 IE IN=203.83, 6" (NW) IE IN=204.00, 4" (W) IE OUT=203.83, 6" (E)
CO #35 N: 188990.51 E: 1190538.03	RIM=204.81 IE IN=203.35, 6" (NW) IE IN=203.52, 4" (W) IE OUT=203.35, 6" (E)
CO #36 N: 188946.54 E: 1190563.82	RIM=203.74 IE IN=201.74, 6" (NE) IE IN=201.91, 4" (E) IE OUT=201.74, 6" (W)
CO #37 N: 188865.85 E: 1190532.72	RIM=204.73 IE IN=203.34, 6" (NW) IE IN=203.51, 4" (W) IE OUT=203.34, 6" (E)
CO #38 N: 188793.25 E: 1190445.63	RIM=205.66 IE IN=200.36, 6" (SW) IE IN=200.19, 4" (W) IE OUT=200.36, 6" (E)

STRUCTURE NAME:	DETAILS:
YD #05 N: 189152.59 E: 1190555.42	RIM=206.11 IE IN=202.31, 6" (N) IE IN=204.71, 6" (W) IE OUT=204.71, 6" (S)

BUILDING 8 FOOTING TO BE EXTENDED 18" BELOW EXISTING GRADE AND 4.89' BELOW PROPOSED GE GRADE

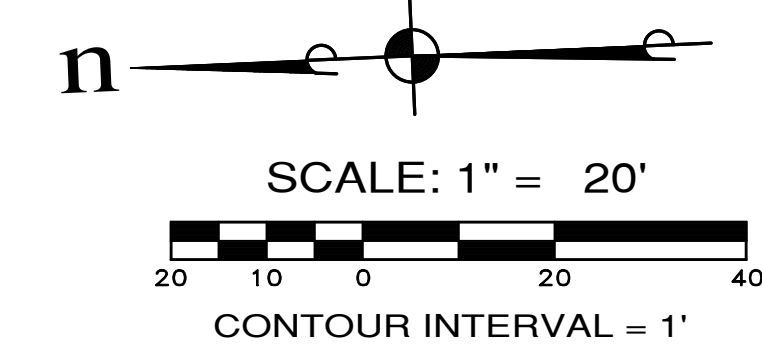
REVISIONS

NO.	DESCRIPTION/DATE	BY

CONSULTING ENGINEERS LLC
ESM
www.esmcivil.com

SIDNEY ROAD TOWNHOMES L.L.C.
HAVEN TOWNHOMES
CITY OF PORT ORCHARD ROAD & STORM DRAINAGE PLAN

JOB NO.: 2155-002-020
DWG. NAME: SD-02
DESIGNED BY: LGB
DRAWN BY: GFF
CHECKED BY:
DATE: 12/10/2021
DATE OF PRINT:
SD-02
12 OF 38 SHEETS



UTILITY CROSSING TABLE

- N: 188627.11
E: 1190603.17
PROPOSED 12" SD BOTTOM=197.60
PROPOSED 8" SS TOP=194.52
CLEARANCE=3.12'
- N: 188597.37
E: 1190479.12
PROPOSED 8" WA BOTTOM=198.39
PROPOSED 12" SD TOP=194.72
CLEARANCE=3.67'

REVISIONS

NO.	DESCRIPTION/DATE	BY
7		
8		

12/09/2021

ESM CONSULTING ENGINEERS, L.L.C.
33400 Riva Ave, Suite 205
Federal Way, WA 98003

FEDERAL WAY
EXPERT

Land Planning
Landscape Architecture

Project Management
Land Surveying
Public Works

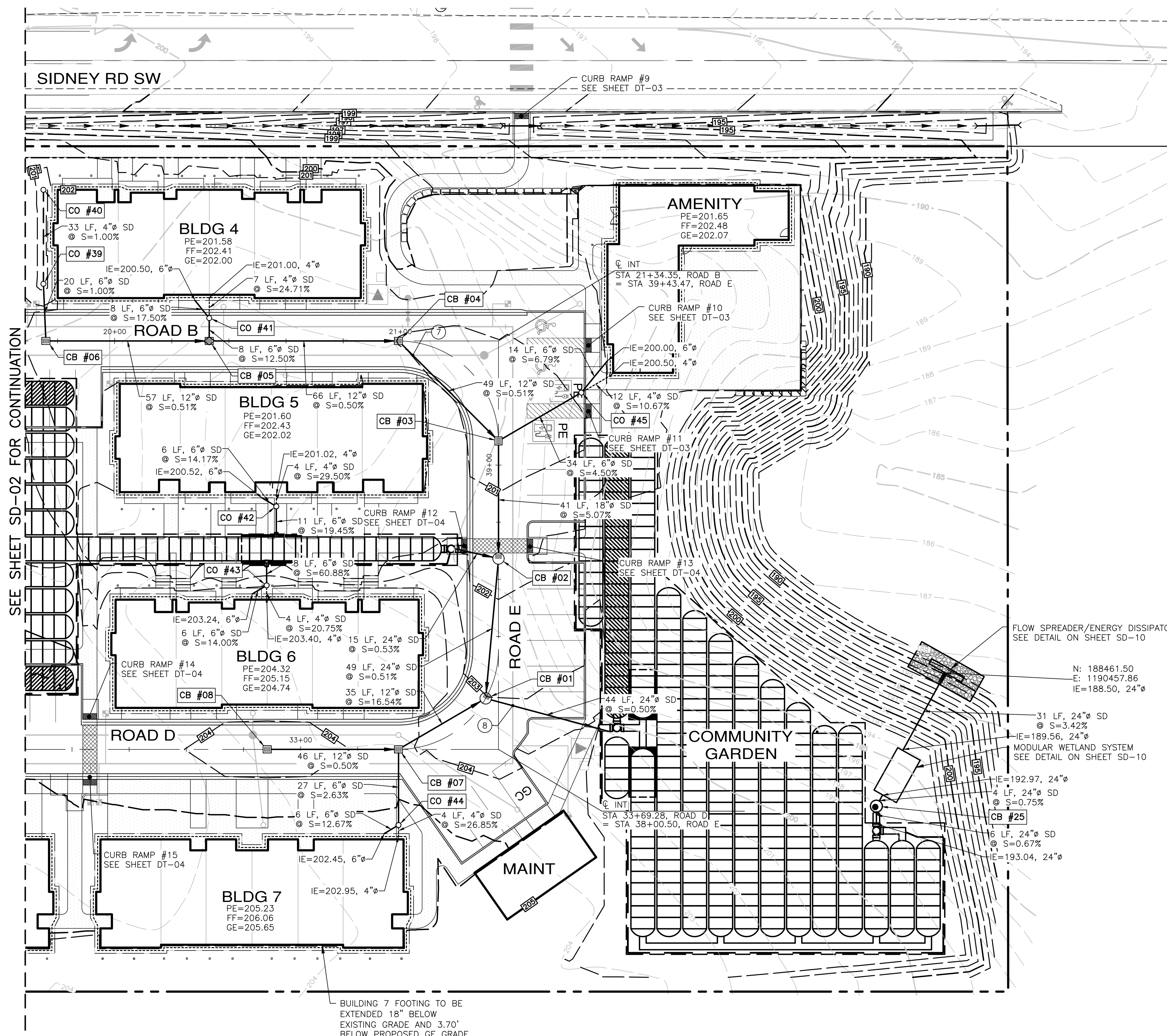
www.esmcivil.com

WASHINGTON

SIDNEY ROAD TOWNHOMES L.L.C.
HAVEN TOWNHOMES
ROAD & STORM DRAINAGE PLAN

JOB NO.: 2155-002-020
DWG. NAME: SD-03
DESIGNED BY: LGB
DRAWN BY: GFF
CHECKED BY:
DATE: 12/10/2021
DATE OF PRINT:

SD-03
13 OF 38 SHEETS



STRUCTURE NAME:	DETAILS:
CB #01, TYPE 2-48" SD STA 38+18.34, 4.49' L	RIM=203.02 IE IN=194.69, 12" (NW) IE IN=193.69, 24" (E) IE OUT=193.69, 24" (S)
CB #02, TYPE 2-48" SD STA 38+67.30, 0.00'	RIM=201.62 IE IN=194.44, 18" (E) IE IN=193.94, 24" (N) IE OUT=193.94, 24" (W)
CB #03, TYPE 1 STA 39+08.47, 0.00'	RIM=200.52 IE IN=197.02, 12" (NE) IE IN=197.52, 6" (SE) IE OUT=196.52, 18" (W)
CB #04, TYPE 1 STA 20+99.35, 0.00'	RIM=200.98 IE IN=197.27, 12" (N) IE OUT=197.27, 12" (SW)
CB #05, TYPE 1 STA 20+33.10, 0.00'	RIM=200.98 IE IN=198.10, 6" (E) IE IN=197.60, 12" (N) IE OUT=197.60, 12" (S)
CB #06, TYPE 1 STA 32+10.85, 142.97' L	RIM=201.69 IE IN=198.39, 6" (E) IE OUT=197.89, 12" (S)
CB #07, TYPE 1 STA 33+34.28, 0.00'	RIM=204.17 IE IN=200.48, 12" (N) IE IN=200.98, 6" (W) IE OUT=200.48, 12" (SE)
CB #08, TYPE 1 STA 32+88.29, 0.00'	RIM=203.71 IE OUT=200.71, 12" (S)
CB #25, TYPE 2-54" SD CONTROL STRUCTURE STA 37+80.62, 132.27' R	RIM=203.00 IE IN=193.00, 24" (W) IE OUT=193.00, 24" (SE)

STRUCTURE NAME:	DETAILS:
CO #39 N: 188755.23 E: 1190633.65	RIM=200.59 IE IN=198.76, 4" (E) IE OUT=198.59, 6" (W)
CO #40 N: 188753.83 E: 1190666.54	RIM=200.59 IE OUT=199.09, 4" (W)
CO #41 N: 188697.75 E: 1190619.19	RIM=201.10 IE IN=199.10, 6" (NE) IE IN=199.27, 4" (E) IE OUT=199.10, 6" (W)
CO #42 N: 188677.11 E: 1190552.34	RIM=201.67 IE IN=199.67, 6" (NE) IE IN=199.84, 4" (E) IE OUT=199.67, 6" (W)
CO #43 N: 188681.67 E: 1190524.87	RIM=203.89 IE IN=202.40, 6" (NW) IE IN=202.57, 4" (W) IE OUT=202.40, 6" (E)
CO #44 N: 188639.11 E: 1190439.06	RIM=205.42 IE IN=201.69, 6" (NW) IE IN=201.88, 4" (W) IE OUT=201.69, 6" (E)
CO #45 N: 188568.72 E: 1190587.59	RIM=201.05 IE IN=199.22, 4" (SE) IE IN=199.05, 6" (SE) IE OUT=199.05, 6" (NW)

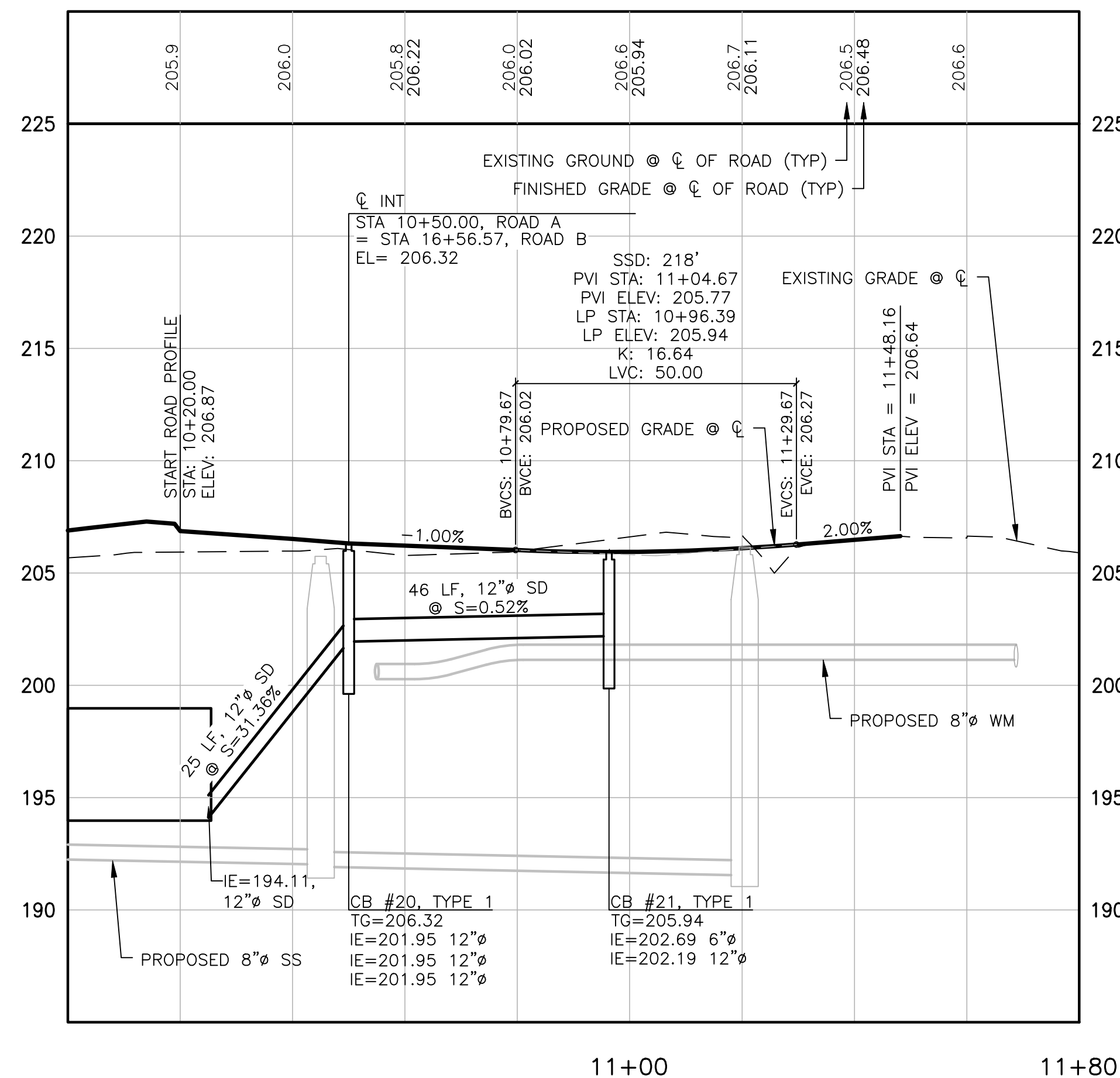
SEE SHEET SD-02 FOR CONTINUATION

BUILDING 7 FOOTING TO BE EXTENDED 18" BELOW EXISTING GRADE AND 3.70' BELOW PROPOSED GE GRADE

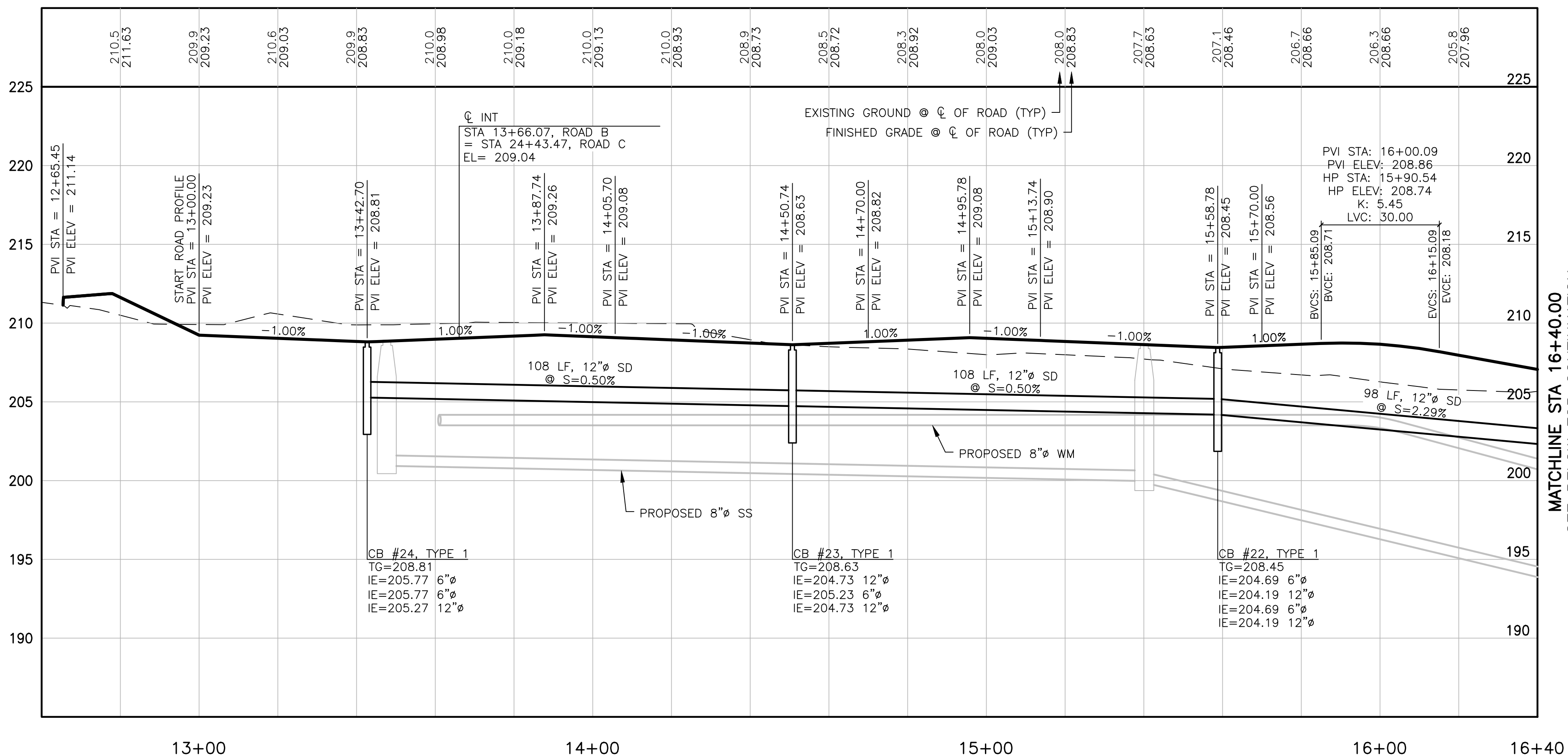
File: \\mms\ENGR\ESM-JOB\2155\02\SD-03.dwg
Printed: 12/10/2021 1:12 PM
Printed By: Greg Frazier

PW21-079 / PW21-080

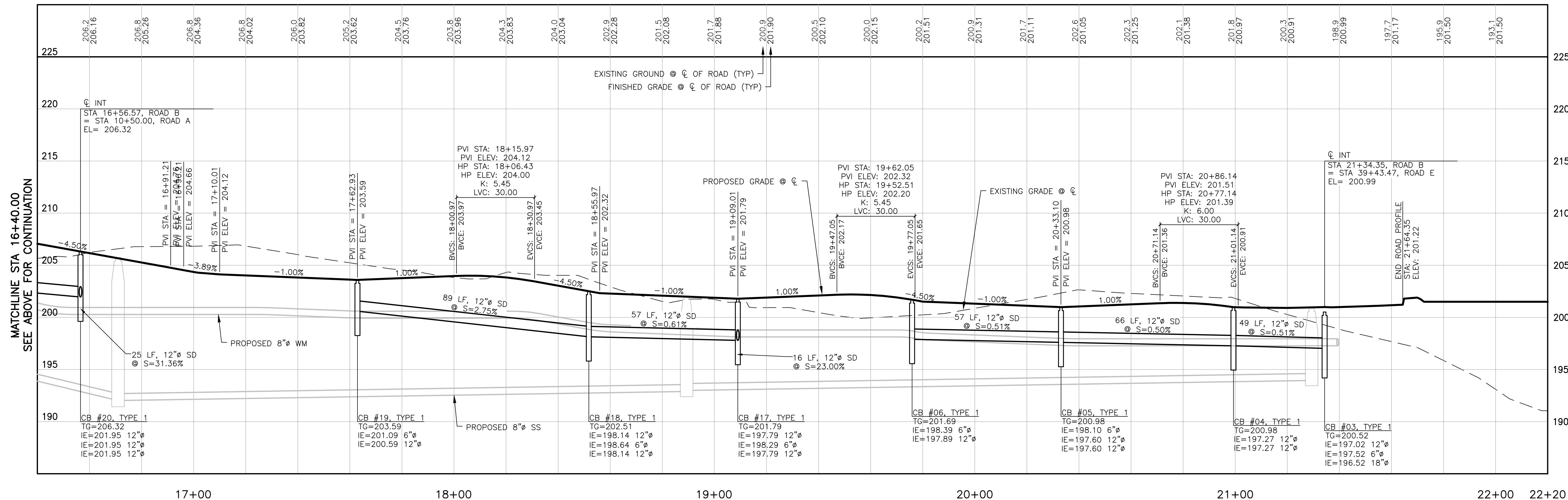
A PORTION OF NW 1/4 OF SECTION 11, T. 23 N., R. 1 E., W.M.



ROAD A
SCALE: 1"=20' HORIZ.
1"=5' VERT.



ROAD B
SCALE: 1"=20' HORIZ.
1"=5' VERT.



ROAD B
SCALE: 1"=20' HORIZ.
1"=5' VERT.

MATCHLINE STA 16+40.00
SEE BELOW FOR CONTINUATION

REVISIONS		
NO.	DESCRIPTION/DATE	BY

ESM CONSULTING ENGINEERS, LLC
33400 8th Ave S, Suite 205
Federal Way, WA 98003
www.esmcivil.com

Professional Engineer
Registered Professional Engineer
12/09/2021

Land Surveying
Project Management
Land Planning
Landscape Architecture

SIDNEY ROAD TOWNHOMES L.L.C.
HAVEN TOWNHOMES
ROAD & STORM PROFILES
CITY OF PORT ORCHARD
WASHINGTON

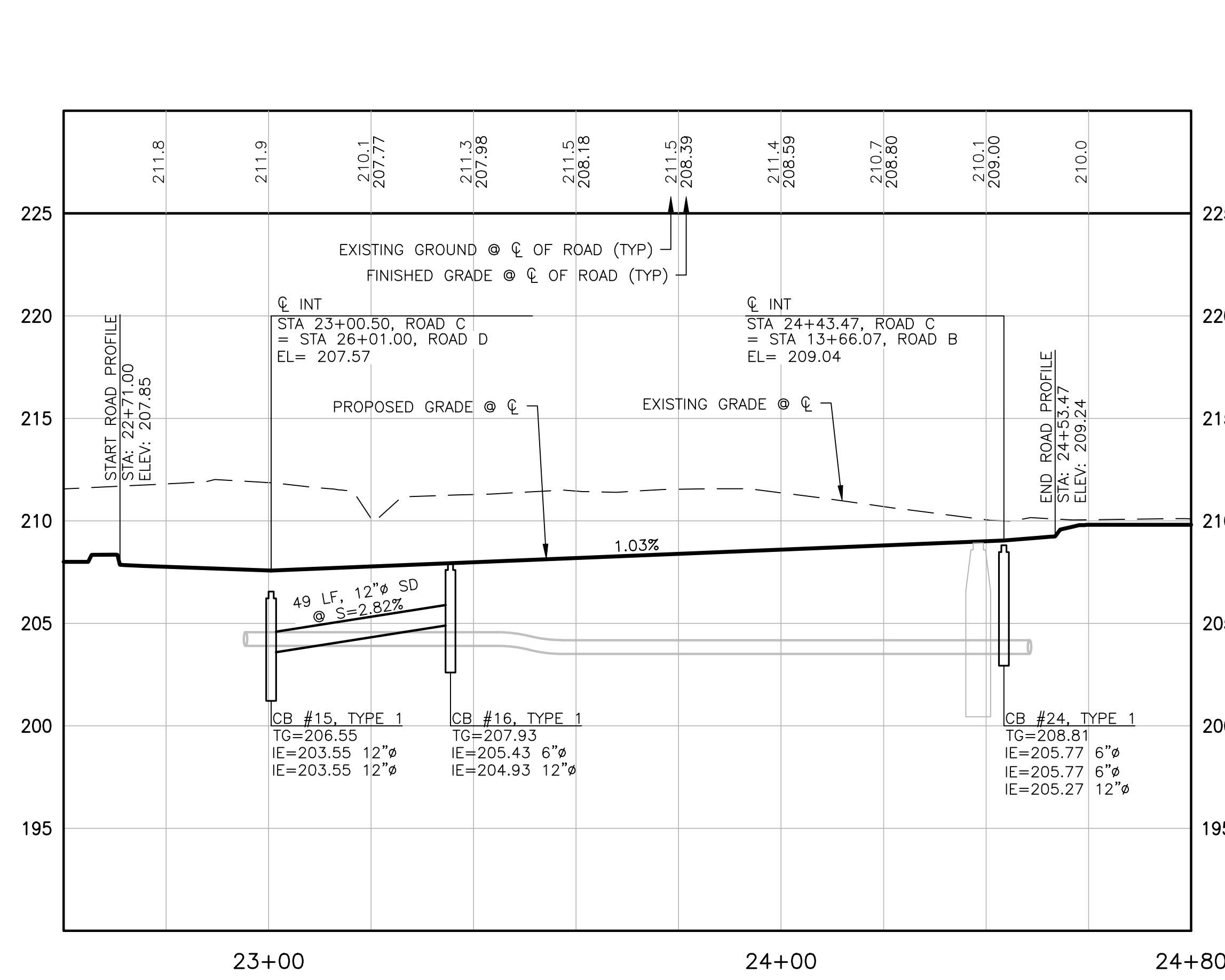
JOB NO.: 2155-002-020
DWG. NAME: SD-04
DESIGNED BY: LGB
DRAWN BY: GFF
CHECKED BY:
DATE: 12/03/2021
DATE OF PRINT:

SD-04
14 OF 38 SHEETS

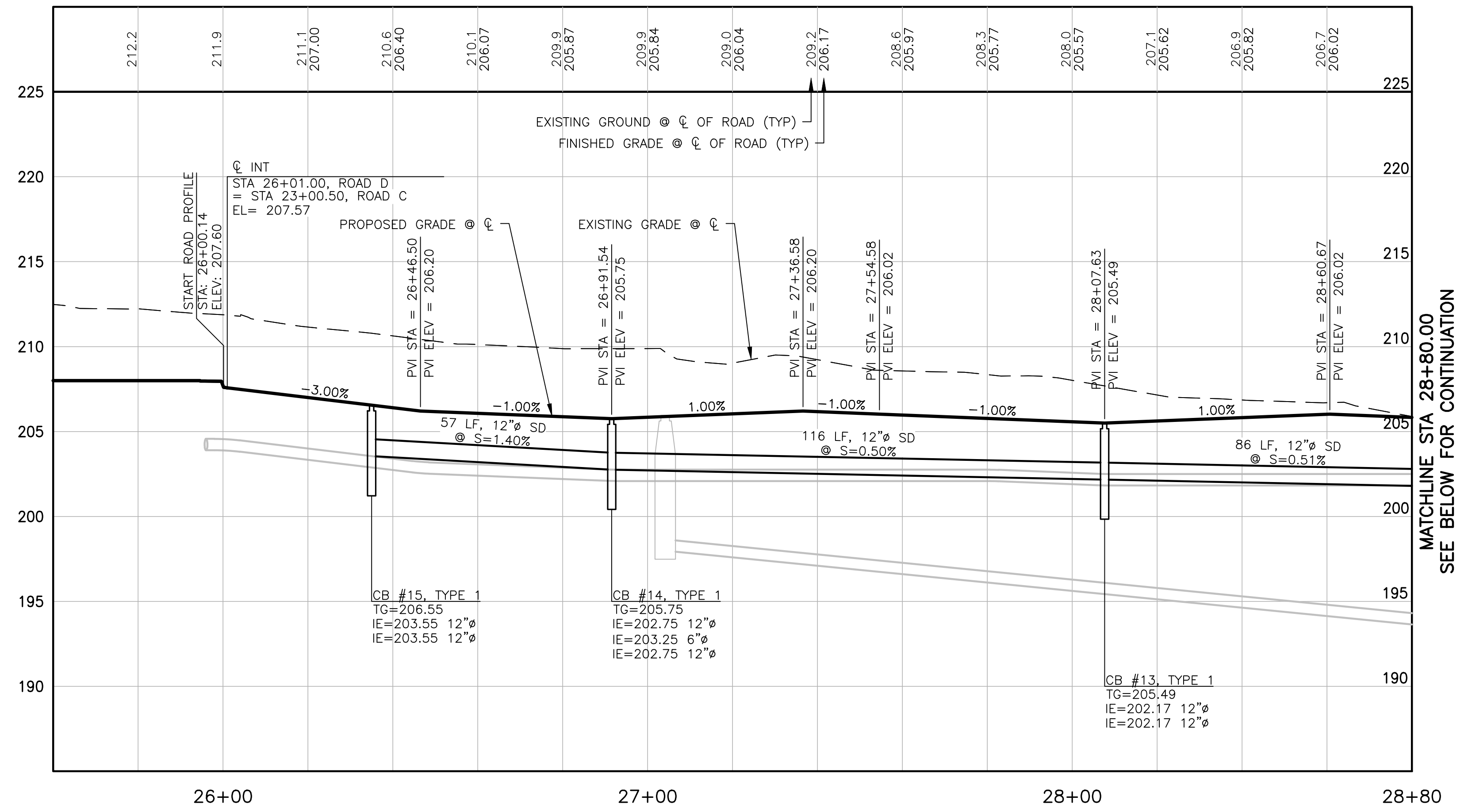
PW21-079 / PW21-080

File: \\mms\ENGR\ESM-JOB\2155\020\020\pws\SD-04.dwg
Printed: 12/9/2021 9:00 AM
Printed By: Greg Fedore

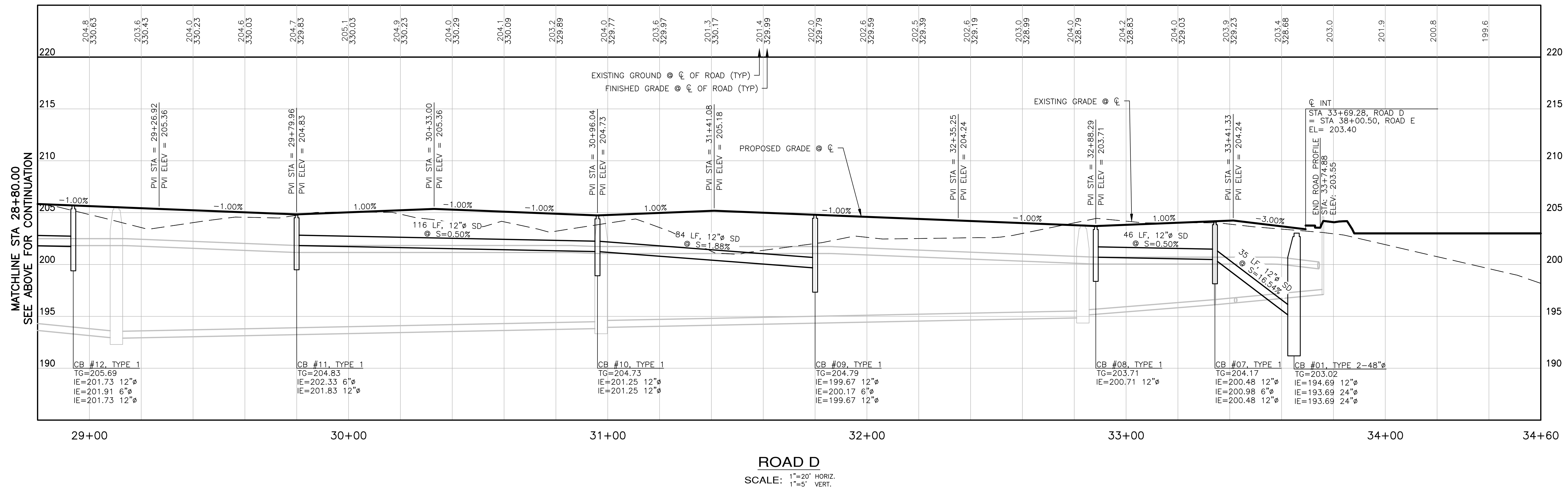
A PORTION OF NW 1/4 OF SECTION 11, T. 23 N., R. 1 E., W.M.



ROAD C
SCALE: 1"=20' HORIZ.
1"=5' VERT.



ROAD D
SCALE: 1"=20' HORIZ.
1"=5' VERT.



ROAD D
SCALE: 1"=20' HORIZ.
1"=5' VERT.

REVISIONS		
NO.	DESCRIPTION/DATE	BY

ESM CONSULTING ENGINEERS, LLC
33400 8th Ave S, Suite 205
Federal Way, WA 98003
www.esmcivil.com

PAUL G. BARTENIER
REGISTERED PROFESSIONAL ENGINEER
12/09/2021

Civil Engineering | Land Surveying | Project Management | Landscape Architecture
Public Works | Land Planning | Architecture

SIDNEY ROAD TOWNHOMES L.L.C.
HAVEN TOWNHOMES
ROAD & STORM PROFILES
CITY OF PORT ORCHARD
WASHINGTON

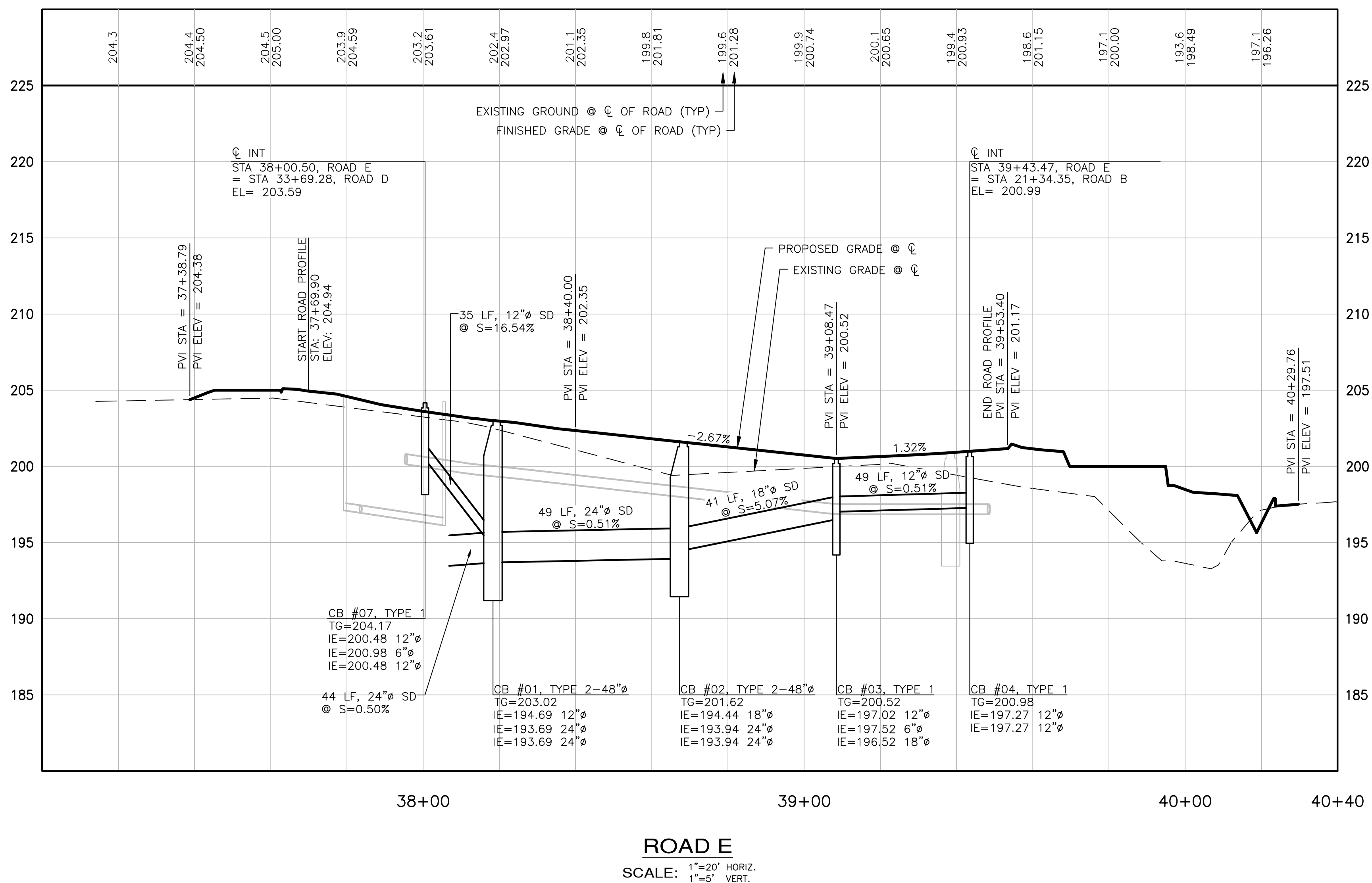
JOB NO.: 2155-002-020
DWG. NAME: SD-05
DESIGNED BY: LGB
DRAWN BY: GFF
CHECKED BY:
DATE: 12/03/2021
DATE OF PRINT:

SD-05
15 OF 38 SHEETS

PW21-079 / PW21-080

File: \\nms\ENR\ESM-JOBES\2155\020\020\pds\SD-05.dwg
Printed: 12/9/2021 7:32 AM
Printed By: Greg Fedore

A PORTION OF NW 1/4 OF SECTION 11, T. 23 N., R. 1 E., W.M.



REVISIONS		
NO.	DESCRIPTION/DATE	BY

ESM CONSULTING ENGINEERS, LLC
 33400 8th Ave S, Suite 205
 Federal Way, WA 98003
 www.esmcivil.com
 Civil Engineering | Land Surveying | Project Management | Landscape Architecture
 (253) 836-6113
 (253) 837-9900

SIDNEY ROAD TOWNHOMES L.L.C.
HAVEN TOWNHOMES
 ROAD & STORM PROFILES
 CITY OF PORT ORCHARD
 WASHINGTON

JOB NO.:	2155-002-020
DWG. NAME:	SD-06
DESIGNED BY:	LGB
DRAWN BY:	OFF
CHECKED BY:	
DATE:	12/03/2021
DATE OF PRINT:	

File: \\smc\ENR\ESM-JOB\2155\020\020\pds\SD-06.dwg
 Plotted: 12/9/2021 9:03 AM
 Plotted By: Greg Fedore

REVISIONS		
NO.	DESCRIPTION/DATE	BY

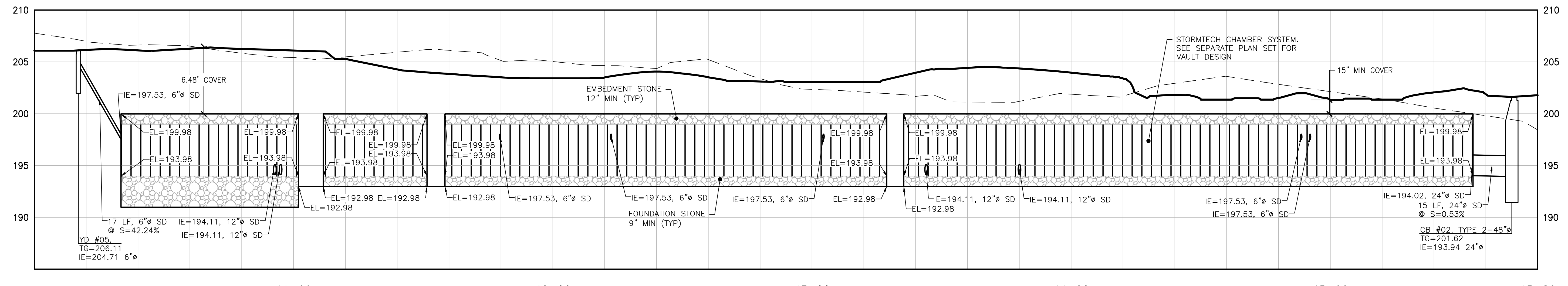
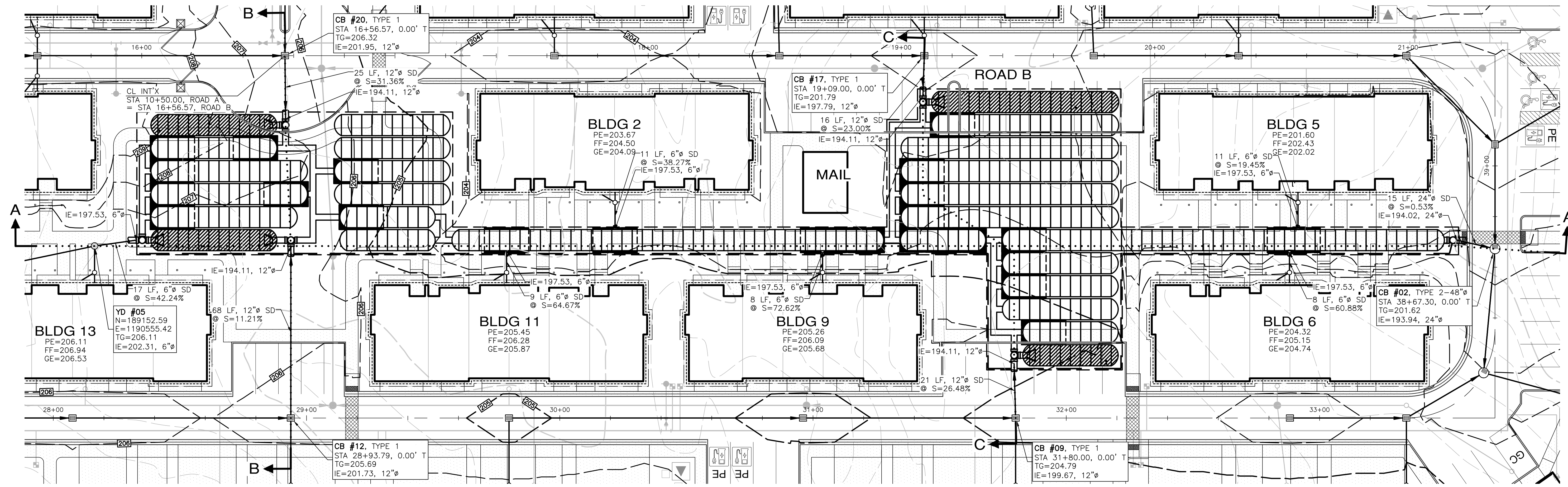
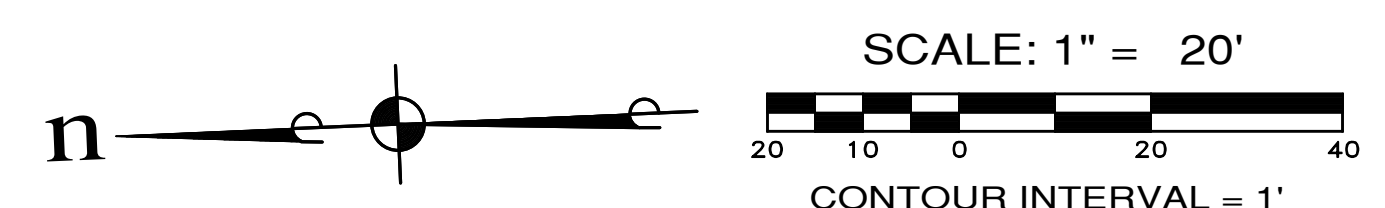
ESM CONSULTING ENGINEERS, L.L.C.
 33400 8th Ave S, Suite 205
 Federal Way, WA 98003
 www.esmcivil.com

REGISTERED PROFESSIONAL ENGINEER
 STATE OF WASHINGTON
 LICENSE NO. 40111
 12/09/2021

Civil Engineering
 Public Works
 Land Planning
 Landscape Architecture
 Project Management

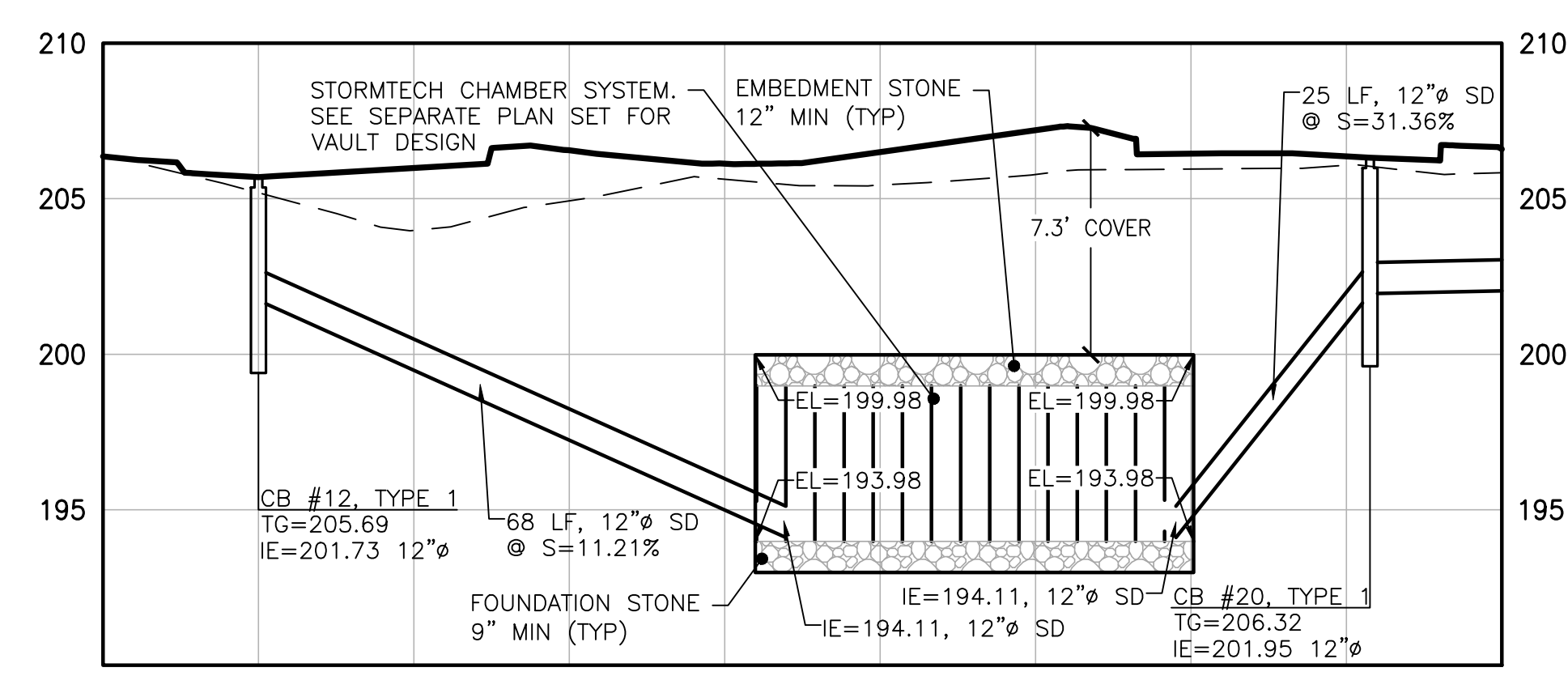
SIDNEY ROAD TOWNHOMES L.L.C.
HAVEN TOWNHOMES
 CITY OF PORT ORCHARD
 STORMTECH PLAN & SECTIONS
 WASHINGTON

JOB NO.: 2155-002-020
 DWG. NAME: SD-07
 DESIGNED BY: LGB
 DRAWN BY: GFF
 CHECKED BY:
 DATE: 12/03/2021
 DATE OF PRINT:
SD-07
 17 OF 38 SHEETS



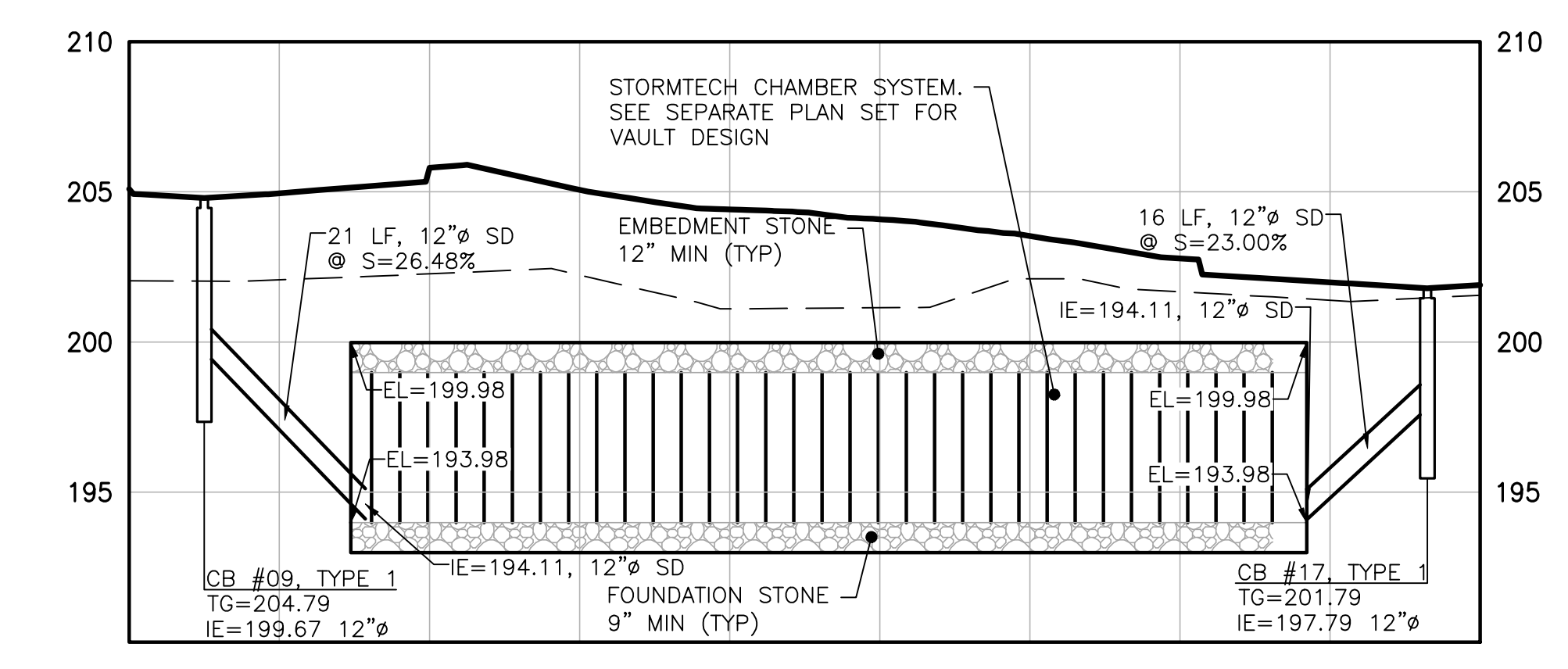
STORMTECH CHAMBERS SECTION A-A

SCALE: 1"=20' HORIZ.
 1"=5' VERT.



STORMTECH CHAMBERS SECTION B-B

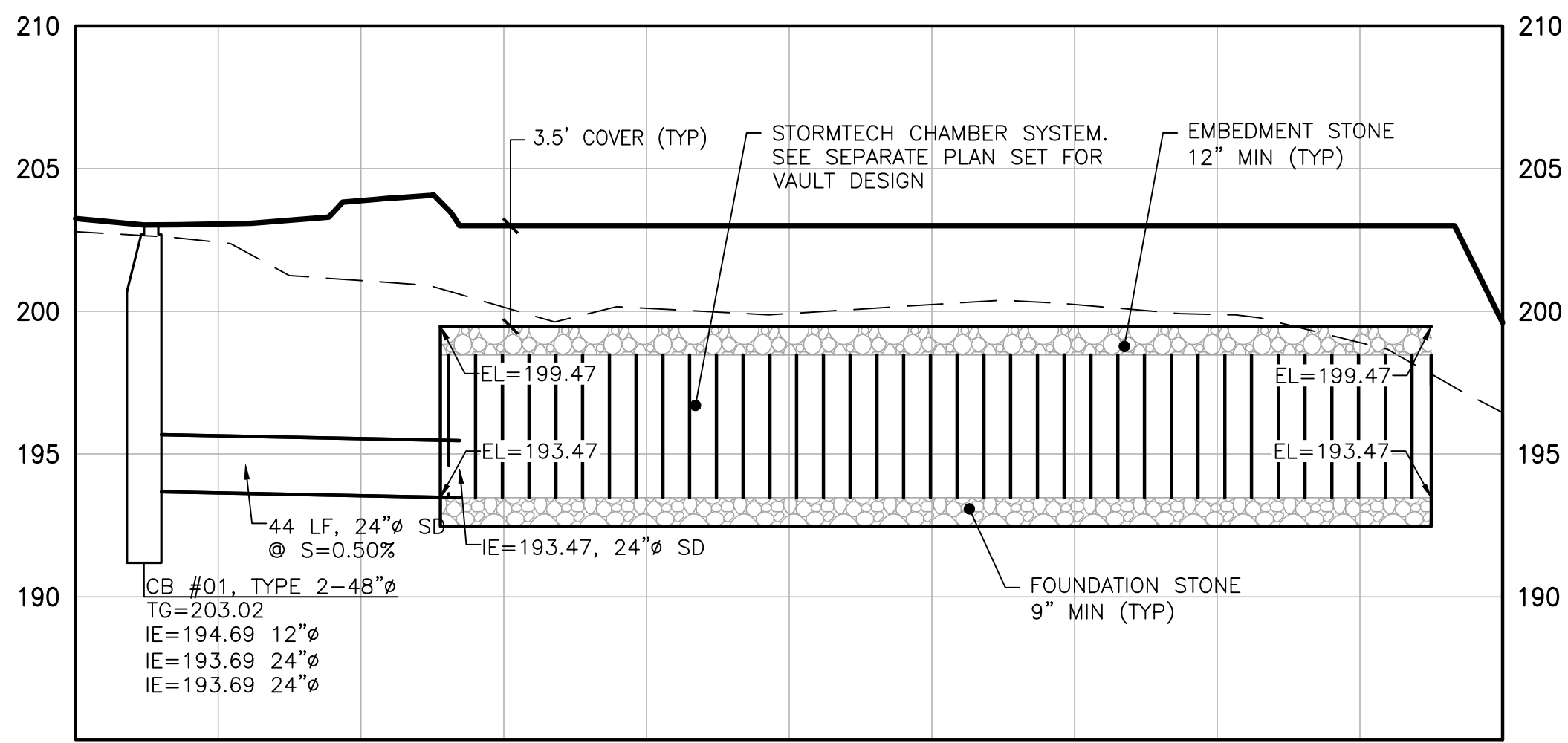
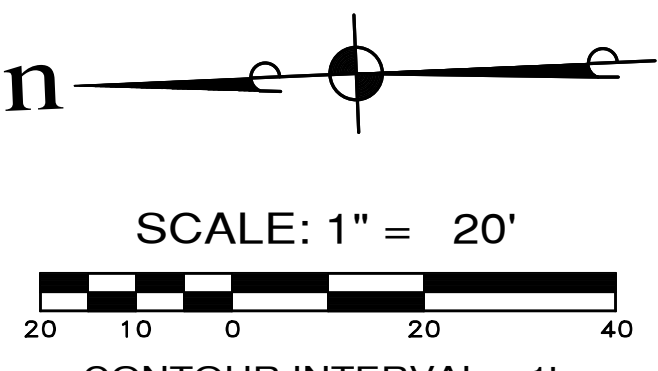
SCALE: 1"=20' HORIZ.
 1"=5' VERT.



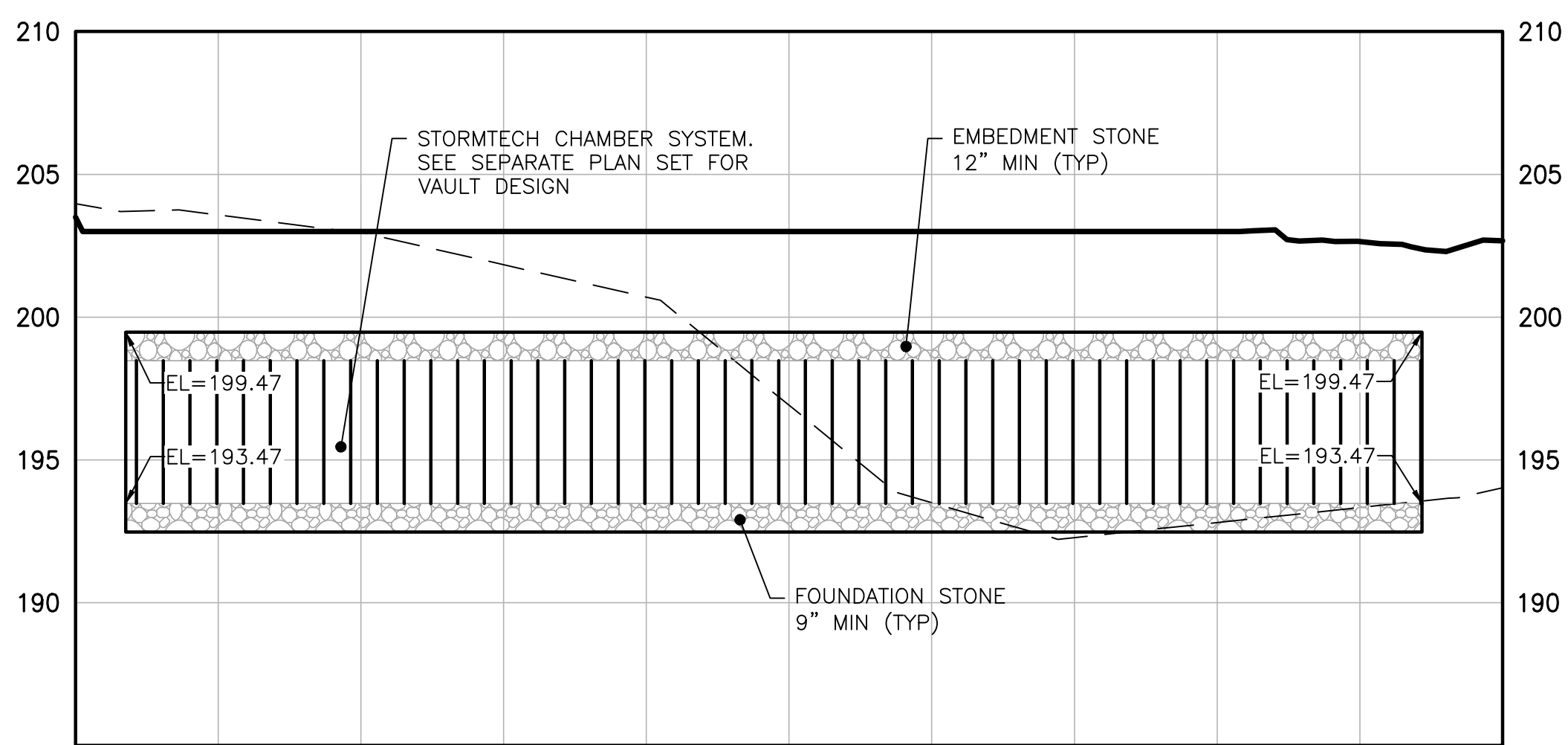
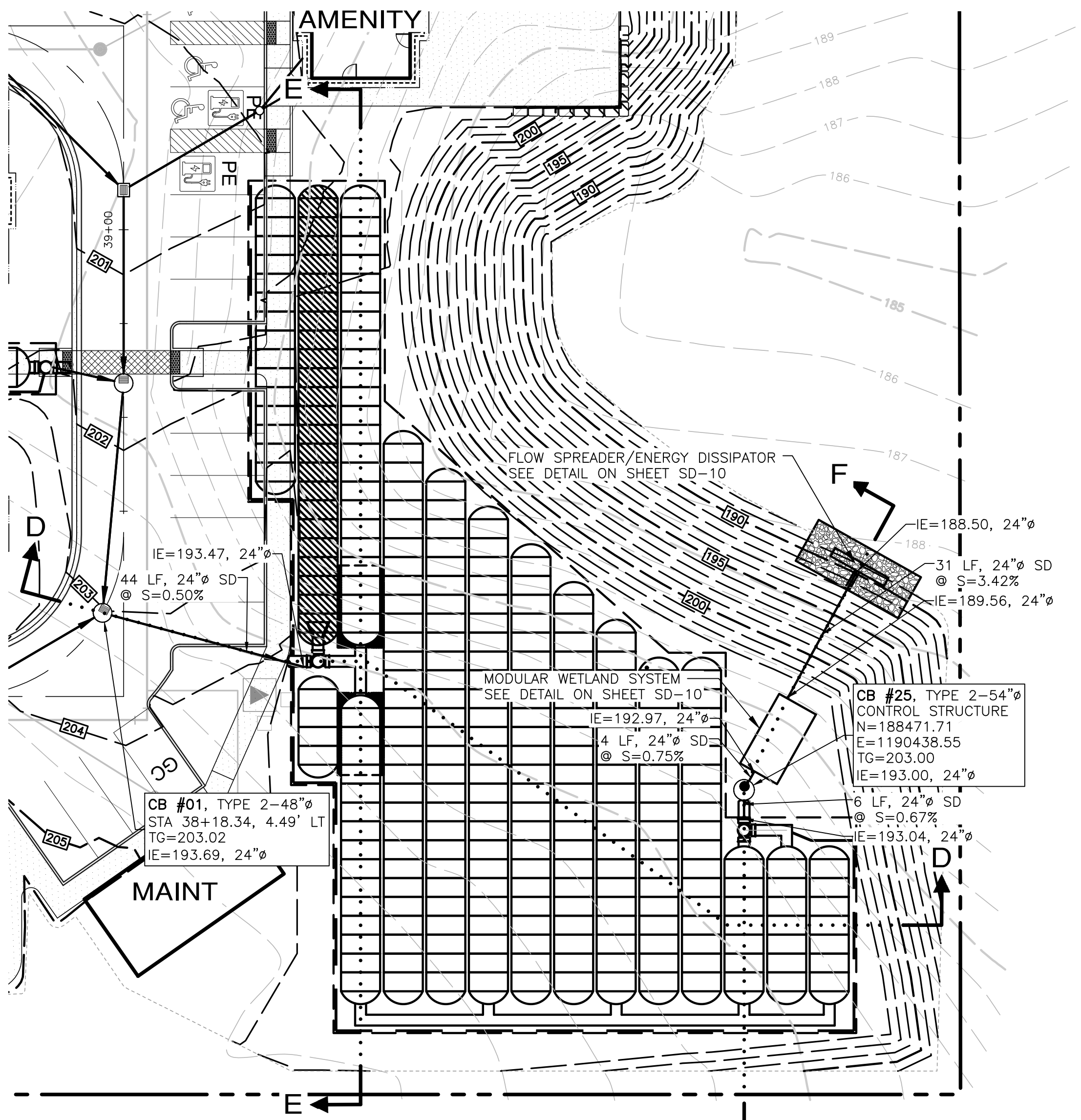
STORMTECH CHAMBERS SECTION C-C

SCALE: 1"=20' HORIZ.
 1"=5' VERT. PW21-079 / PW21-080

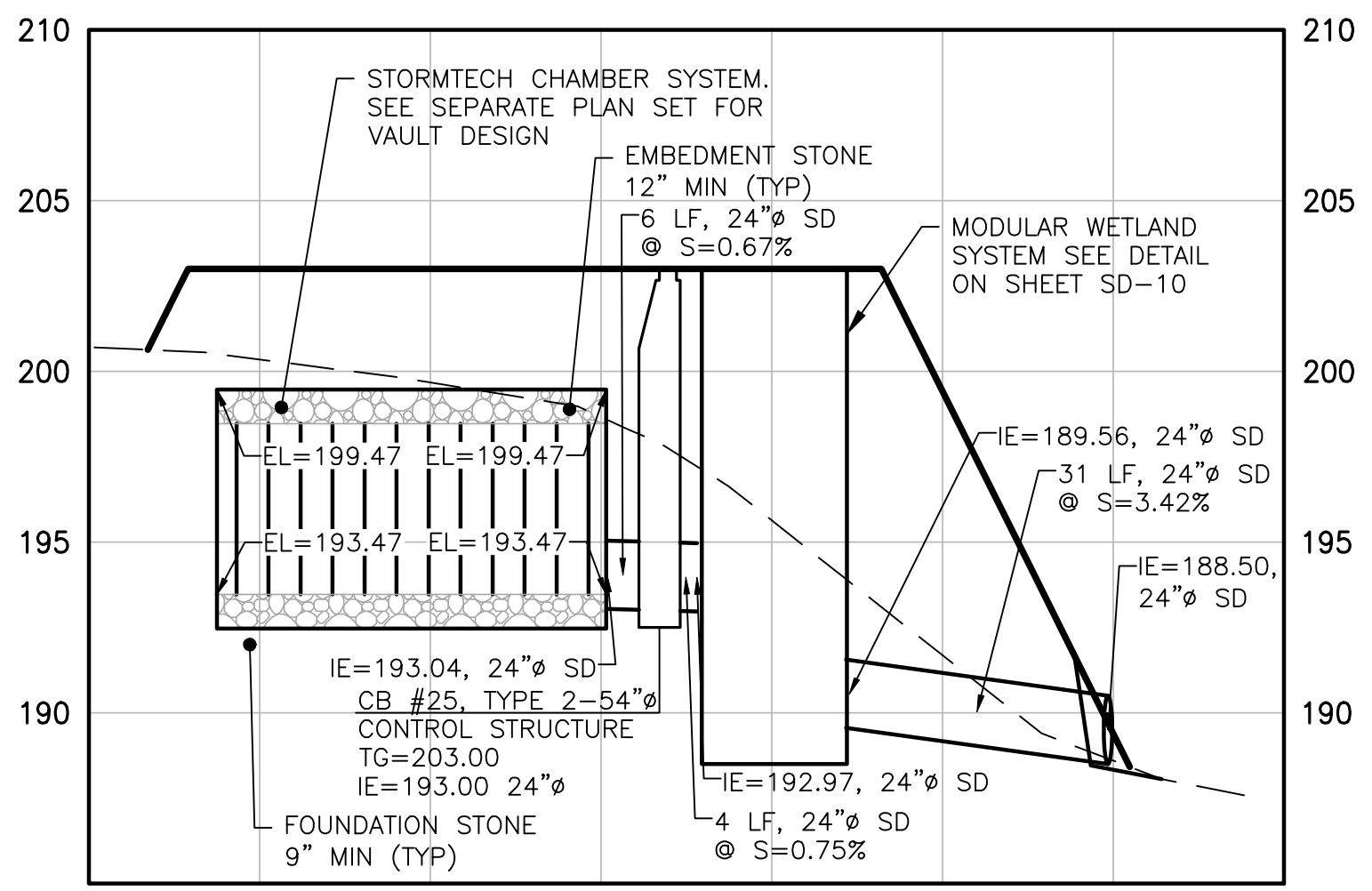
File: \\smc\ENR\ESM-0085\2155\020\020\plans\SD-07.dwg
 Printed: 12/03/2021 10:37 AM
 Printed By: Greg Fedore



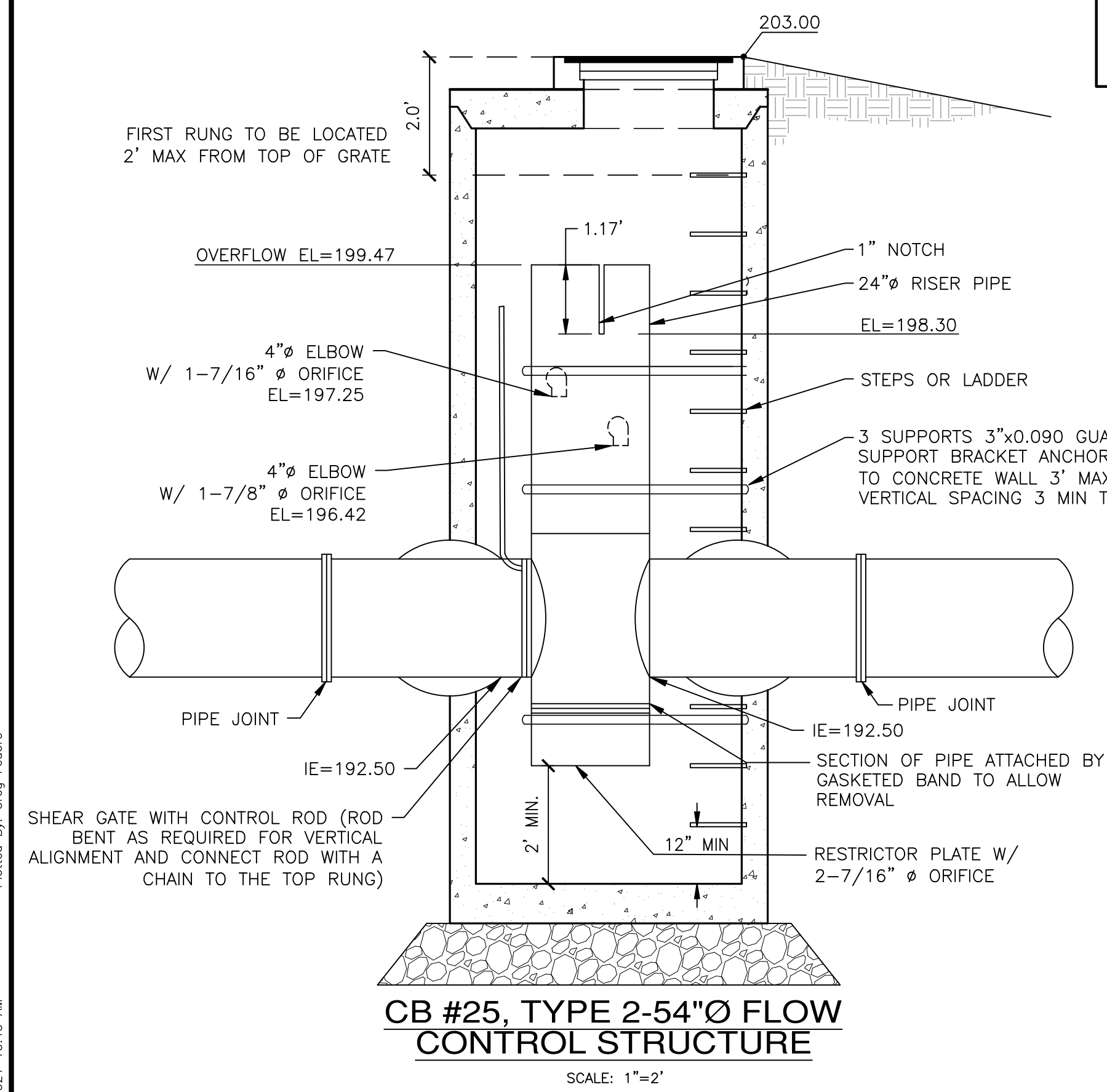
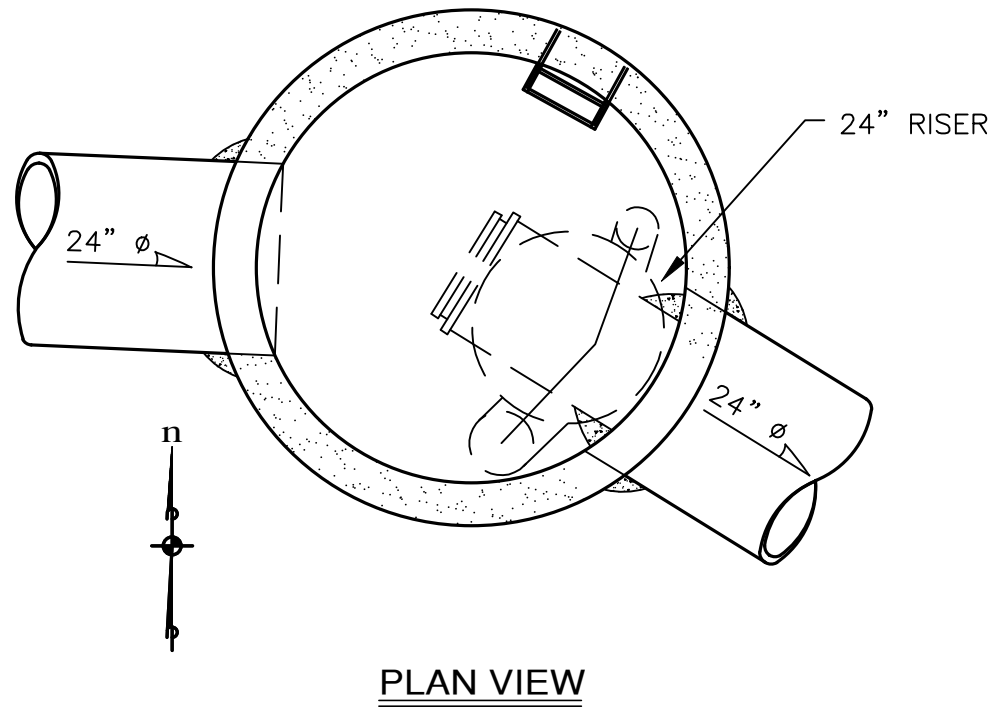
61+00 62+00
STORMTECH CHAMBERS SECTION D-D
 SCALE: 1"=20' HORIZ.
 1"=5' VERT.



66+00 67+00
STORMTECH CHAMBERS SECTION E-E
 SCALE: 1"=20' HORIZ.
 1"=5' VERT.



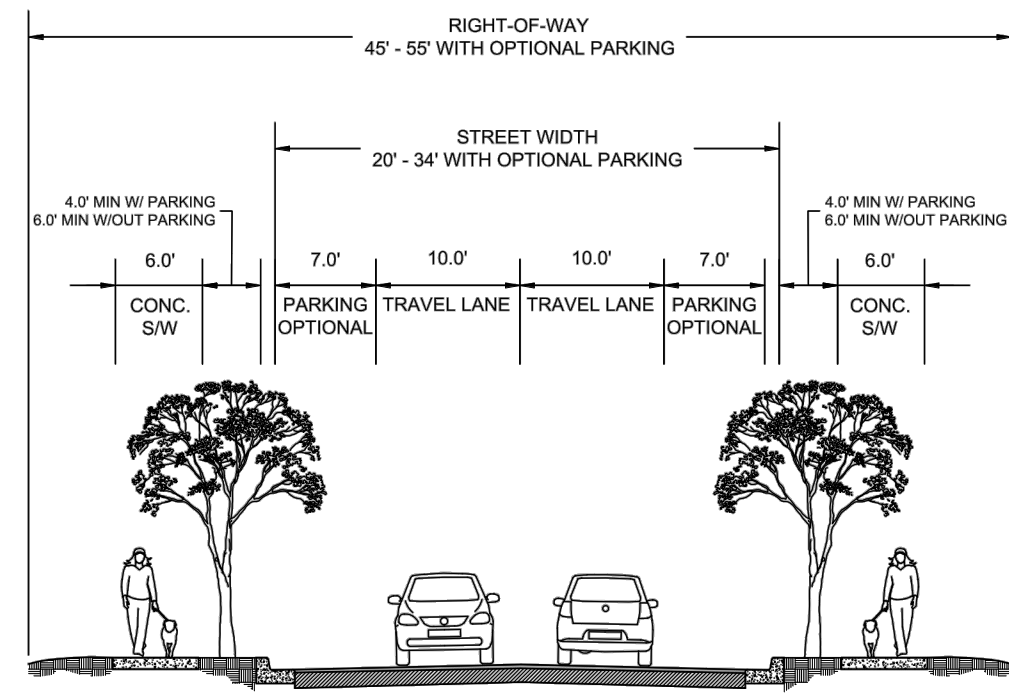
71+00 71+40
STORMTECH CHAMBERS SECTION F-F
 SCALE: 1"=20' HORIZ.
 1"=5' VERT.



ESM CONSULTING ENGINEERS, LLC
 FEDERAL REGISTERED ENGINEER
 33400 Rte. Ave. S., Suite 205
 Federal Way, WA 98003
 www.esmcivil.com
 Civil Engineering | Project Management | Landscape Architecture | Land Planning

SIDNEY ROAD TOWNHOMES L.L.C.
HAVEN TOWNHOMES
 CITY OF PORT ORCHARD
 STORMTECH PLAN & SECTIONS

JOB NO.: 2155-002-020
 DWG. NAME: SD-08
 DESIGNED BY: LGB
 DRAWN BY: GFF
 CHECKED BY:
 DATE: 12/03/2021
 DATE OF PRINT:



Est. 1890

LOCAL A
TWO LANES

DRAWN BY	IDS
DATE	1/15/2019
SCALE	NTS
DRAWING NUMBER	200

A PORTION OF NW 1/4 OF SECTION 11, T. 23 N., R. 1 E., W.M.

NOTES:

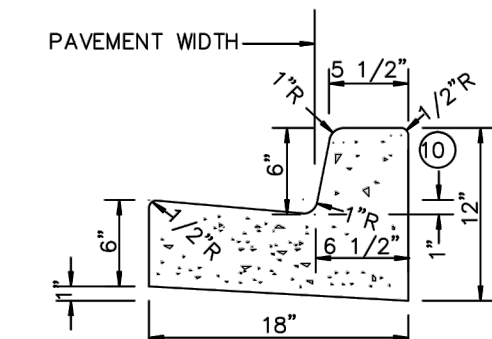
- CONSTRUCTION OF CURB DETAILS SHALL BE IN ACCORDANCE WITH THE CURRENTLY ADOPTED STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION AS PUBLISHED BY THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION AND THE AMERICAN PUBLIC WORKS ASSOCIATION. (WSDOT/APWA SPECIFICATIONS) UNLESS OTHERWISE MODIFIED BELOW.
- ALL CONCRETE SHALL BE COMMERCIAL CLASS PER WSDOT/APWA SPECIFICATIONS.
- FORMS SHALL BE TRUE TO LINE AND GRADE AND SECURELY STAKED. STEEL FORMS ONLY SHALL BE USED ON TANGENT SECTIONS. WOOD FORMS MAY BE USED ON CURVED SECTIONS.
- FULL DEPTH EXPANSION JOINTS CONSISTING OF 3/8" MINIMUM PREMOLDED JOINT MATERIAL SHALL BE PLACED ADJACENT TO CATCH BASINS, INLETS AND AT POINTS OF TANGENCY ON STREETS AND DRIVEWAY RETURNS. MAXIMUM SPACING SHALL BE 20 FEET.
- CONTRACTION JOINTS (DUMMY JOINTS) CONSISTING OF 3/8" MIN. X 2" OF PREMOLDED JOINT MATERIAL SHALL BE CONSTRUCTED AT INTERVALS OF 10 FEET.
- ALL JOINTS SHALL BE CLEAN AND EGGED.
- FINISH SHALL BE A LIGHT BROOM FINISH.
- FINISHED CURBS AND GUTTERS SHALL BE SPRAYED WITH A CLEAR CURING COMPOUND.
- SUBGRADE COMPACTION FOR CURBS AND GUTTERS SHALL MEET A MINIMUM 95% OF MAXIMUM DENSITY IN ACCORDANCE WITH SEC. 2-03.3(14) OF THE WSDOT/APWA SPECIFICATIONS.



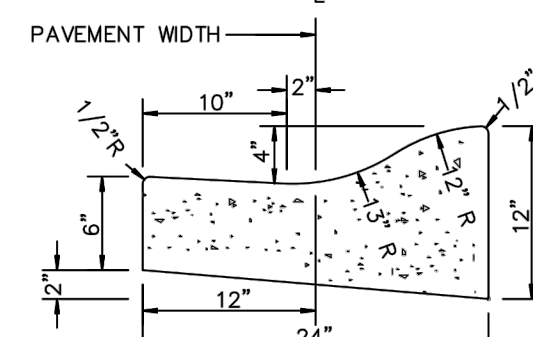
Est. 1890

CURB AND GUTTER A
CEMENT CONCRETE CURB AND GUTTER

DRAWN BY	IDS
DATE	1/29/2019
SCALE	NTS
DRAWING NUMBER	300



CEMENT CONCRETE VERTICAL CURB AND GUTTER



CEMENT CONCRETE ROLLED CURB AND GUTTER

NOTES:

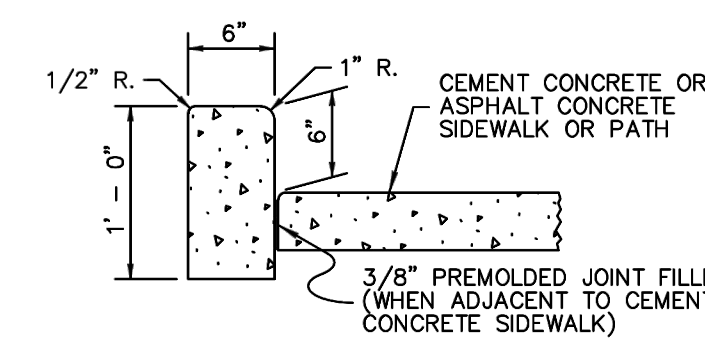
- CONSTRUCTION OF CURB DETAILS SHALL BE IN ACCORDANCE WITH THE CURRENTLY ADOPTED STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION AS PUBLISHED BY THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION AND THE AMERICAN PUBLIC WORKS ASSOCIATION. (WSDOT/APWA SPECIFICATIONS) UNLESS OTHERWISE MODIFIED BELOW.
- ALL CONCRETE SHALL BE COMMERCIAL CLASS PER WSDOT/APWA SPECIFICATIONS.
- FORMS SHALL BE TRUE TO LINE AND GRADE AND SECURELY STAKED. STEEL FORMS ONLY SHALL BE USED ON TANGENT SECTIONS. WOOD FORMS MAY BE USED ON CURVED SECTIONS.
- FULL DEPTH EXPANSION JOINTS CONSISTING OF 3/8" MINIMUM PREMOLDED JOINT MATERIAL SHALL BE PLACED ADJACENT TO CATCH BASINS, INLETS AND AT POINTS OF TANGENCY ON STREETS AND DRIVEWAY RETURNS. MAXIMUM SPACING SHALL BE 20 FEET.
- CONTRACTION JOINTS (DUMMY JOINTS) CONSISTING OF 3/8" MIN. X 2" OF PREMOLDED JOINT MATERIAL SHALL BE CONSTRUCTED AT INTERVALS OF 10 FEET.
- ALL JOINTS SHALL BE CLEAN AND EGGED.
- FINISH SHALL BE A LIGHT BROOM FINISH.
- FINISHED CURBS AND GUTTERS SHALL BE SPRAYED WITH A CLEAR CURING COMPOUND.
- SUBGRADE COMPACTION FOR CURBS AND GUTTERS SHALL MEET A MINIMUM 95% OF MAXIMUM DENSITY IN ACCORDANCE WITH SEC. 2-03.3(14) OF THE WSDOT/APWA SPECIFICATIONS.



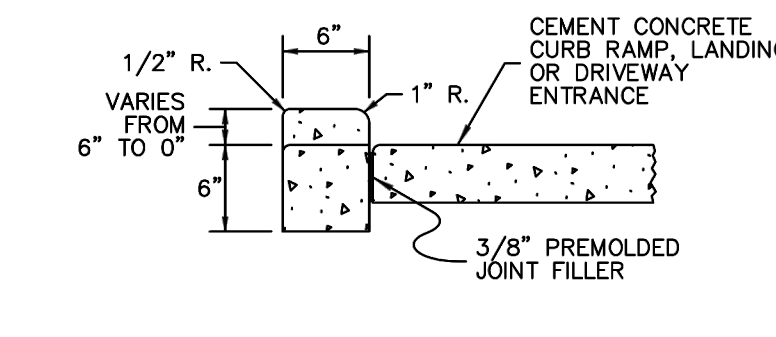
Est. 1890

CURB AND GUTTER B
CEMENT CONCRETE PEDESTRIAN CURB

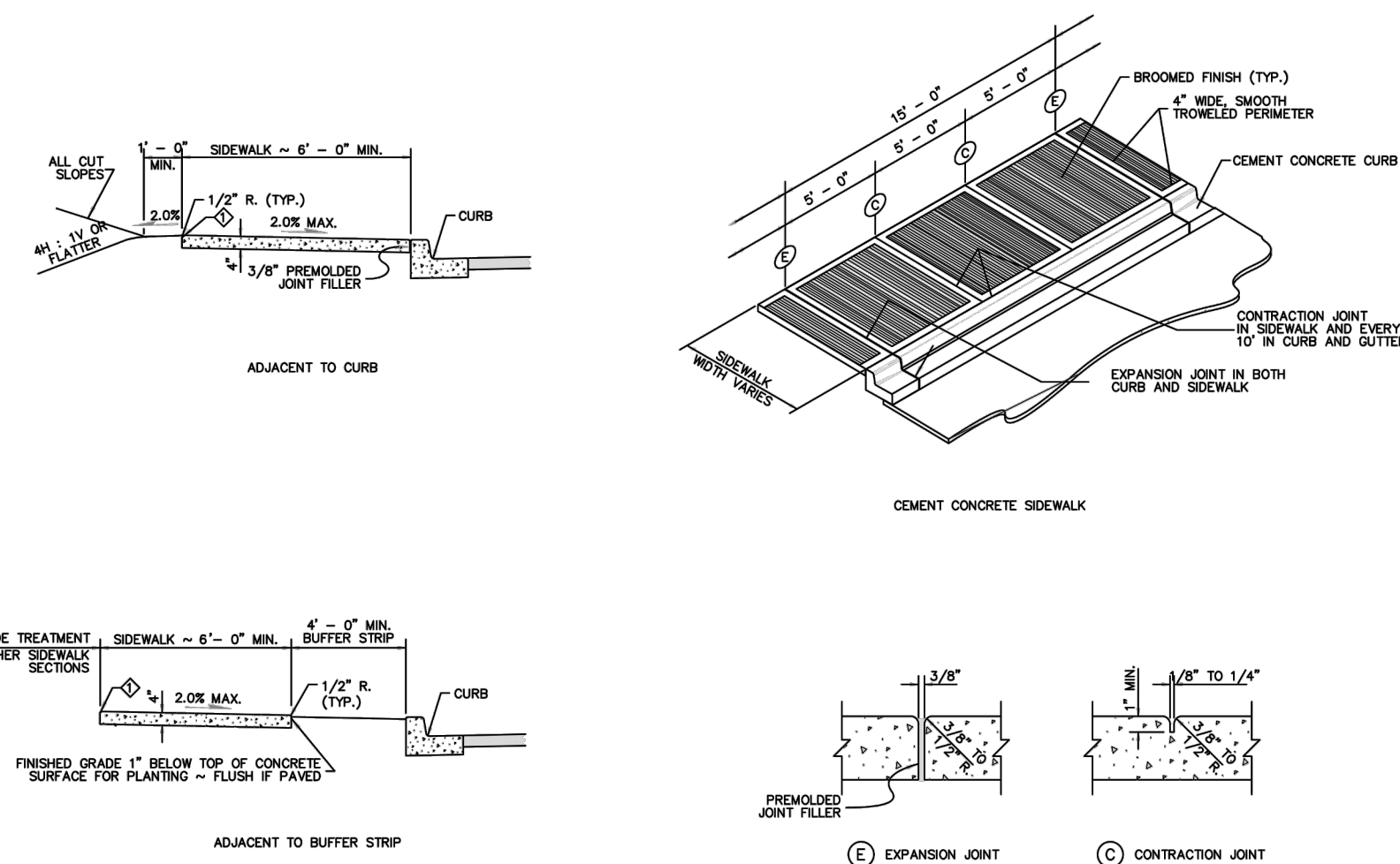
DRAWN BY	IDS
DATE	1/29/2019
SCALE	NTS
DRAWING NUMBER	301



CEMENT CONCRETE PEDESTRIAN CURB



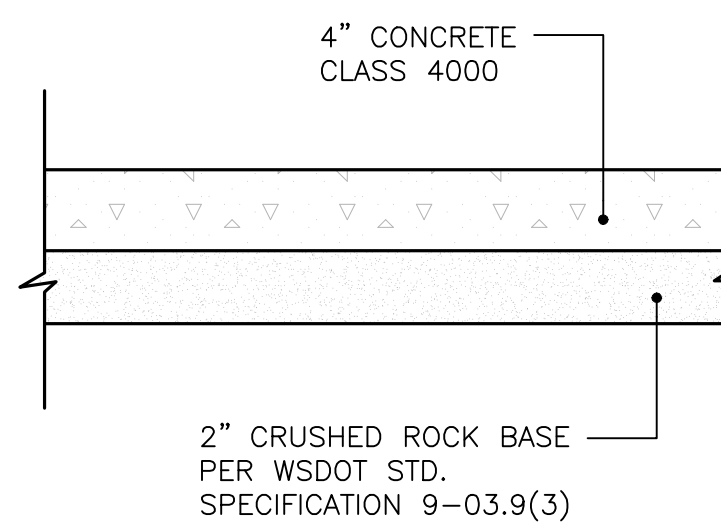
CEMENT CONCRETE PEDESTRIAN CURB AT CURB RAMPS, LANDINGS, AND DRIVEWAY ENTRANCES



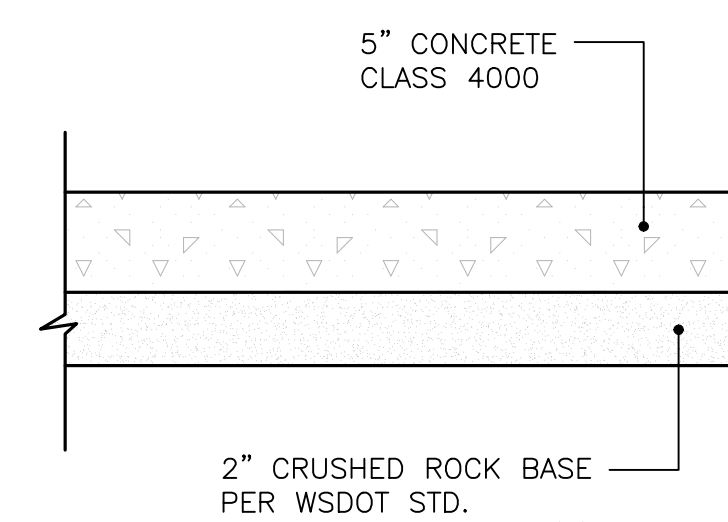
Est. 1890

SIDEWALK A
CEMENT CONCRETE SIDEWALK

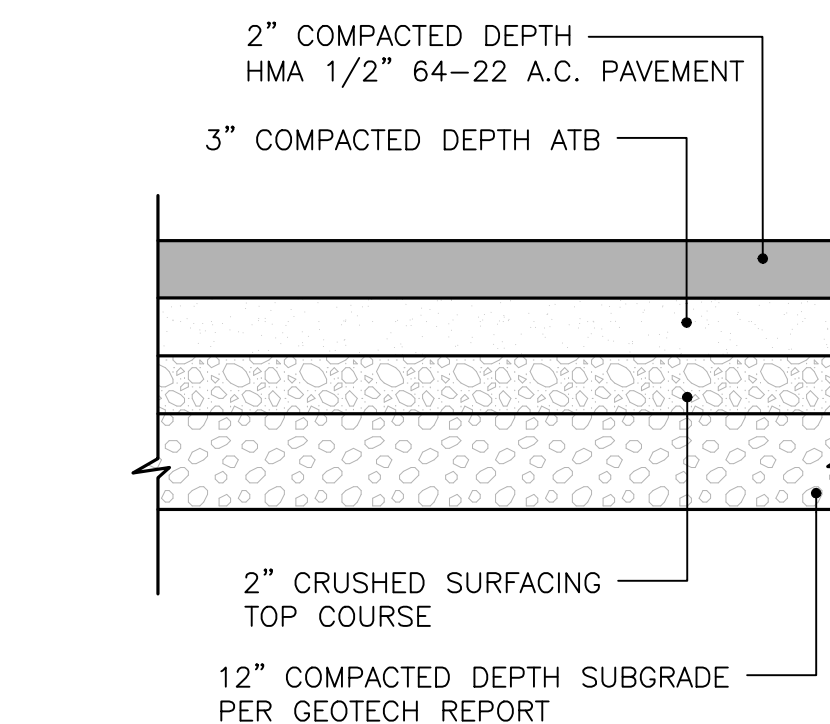
DRAWN BY	IDS
DATE	1/11/2019
SCALE	NTS
DRAWING NUMBER	340



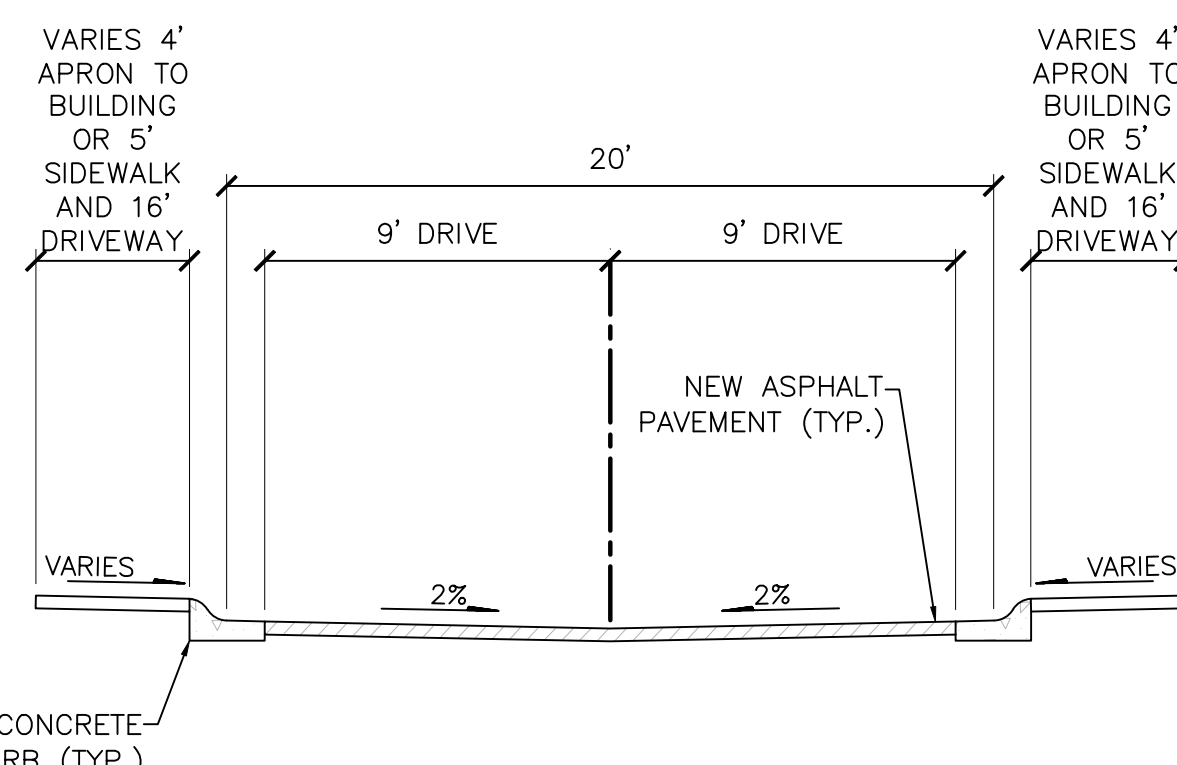
CONCRETE TRAIL SECTION
NOT TO SCALE



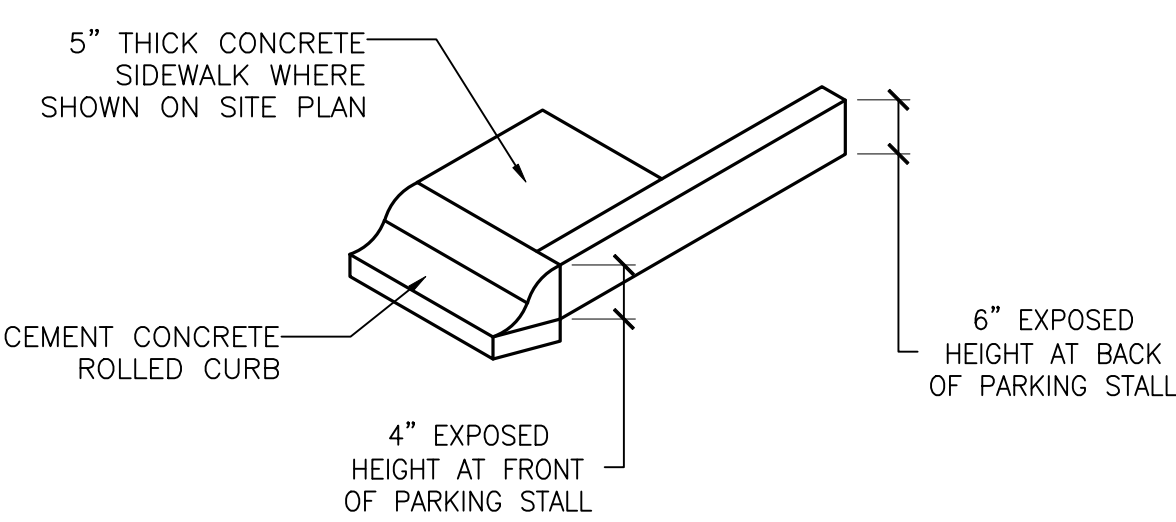
CONCRETE SIDEWALK SECTION
NOT TO SCALE



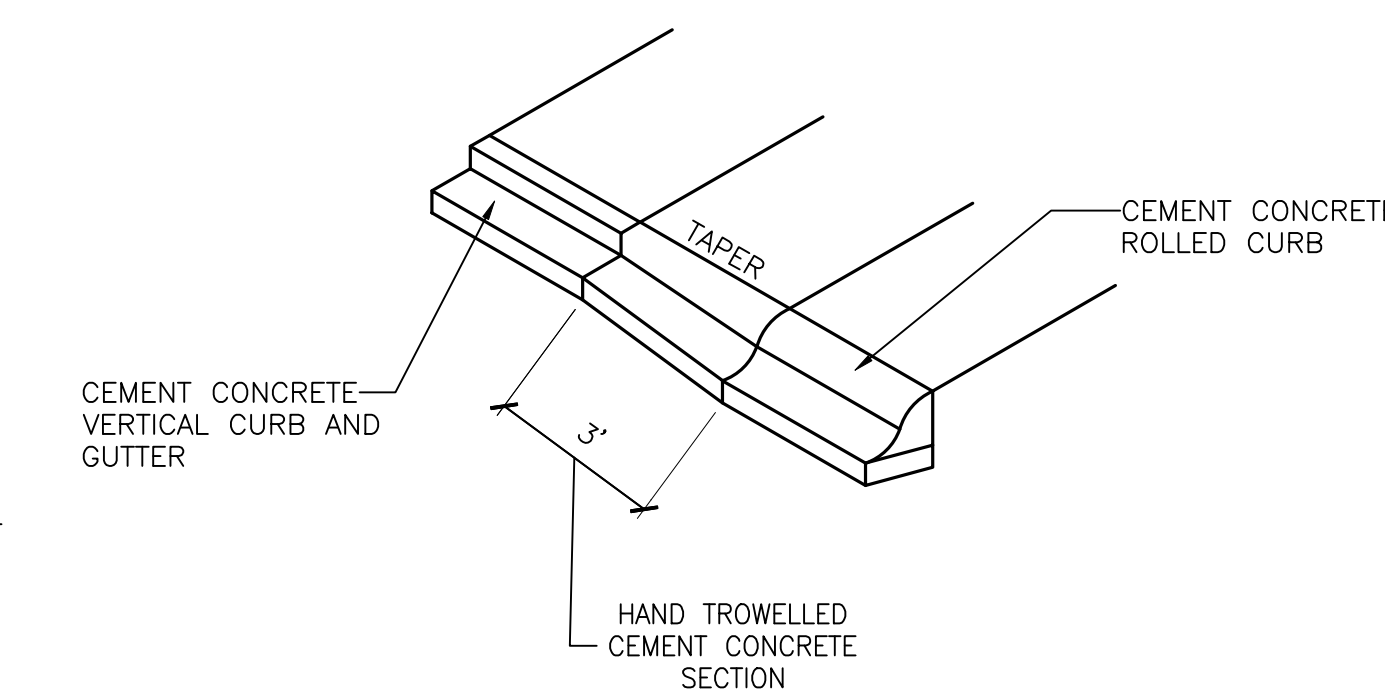
TYPICAL ON-SITE ASPHALT PAVING SECTION
NOT TO SCALE



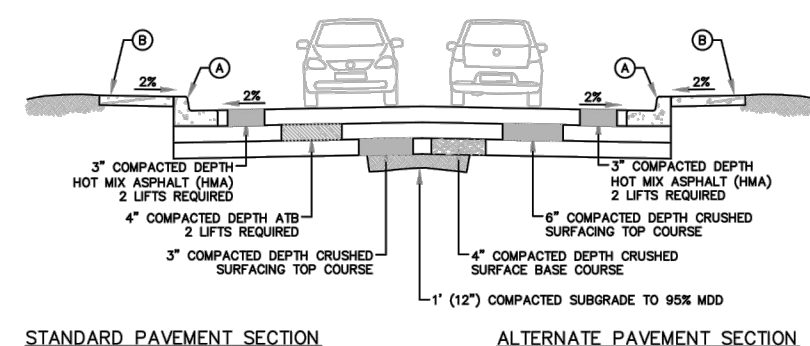
TYPICAL PAVEMENT SECTION
SCALE: 1"=5'



ROLLED CURB TO VERTICAL CURB TRANSITION AT PARKING STALLS
NOT TO SCALE



VERTICAL TO ROLLED CURB TRANSITION
NOT TO SCALE



- CONCRETE CURB AND GUTTER, SEE STD DETAIL 500
- CONCRETE SIDEWALK, SEE STD DETAIL 540

NOTES:

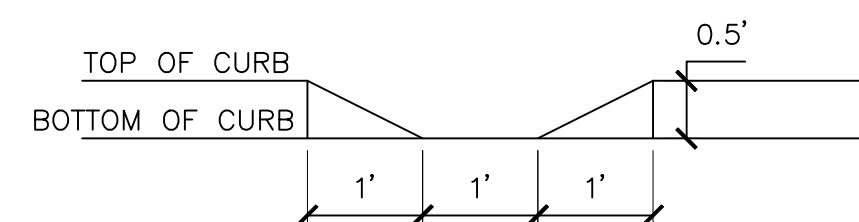
- PAVEMENT SECTIONS SHALL BE PLACED OF 12" MINIMUM COMPACTED SUBGRADE (Q05 MOD).
- PAVEMENT SECTION DEPTHS NOTED REFER TO COMPACTED DEPTH.
- SLOPE EXHIBMENTS MAY BE REQUIRED FOR GRADING OUTSIDE DEDICATED RIGHT-OF-WAY.
- PLANTER STRIP SHALL DRAIN TOWARD STREET AT ONE TO TEN CROSS-SLOPE.



Est. 1890

TYPICAL STREET SECTION D
LOCAL

DRAWN BY	IDS
DATE	1/29/2019
SCALE	NTS
DRAWING NUMBER	403



CURB CUT INLET
NOT TO SCALE

REVISIONS		
NO.	DESCRIPTION/DATE	BY

ESM CONSULTING ENGINEERS LLC
33400 8th Ave S, Suite 205
Federal Way, WA 98003
www.esmcivil.com

Professional Engineer
12/09/2021

Land Surveying
Project Management
Land Planning
Landscape Architecture
Public Works

SIDNEY ROAD TOWNHOMES L.L.C.
HAVEN TOWNHOMES
ROAD & STORM DETAILS
CITY OF PORT ORCHARD WASHINGTON

JOB NO.: 2155-002-020
DWG. NAME: SD-09
DESIGNED BY: LGB
DRAWN BY: GFF
CHECKED BY:
DATE: 12/03/2021
DATE OF PRINT:
SD-09
19 OF 38 SHEETS

SITE SPECIFIC DATA			
PROJECT NUMBER			
PROJECT NAME			
PROJECT LOCATION			
STRUCTURE ID			
TREATMENT REQUIRED			
VOLUME BASED (CF)	FLOW BASED (CFS)		
N/A	0.462		
PEAK BYPASS REQUIRED (CFS) - IF APPLICABLE OFFLINE			
PIPE DATA	I.E.	MATERIAL	DIAMETER
INLET PIPE 1		192.47	24"Ø
INLET PIPE 2	N/A	N/A	N/A
OUTLET PIPE		189.06	24"Ø
PRETREATMENT		BIOFILTRATION	DISCHARGE
RIM ELEVATION			
SURFACE LOAD	PEDESTRIAN		
FRAME & COVER	2EA #30"	OPEN PLANTER	#24"
NOTES:			

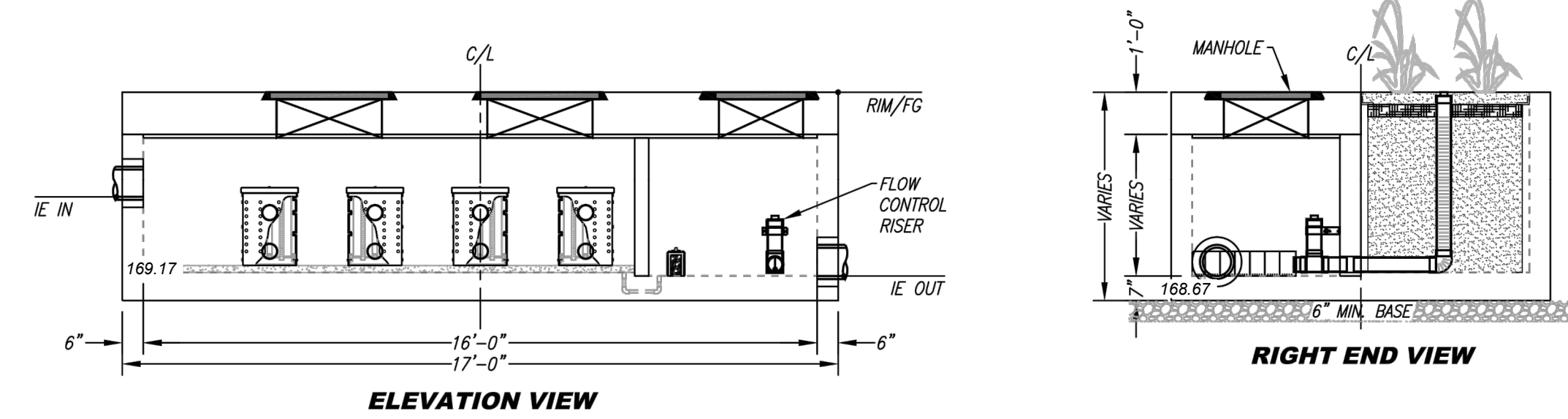
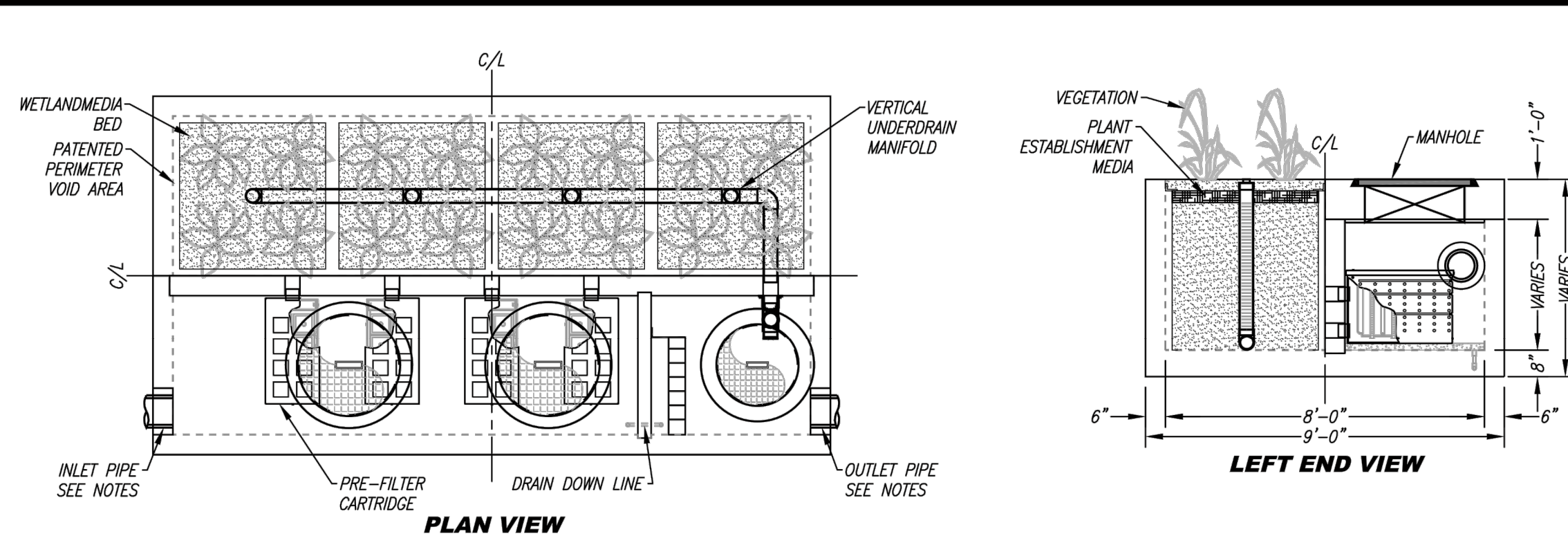
*PRELIMINARY NOT FOR CONSTRUCTION

INSTALLATION NOTES

- CONTRACTOR TO PROVIDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS REQUIRED TO OFFLOAD AND INSTALL THE SYSTEM AND APURTENANCES IN ACCORDANCE WITH THIS DRAWING AND THE MANUFACTURERS SPECIFICATIONS, UNLESS OTHERWISE STATED IN MANUFACTURERS CONTRACT.
- UNIT MUST BE INSTALLED ON LEVEL BASE. MANUFACTURER RECOMMENDS A MINIMUM 6" LEVEL ROCK BASE UNLESS SPECIFIED BY THE PROJECT ENGINEER. CONTRACTOR IS RESPONSIBLE TO VERIFY PROJECT ENGINEERS RECOMMENDED BASE SPECIFICATIONS.
- CONTRACTOR TO SUPPLY AND INSTALL ALL EXTERNAL CONNECTING PIPES. ALL PIPES MUST BE FLUSH WITH INSIDE SURFACE OF CONCRETE. (PIPES CANNOT INTRUDE BEYOND FLUSH). INVERT OF OUTFLOW PIPE MUST BE FLUSH WITH DISCHARGE CHAMBER FLOOR. ALL PIPES SHALL BE SEALED WATER TIGHT PER MANUFACTURERS STANDARD CONNECTION DETAIL.
- CONTRACTOR RESPONSIBLE FOR INSTALLATION OF ALL RISERS, MANHOLES, AND HATCHES. CONTRACTOR TO GROUT ALL MANHOLES AND HATCHES TO MATCH FINISHED SURFACE UNLESS SPECIFIED OTHERWISE.
- VEGETATION SUPPLIED AND INSTALLED BY OTHERS. ALL UNITS WITH VEGETATION MUST HAVE DRIP OR SPRAY IRRIGATION SUPPLIED AND INSTALLED BY OTHERS.
- CONTRACTOR RESPONSIBLE FOR CONTACTING BIO CLEAN FOR ACTIVATION OF UNIT. MANUFACTURERS WARRANTY IS VOID WITH OUT PROPER ACTIVATION BY A BIO CLEAN REPRESENTATIVE.

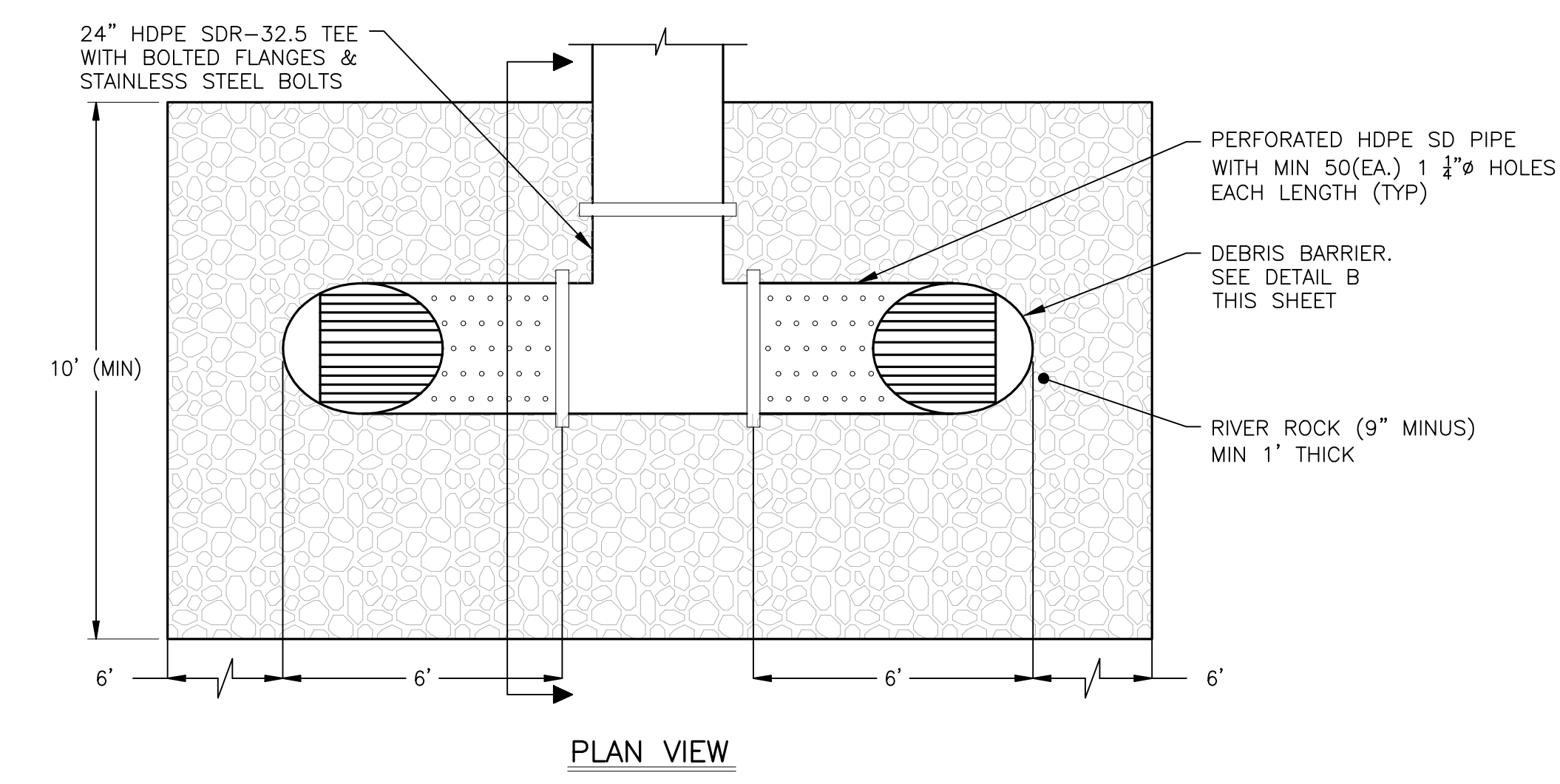
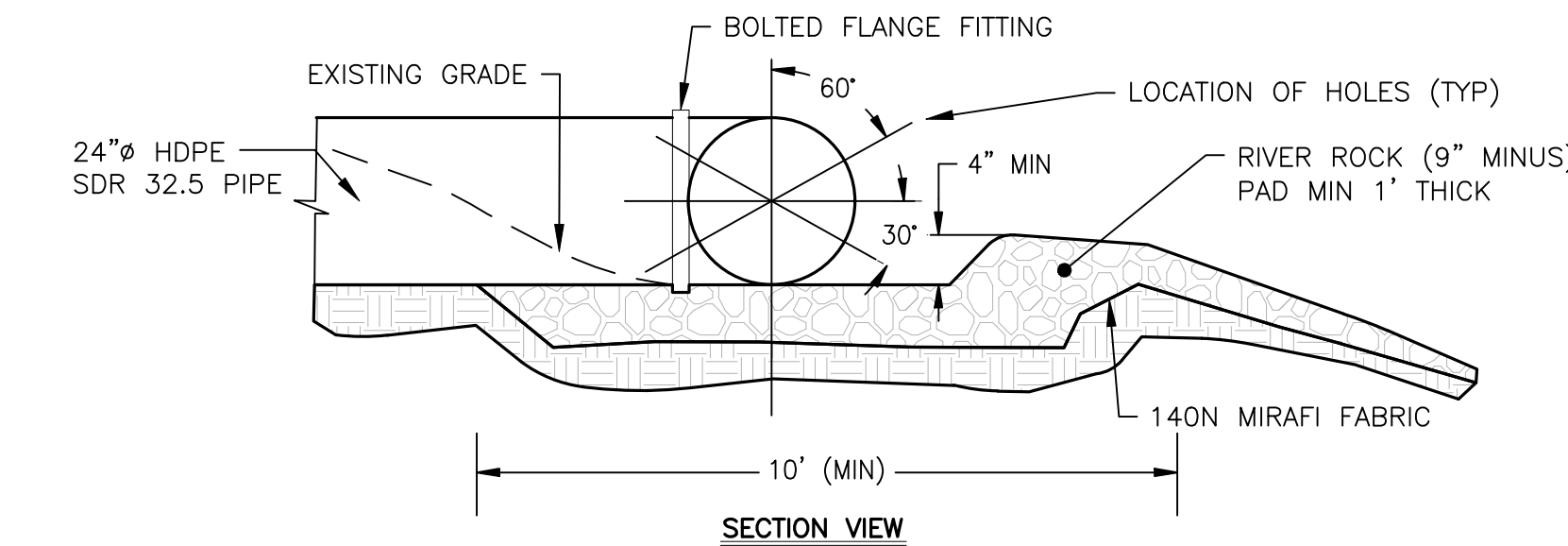
GENERAL NOTES

- MANUFACTURER TO PROVIDE ALL MATERIALS UNLESS OTHERWISE NOTED.
- ALL DIMENSIONS, ELEVATIONS, SPECIFICATIONS AND CAPACITIES ARE SUBJECT TO CHANGE. FOR PROJECT SPECIFIC DRAWINGS DETAILING EXACT DIMENSIONS, WEIGHTS AND ACCESSORIES PLEASE CONTACT BIO CLEAN.



TREATMENT FLOW (CFS)	0.462
OPERATING HEAD (FT)	3.4
PRETREATMENT LOADING RATE (GPM/SF)	2.0
WETLAND MEDIA LOADING RATE (GPM/SF)	1.0

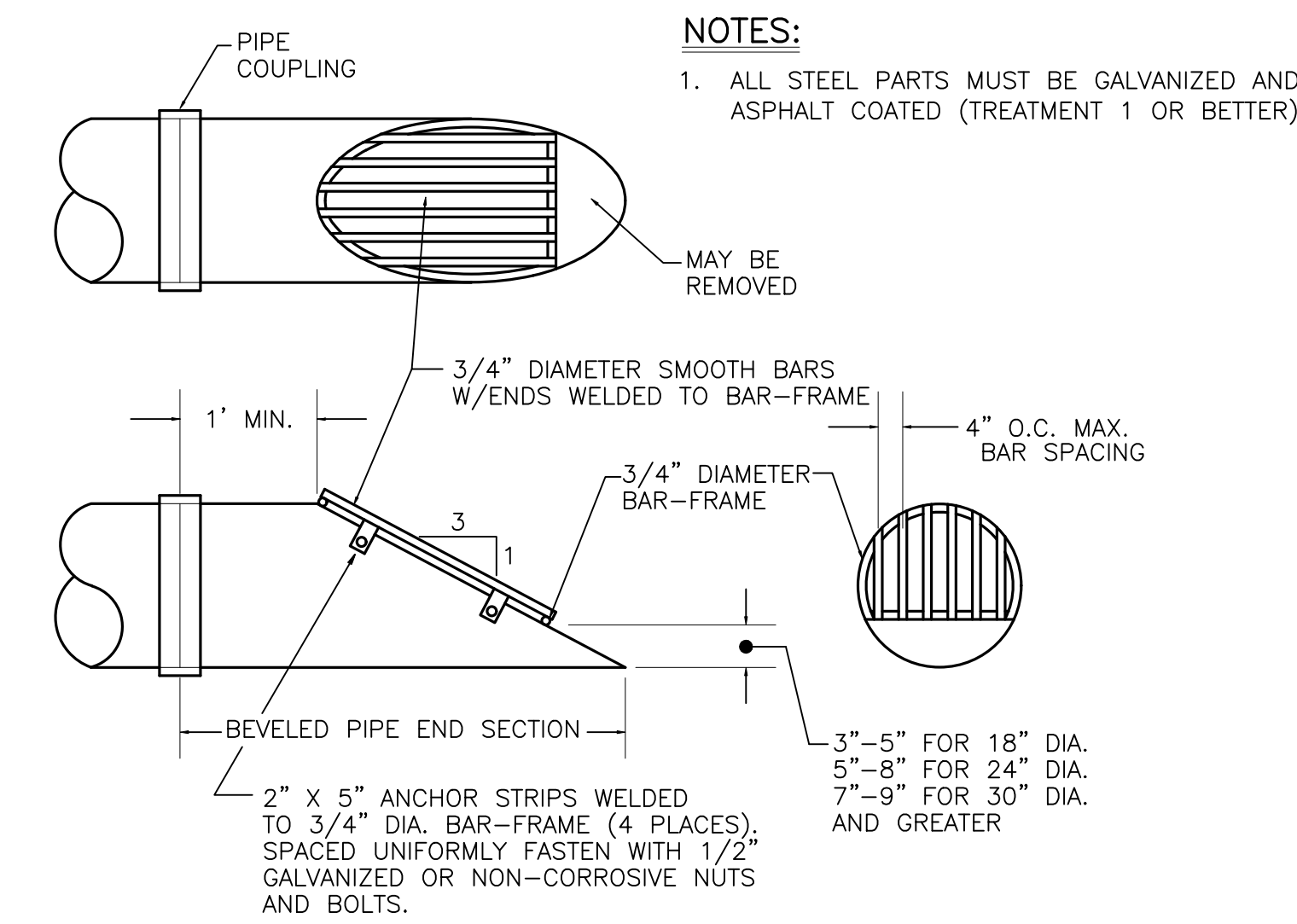
MWS-L-8-16-V
STORMWATER BIOFILTRATION SYSTEM
STANDARD DETAIL



NOTES:

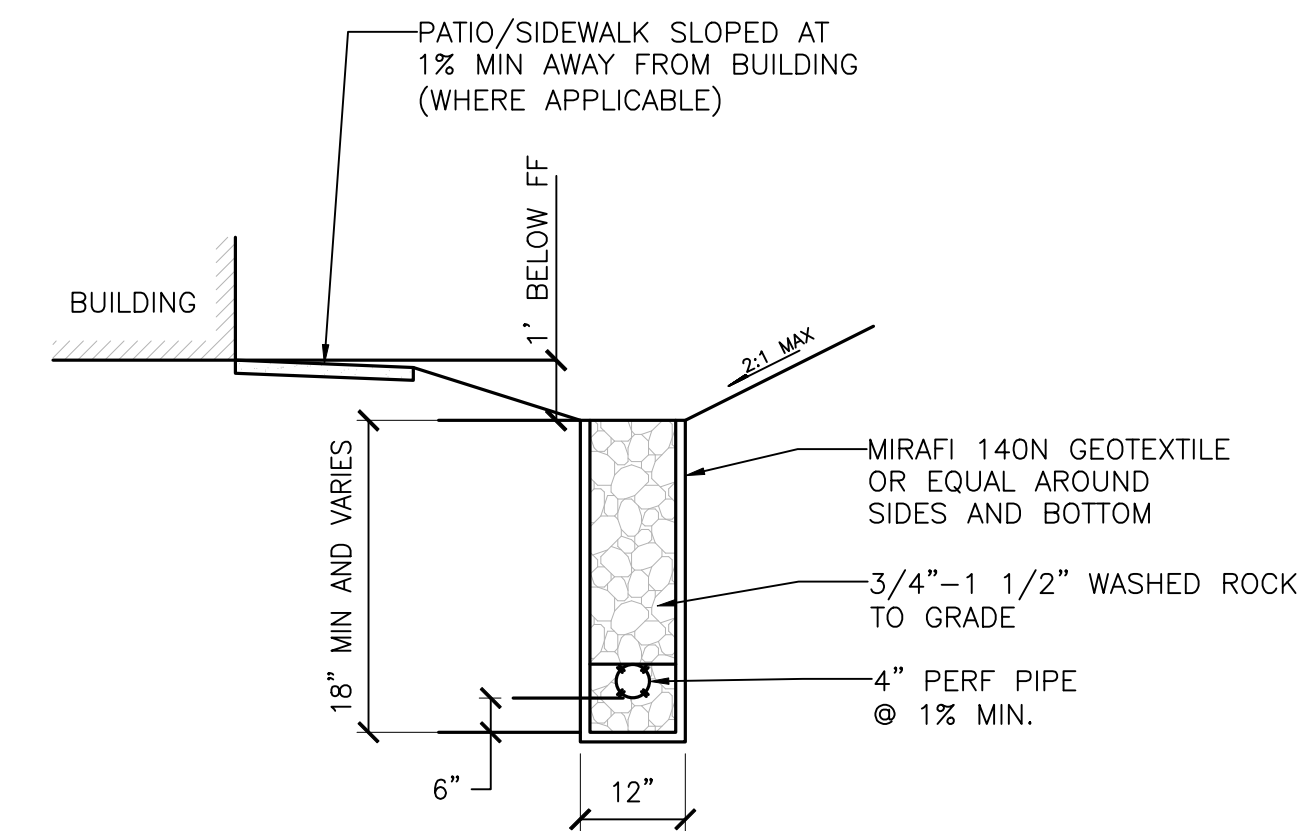
- CORPORATION PLACE ENERGY DISSIPATOR PERPENDICULAR TO THE SLOPE.
- RIVER ROCK (9" MINUS) TO EXTEND TOWARD STREAM BANKS, BUT SHALL BE PLACED ABOVE THE ORDINARY HIGH WATER MARK.
- UNDERLINE RIVER-ROCK PAD AND ROCK DRAINAGE COURSE WITH 140N MIRAFI FABRIC OR EQUIVALENT FILTER FABRIC (ENGINEER MUST VERIFY PLACEMENT AND MATERIAL).

(A) FLOW SPREADER/ENERGY DISSIPATOR
NOT TO SCALE



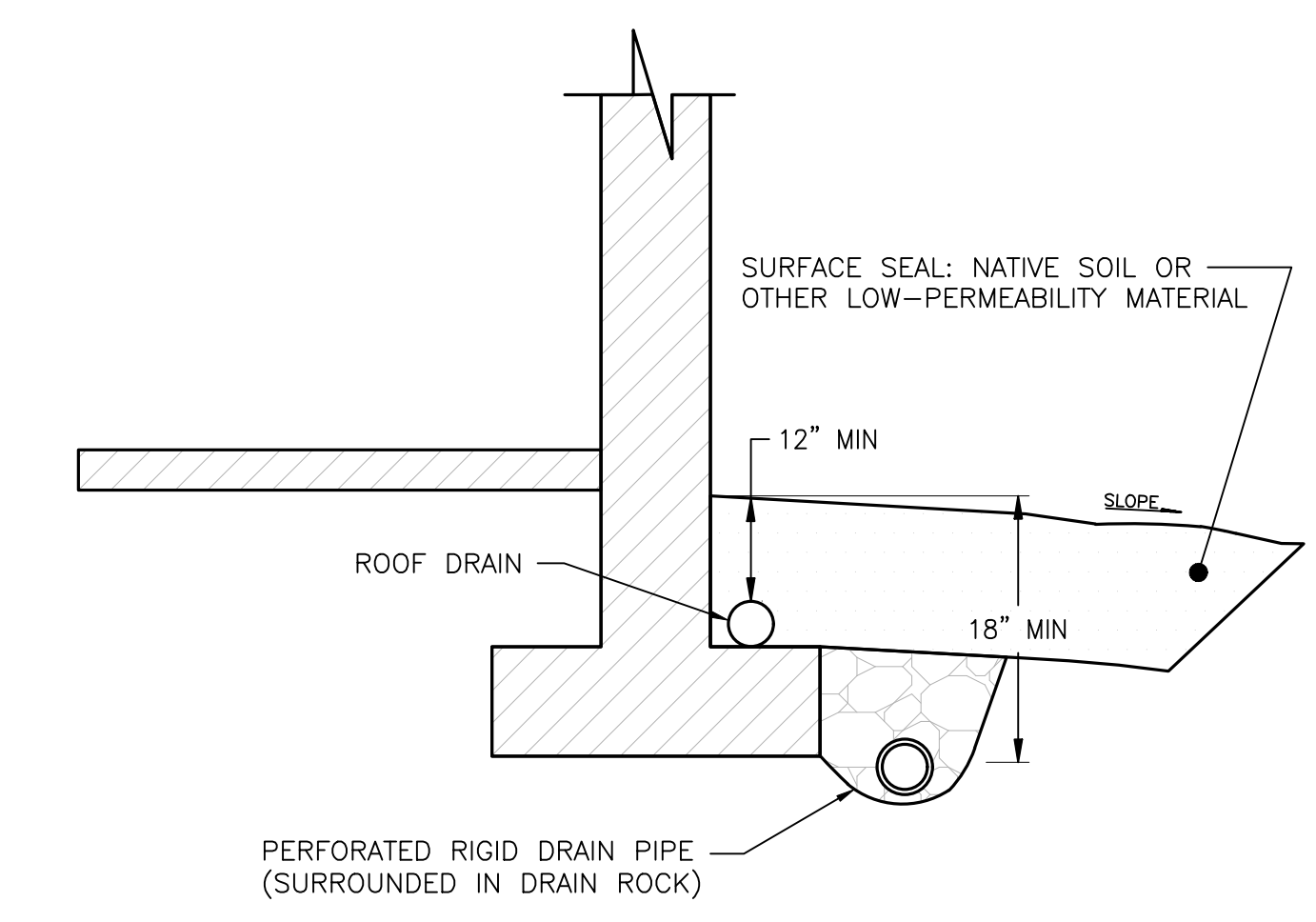
- NOTES:**
- ALL STEEL PARTS MUST BE GALVANIZED AND ASPHALT COATED (TREATMENT 1 OR BETTER)

(B) DEBRIS BARRIER
NOT TO SCALE



- NOTES:**
- ALL LANDSCAPE GRADES SURROUNDING BUILDING MUST BE SLOPED AT 3% MIN. AWAY FROM BUILDING
 - DRIVEWAYS SHALL BE SLOPED AT 0.5% MIN. AWAY FROM BUILDING.
 - TOP OF FRENCH DRAINS TO BE SET 8" MINIMUM BELOW FF OF BUILDING WHERE SHOWN.

(C) TYPICAL GRADING AT BUILDING EDGE W/ FRENCH DRAIN
NOT TO SCALE



(D) FOOTING & ROOF DRAIN DETAIL
NOT TO SCALE

File: \\mms6\ENGR\ESM-JOB\21155\020\020\pds\SD-10.dwg
Printed: 12/09/2021 9:06 AM
Printed By: Greg Fedore

REVISIONS		
NO.	DESCRIPTION/DATE	BY

ESM CONSULTING ENGINEERS, LLC
33400 Rte. Ave. S., Suite 205
Federal Way, WA 98003
(206) 835-6113
(206) 835-9900
www.esmcivil.com

REGISTERED PROFESSIONAL ENGINEER
12/09/2021

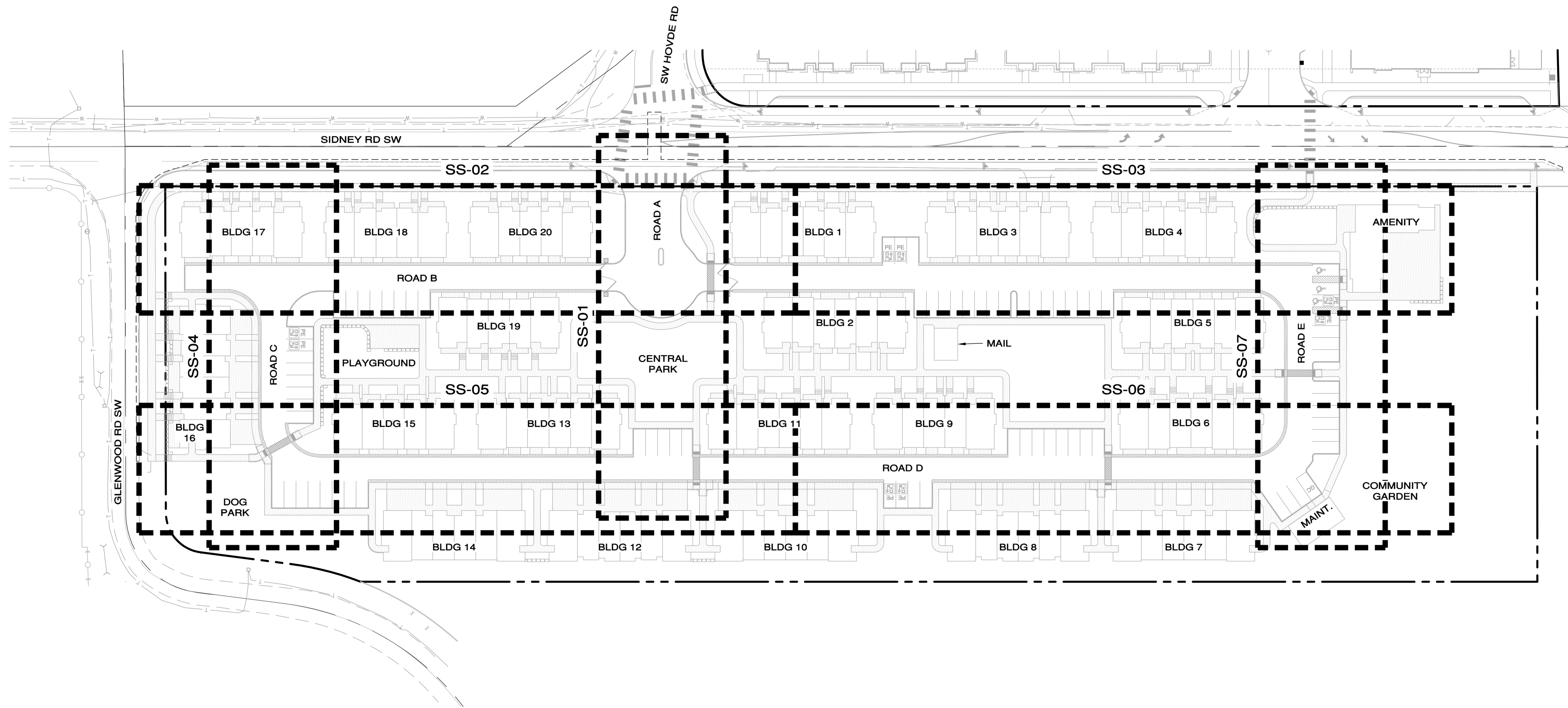
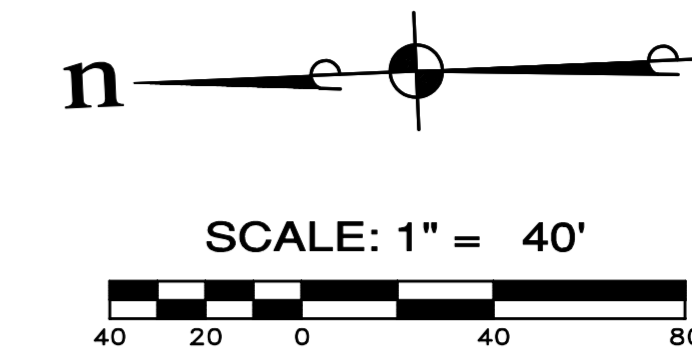
Land Surveying
Project Management
Landscape Architecture
Public Works

SIDNEY ROAD TOWNHOMES L.L.C.
HAVEN TOWNHOMES
ROAD & STORM DETAILS
CITY OF PORT ORCHARD WASHINGTON

JOB NO.: 2155-002-020
DWG. NAME: SD-10
DESIGNED BY: LGB
DRAWN BY: GFF
CHECKED BY:
DATE: 12/03/2021
DATE OF PRINT:

SD-10
20 OF 38 SHEETS

A PORTION OF NW 1/4 OF SECTION 11, T. 23 N., R. 1 E., W.M.



REVISIONS		
NO.	DESCRIPTION/DATE	BY



ESM CONSULTING ENGINEERS LLC
 35400 8th Ave S, Suite 205
 Federal Way, WA 98003
 www.esmcivil.com

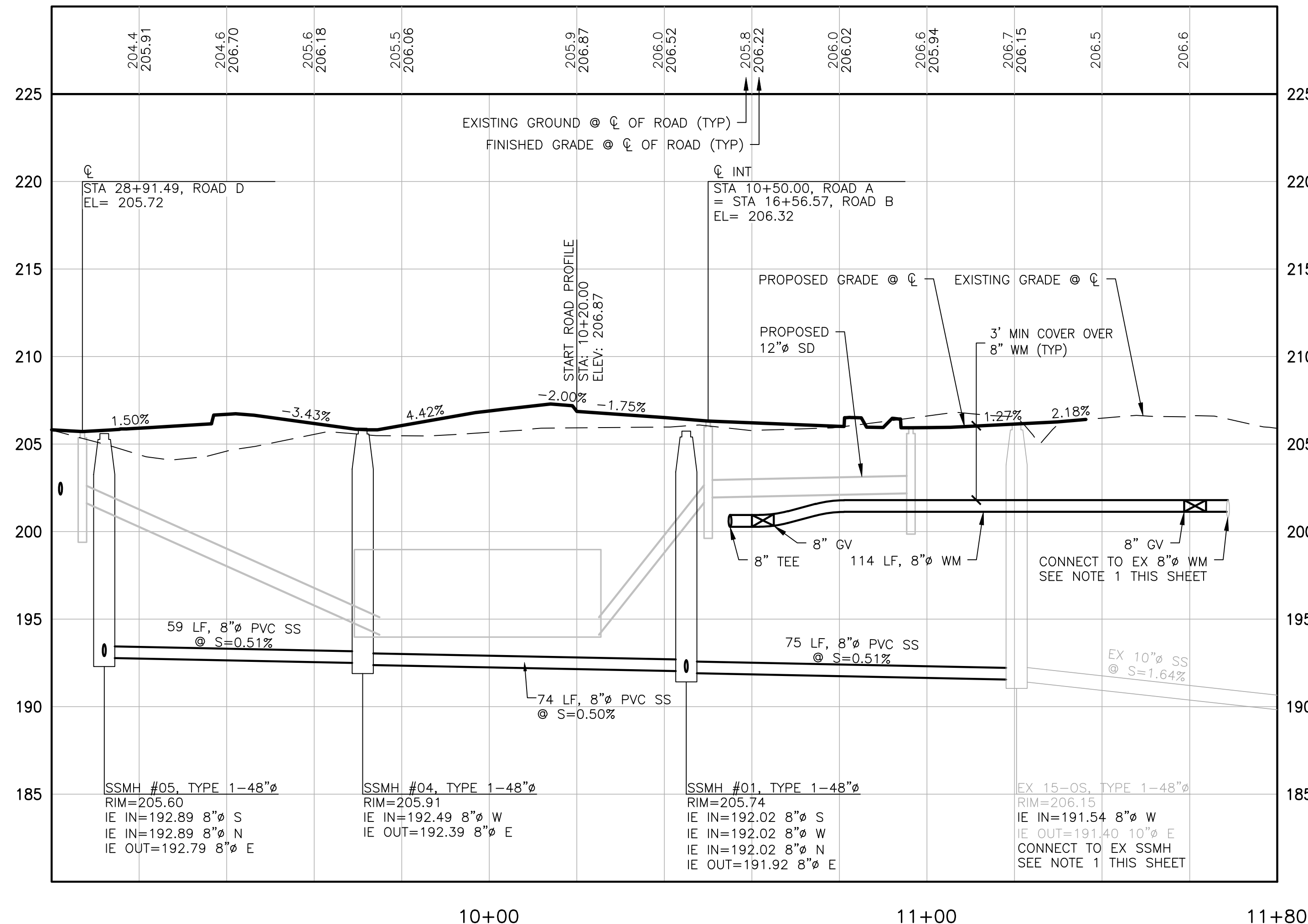
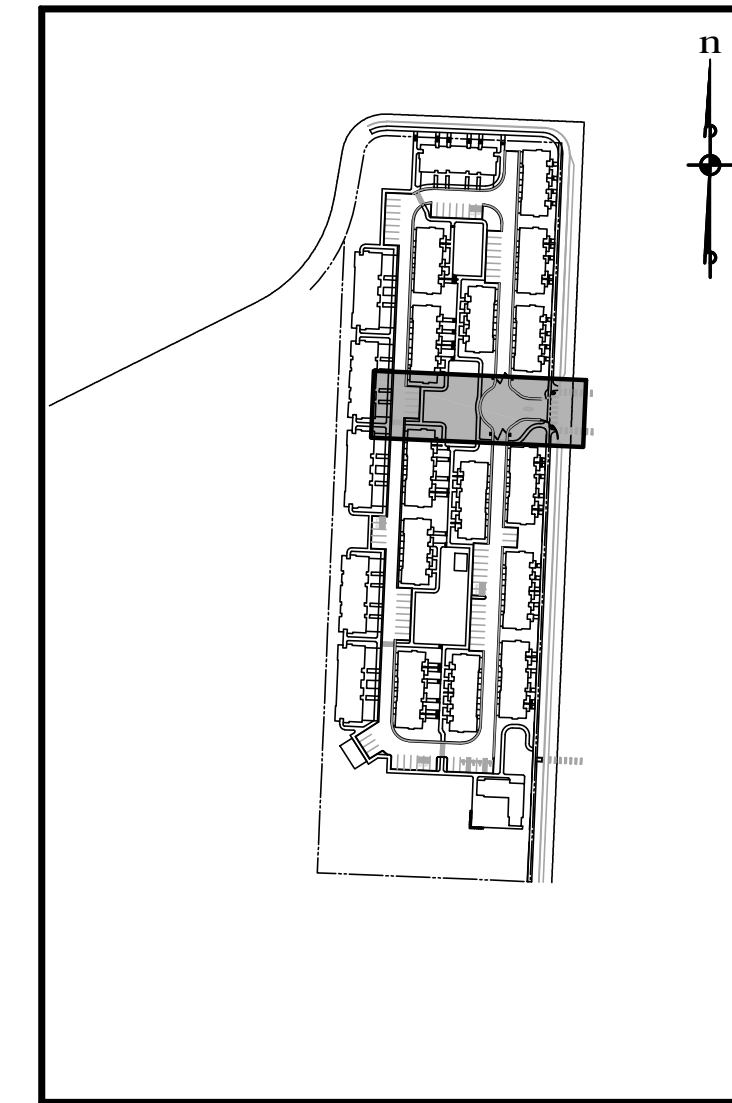
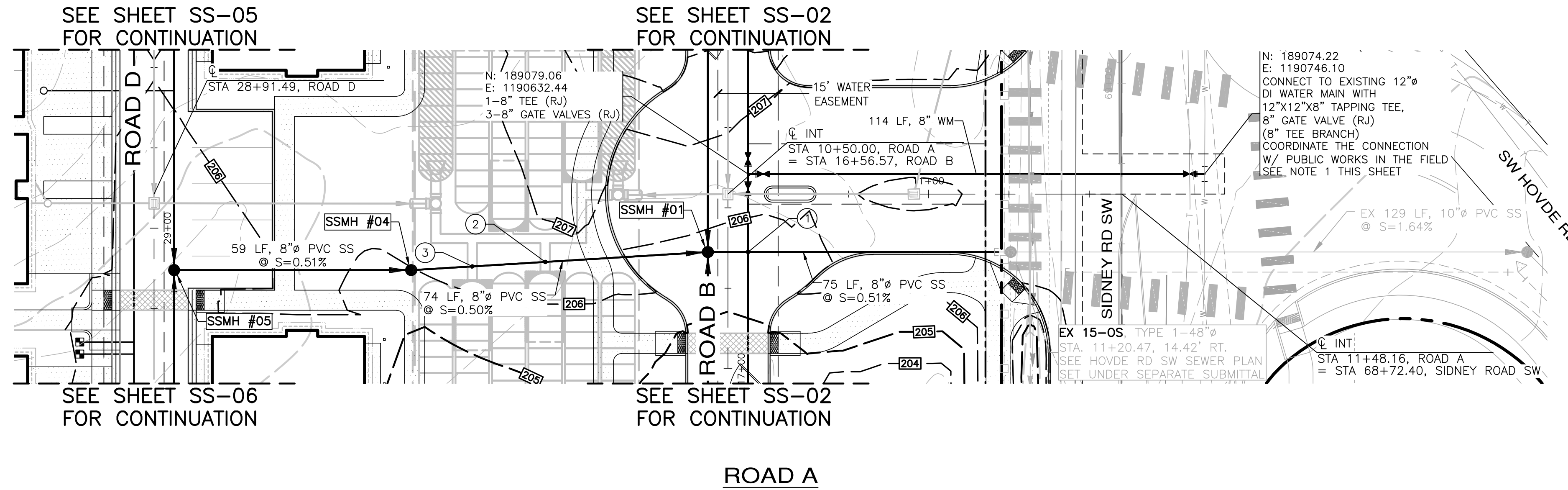
FEDERAL WAY (253) 838-6113
 EVERETT (425) 297-9900

Civil Engineering
 Public Works
 Land Surveying
 Project Management
 Land Planning
 Landscape Architecture

SIDNEY ROAD TOWNHOMES L.L.C.
HAVEN TOWNHOMES
 SEWER/WATER KEY MAP
 CITY OF PORT ORCHARD WASHINGTON

JOB NO.:	2155-002-020
DWG. NAME:	SS-KEY
DESIGNED BY:	LGB
DRAWN BY:	GFF
CHECKED BY:	
DATE:	12/10/2021
DATE OF PRINT:	

File: \\esma\ENGR\ESM-JOB\2155\020\020\020\020\SS-KEY.dwg
 Plotted: 12/9/2021 3:14 PM
 Plotted By: Laura Bartenhagen



SCALE: 1"=20' HORIZ.
1"=5' VERT.

- NOTES:**
- CONTRACTOR TO VERIFY LOCATION, ELEVATION, SIZE AND TYPE PRIOR TO CONSTRUCTION AND NOTIFY ENGINEER OF ANY DISCREPANCIES. CONTRACTOR TO PROVIDE UTILITY LOCATES TO CONFIRM EXISTING WATER INFRASTRUCTURE SUCH AS GATE VALVES AND BLOW-OFFS.
 - MAINTAIN A MINIMUM OF 1' SEPARATION BETWEEN CB STRUCTURES AND 8" WATER MAIN.
 - PRESERVE AND PROTECT EXISTING GRAVITY 8" SEWER.

UTILITY CROSSING TABLE

- | | |
|---|--|
| 1 | N: 189059.67
E: 1190631.62
PROPOSED 8" WA BOTTOM=200.28
PROPOSED 8" SS TOP=192.54
CLEARANCE=7.74' |
| 2 | N: 189059.35
E: 1190581.02
PROPOSED 24" SD BOTTOM=193.98
PROPOSED 8" SS TOP=192.89
CLEARANCE=1.09' |
| 3 | N: 189059.02
E: 1190562.82
PROPOSED 24" SD BOTTOM=193.98
PROPOSED 8" SS TOP=192.98
CLEARANCE=1.00' |

STRUCTURE TABLE

STRUCTURE NAME:	DETAILS:
SSMH #01, TYPE 1-48"Ø STA 10+45.00, 14.42' RT	RIM=205.74 IE IN=192.02, 8" (S) IE IN=192.02, 8" (W) IE IN=192.02, 8" (N) IE OUT=191.92, 8" (E)
SSMH #04, TYPE 1-48"Ø STA 29+10.42, 64.04' LT	RIM=205.91 IE IN=192.49, 8" (W) IE OUT=192.39, 8" (E)
SSMH #05, TYPE 1-48"Ø STA 29+10.42, 5.00' LT	RIM=205.60 IE IN=192.89, 8" (S) IE IN=192.89, 8" (N) IE OUT=192.79, 8" (E)
EX 15-0S, TYPE 1-48"Ø STA 11+20.47, 14.42' RT	RIM=206.15 IE IN=191.54, 8" (W)

REVISIONS

NO.	DESCRIPTION/DATE	BY

ESM CONSULTING ENGINEERS, LLC
 33400 8th Ave S, Suite 205
 Federal Way, WA 98003
 www.esmcivil.com
 Civil Engineering | Land Surveying | Project Management | Landscape Architecture
 Public Works | Land Planning

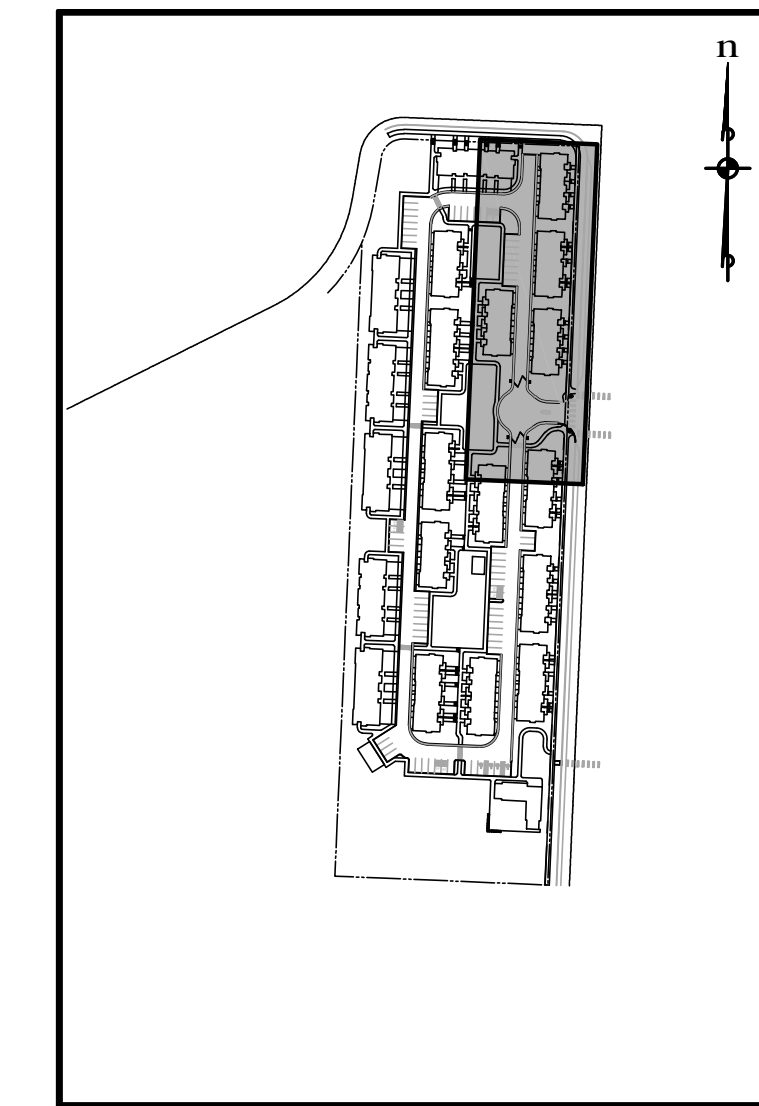
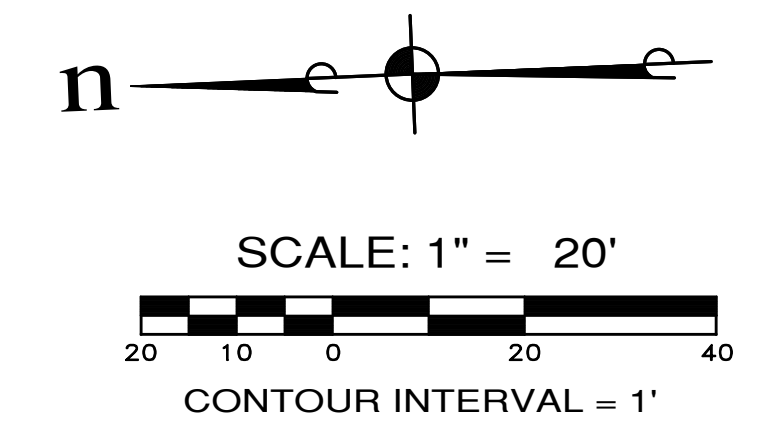
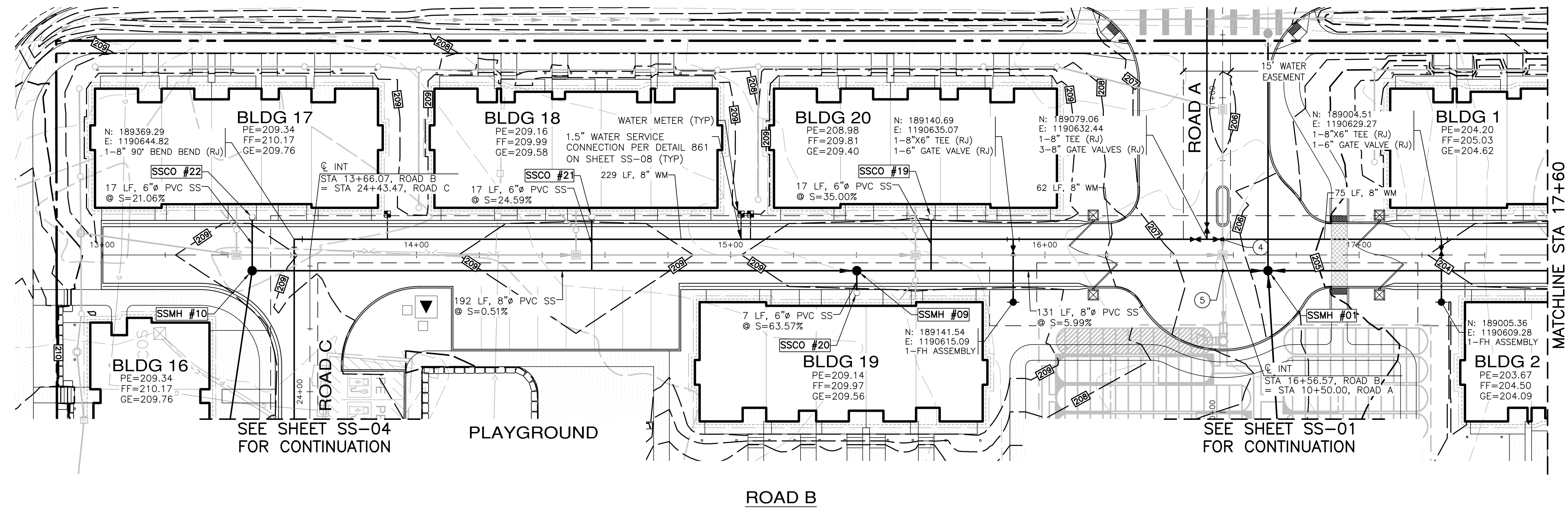
WASHINGTON

SIDNEY ROAD TOWNHOMES L.L.C.
HAVEN TOWNHOMES
 CITY OF PORT ORCHARD
 SEWER/WATER PLAN & PROFILE

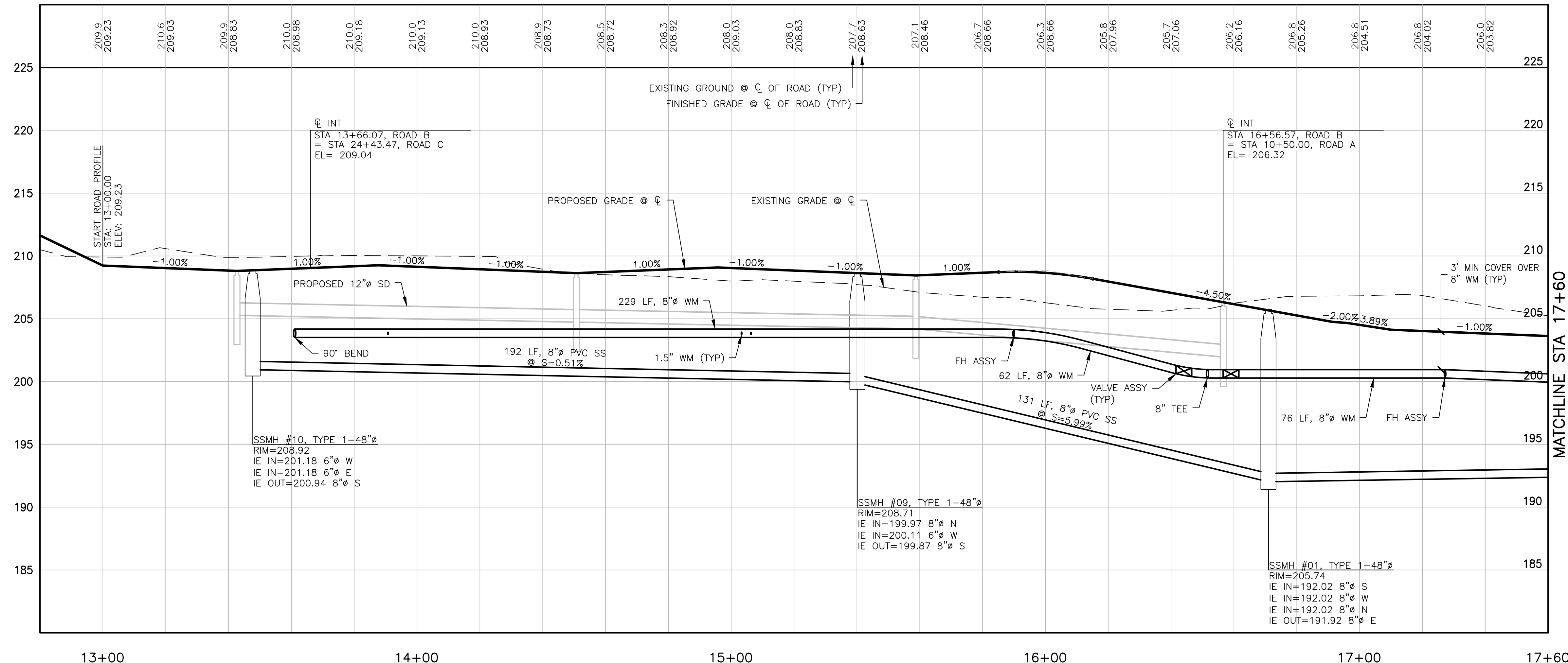
JOB NO.: 2155-002-020
 DWG. NAME: SS-01
 DESIGNED BY: LGB
 DRAWN BY: GFF
 CHECKED BY:
 DATE: 12/03/2021
 DATE OF PRINT:

File: \\smc\ENGR\ESM-JOB\2155\020\020\pds\SS-01.dwg
 Plotted By: Greg Fedore
 Plotted: 12/9/2021 9:09 AM

A PORTION OF NW 1/4 OF SECTION 11, T. 23 N., R. 1 E., W.M.



KEY MAP
N.T.S.



UTILITY CROSSING TABLE

④	N: 189074.07 E: 1190632.23 PROPOSED 12" SD BOTTOM=201.98 PROPOSED 8" WA TOP=200.98 CLEARANCE=1.00'
⑤	N: 189074.45 E: 1190622.24 PROPOSED 12" SD BOTTOM=201.65 PROPOSED 8" WA TOP=193.55 CLEARANCE=8.10'

STRUCTURE TABLE

STRUCTURE NAME:	DETAILS:
SSMH #01, TYPE 1-48" Ø STA 10+45.00, 14.42' RT	RIM=205.74 IE IN=192.02, 8" (S) IE IN=192.02, 8" (W) IE IN=192.02, 8" (N) IE OUT=191.92, 8" (E)
SSMH #09, TYPE 1-48" Ø STA 15+40.14, 5.00' RT	RIM=208.71 IE IN=199.97, 8" (N) IE IN=200.11, 6" (W) IE OUT=199.87, 8" (S)
SSMH #10, TYPE 1-48" Ø STA 13+47.70, 5.00' RT	RIM=208.92 IE IN=201.18, 6" (W) IE IN=201.18, 6" (E) IE OUT=200.94, 8" (S)

STRUCTURE TABLE

STRUCTURE NAME:	DETAILS:
SSCO #19 STA. 15+63.78, 12.00' L	RIM = 209.07 INV OUT = 204.40, 6" (W)
SSCO #20 STA. 15+40.14, 12.00' R	RIM = 209.19 INV OUT = 204.56, 6" (E)
SSCO #21 STA. 14+55.74, 12.00' L	RIM = 209.28 INV OUT = 204.58, 6" (W)
SSCO #22 STA. 13+47.70, 12.00' L	RIM = 209.43 INV OUT = 204.76, 6" (W)

SCALE: 1"=20' HORIZ.
1"=5' VERT.

File: \\nms\ENR\ESM-JOB\2155\020\020\plans\SS-02.dwg
Printed: 12/09/2021 7:55 AM
Printed By: Greg Fedore

REVISIONS

NO.	DESCRIPTION/DATE	BY

ESM CONSULTING ENGINEERS, LLC
33400 Riva Ave, Suite 205
Federal Way, WA 98003
www.esmcivil.com

LAUR G. BARTENBERG
REGISTERED PROFESSIONAL ENGINEER
12/09/2021

Civil Engineering
Public Works

Land Surveying
Project Management

Land Planning
Landscape Architecture

SIDNEY ROAD TOWNHOMES L.L.C.

HAVEN TOWNHOMES

CITY OF PORT ORCHARD
SEWER/WATER PLAN & PROFILE

WASHINGTON

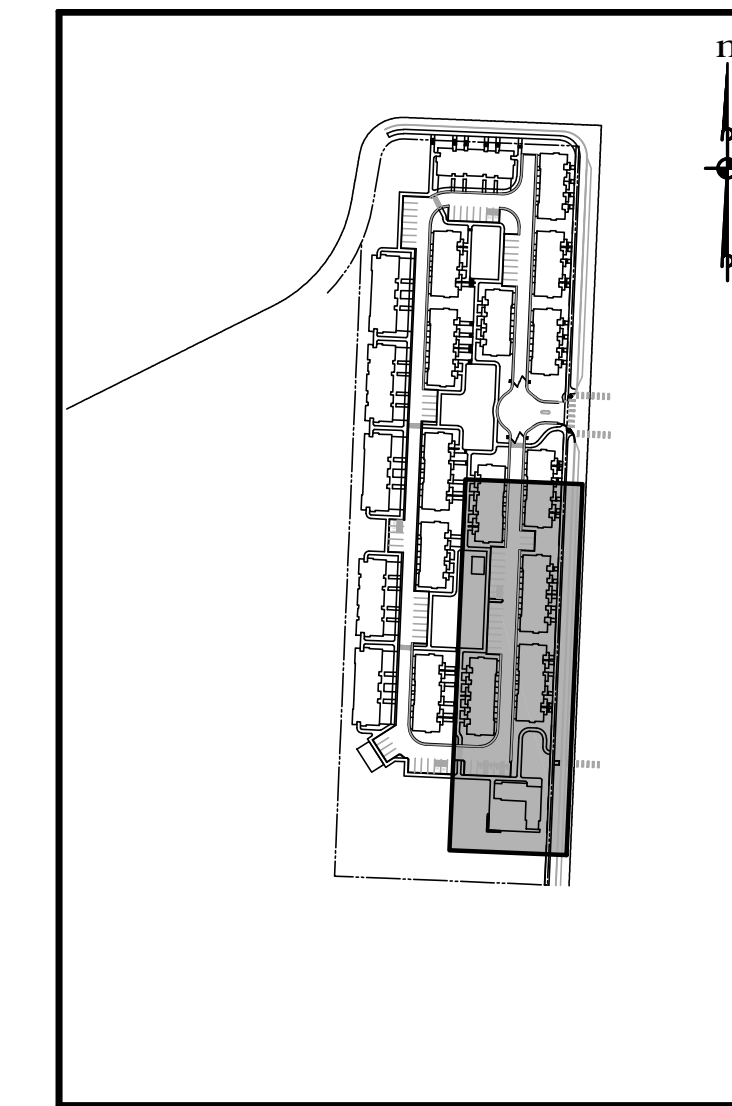
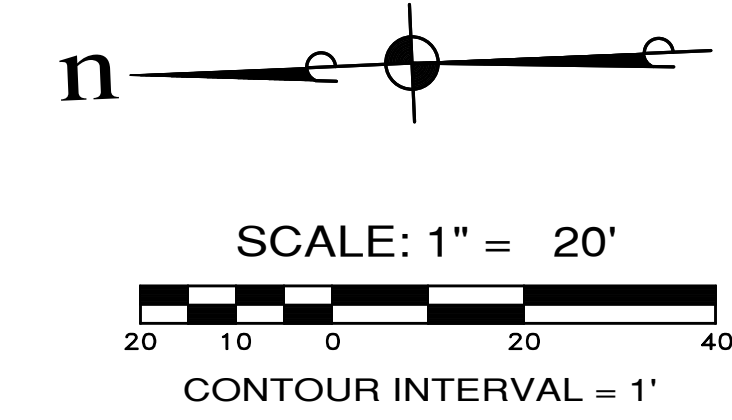
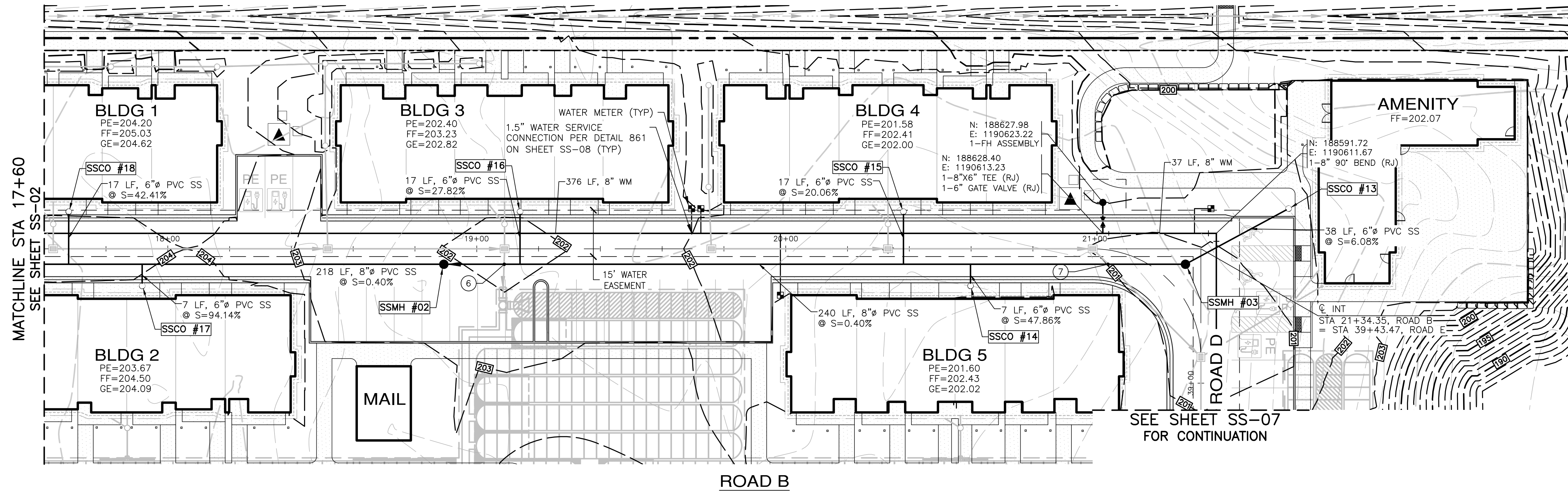
JOB NO.: 2155-002-020
DWG. NAME: SS-02
DESIGNED BY: LGB
DRAWN BY: GFF
CHECKED BY:
DATE: 12/03/2021
DATE OF PRINT:

SS-02

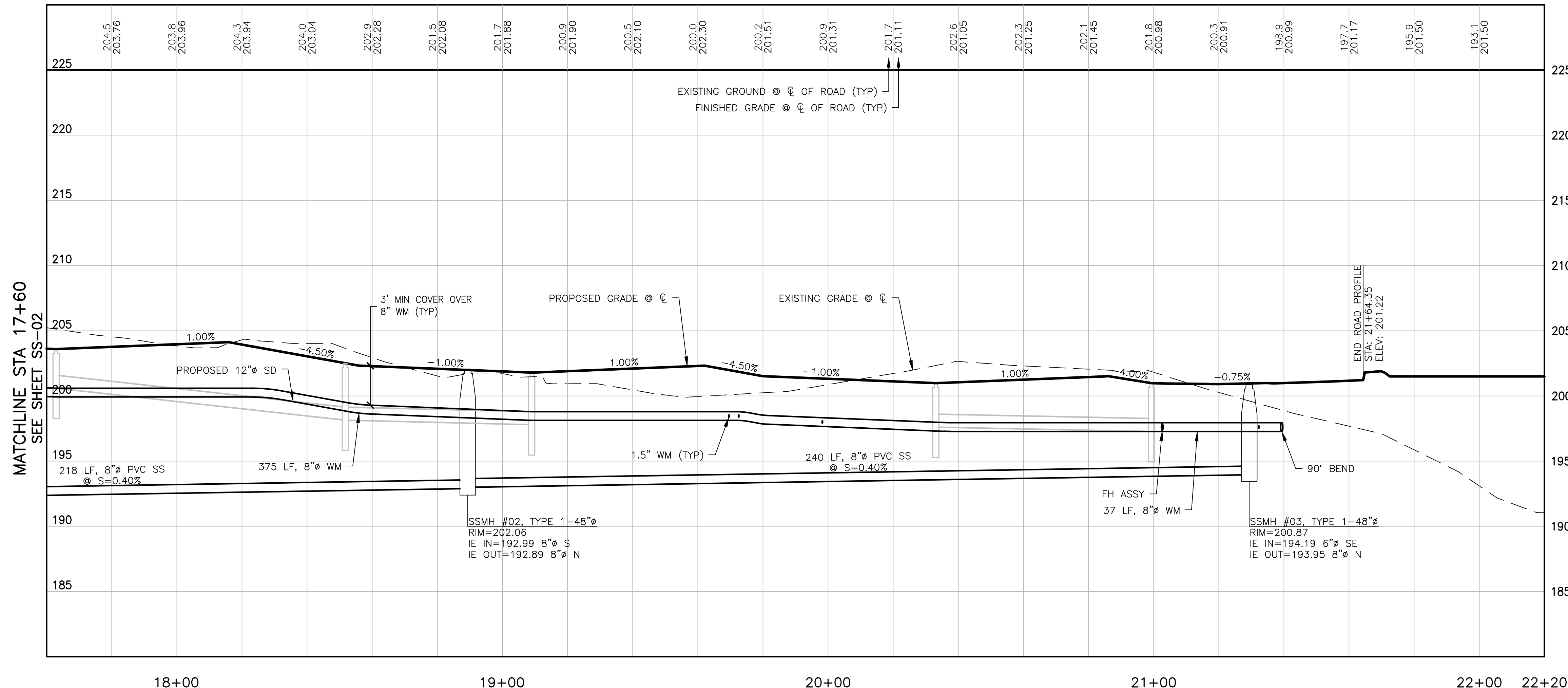
23 OF 38 SHEETS

PW21-079 / PW21-080

A PORTION OF NW 1/4 OF SECTION 11, T. 23 N., R. 1 E., W.M.



KEY MAP
N.T.S.



SCALE: 1"=20' HORIZ.
1"=5' VERT.

UTILITY CROSSING TABLE

⑥
N: 188822.42
E: 1190611.50
PROPOSED 12" SD BOTTOM=197.03
PROPOSED 8" SS TOP=193.74
CLEARANCE=3.29'

⑦
N: 188627.11
E: 1190603.17
PROPOSED 12" SD BOTTOM=197.60
PROPOSED 8" SS TOP=194.52
CLEARANCE=3.12'

STRUCTURE TABLE

STRUCTURE NAME:	DETAILS:
SSMH #02, TYPE 1-48" Ø STA 18+89.35, 5.00' RT	RIM=202.06 IE IN=192.99, 8" (S) IE OUT=192.89, 8" (N)
SSMH #03, TYPE 1-48" Ø STA 21+29.35, 5.00' RT	RIM=200.87 IE IN=194.19, 6" (SE) IE OUT=193.95, 8" (N)

STRUCTURE TABLE

STRUCTURE NAME:	DETAILS:
SSCO #13 STA 21+62.76, 13.00' LT	RIM=201.86 IE OUT=196.50, 6" (NW)
SSCO #14 STA 20+59.81, 12.00' RT	RIM=201.80 IE OUT=197.02, 6" (E)
SSCO #15 STA 20+38.10, 12.00' LT	RIM=201.62 IE OUT=197.00, 6" (W)
SSCO #16 STA 19+14.01, 12.00' LT	RIM=202.43 IE OUT=197.82, 6" (W)
SSCO #17 STA 17+91.72, 12.00' RT	RIM=204.29 IE OUT=199.09, 6" (E)
SSCO #18 STA 17+67.94, 12.00' LT	RIM=204.23 IE OUT=199.62, 6" (W)

REVISIONS

NO.	DESCRIPTION/DATE	BY

PAUL G. BARTENBERG
REGISTERED PROFESSIONAL ENGINEER
12/09/2021

ESM CONSULTING ENGINEERS, LLC
33400 8th Ave S, Suite 205
Federal Way, WA 98003
www.esmcivil.com

Civil Engineering
Public Works

Land Surveying
Project Management

Land Planning
Landscape Architecture

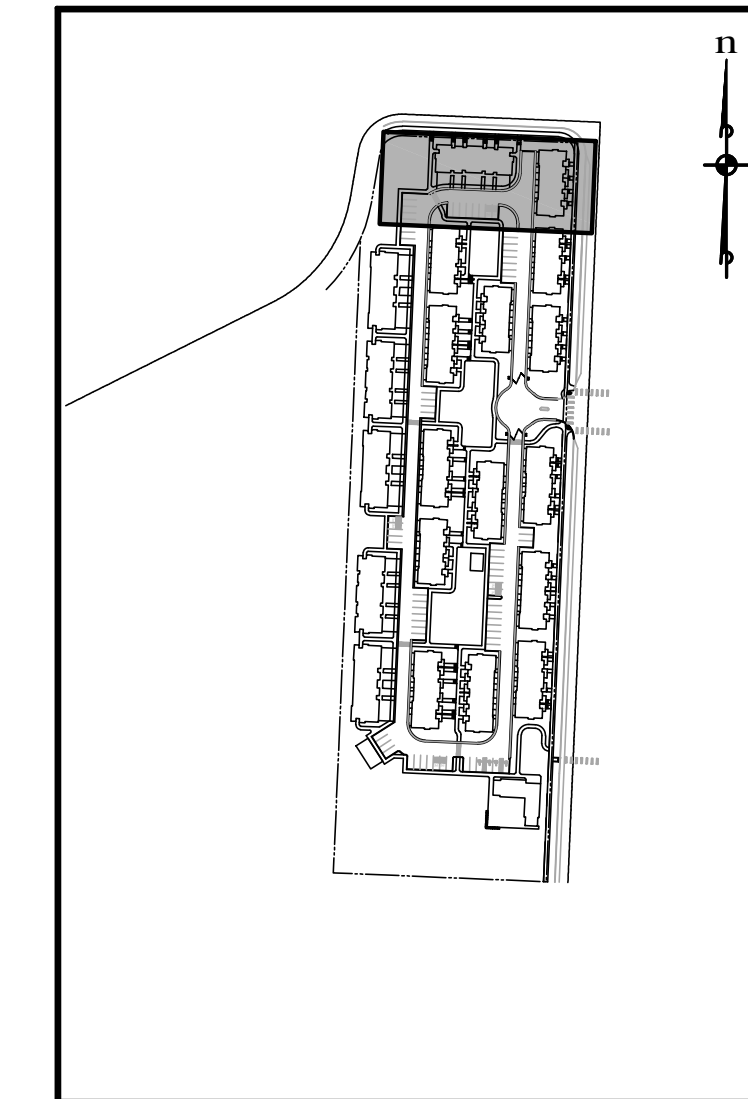
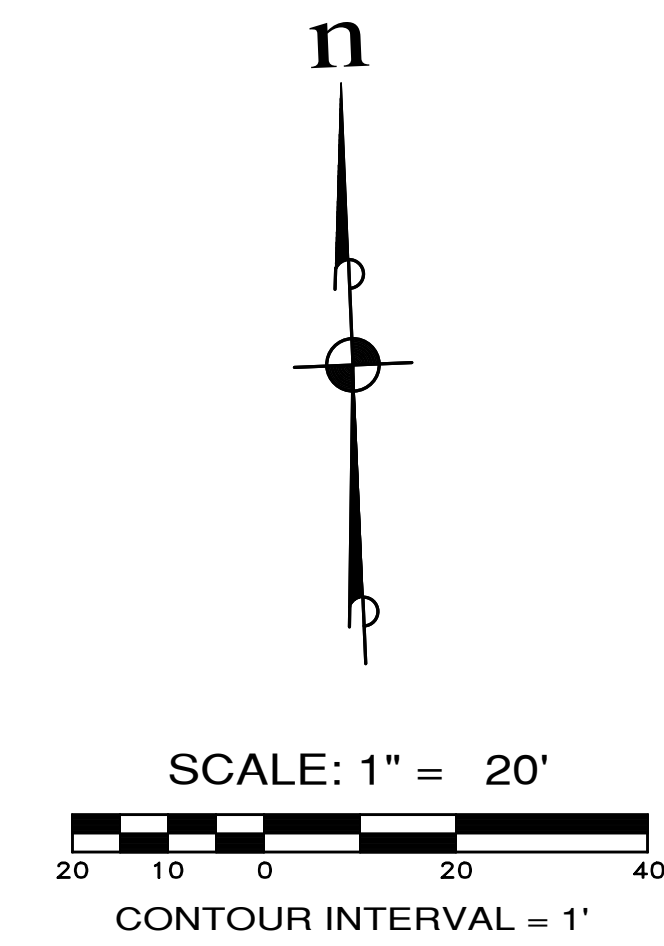
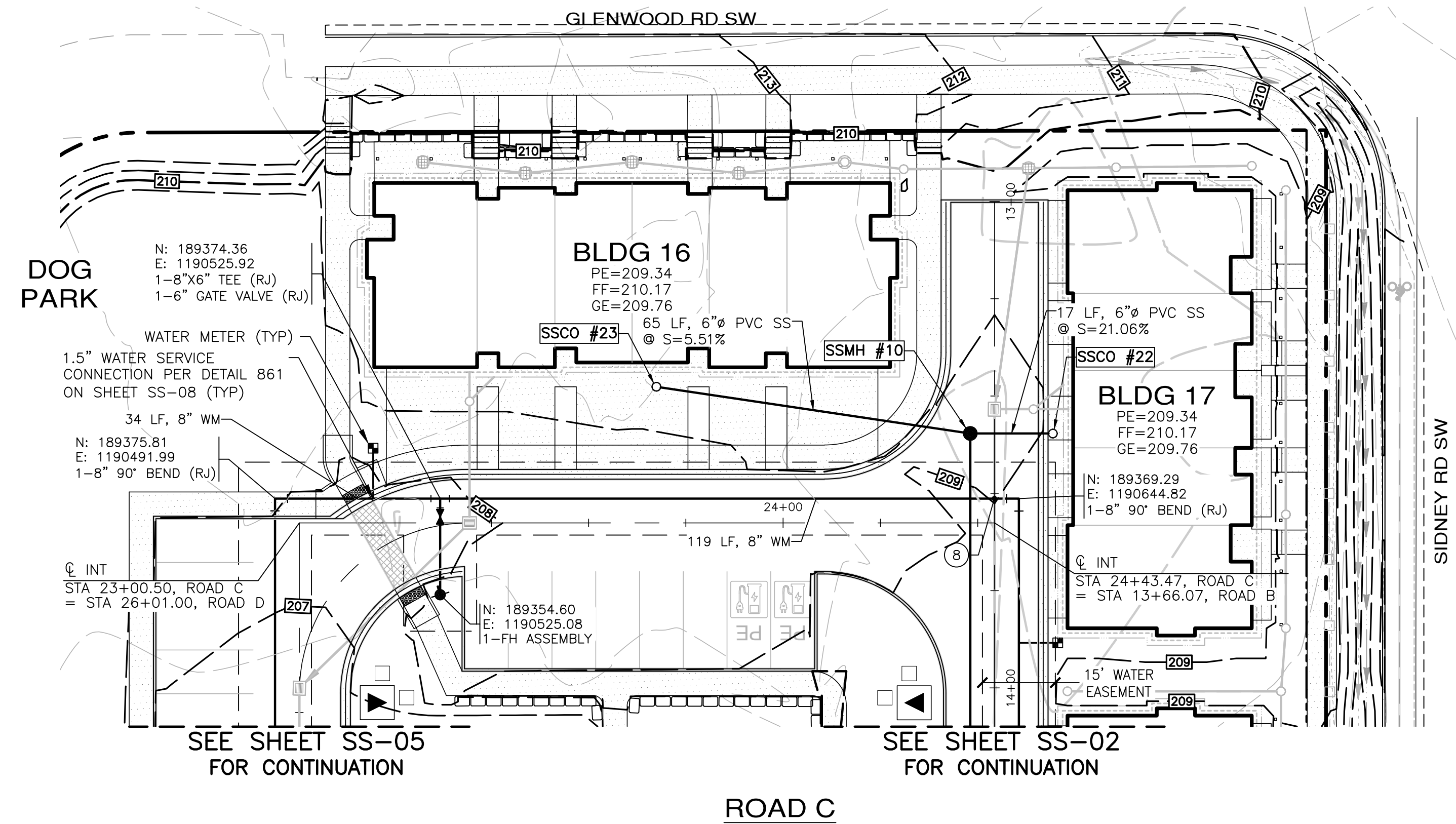
SIDNEY ROAD TOWNHOMES L.L.C.
HAVEN TOWNHOMES
SEWER/WATER PLAN & PROFILE
CITY OF PORT ORCHARD WASHINGTON

JOB NO.: 2155-002-020
DWG. NAME: SS-03
DESIGNED BY: LGB
DRAWN BY: GFF
CHECKED BY:
DATE: 12/10/2021
DATE OF PRINT:

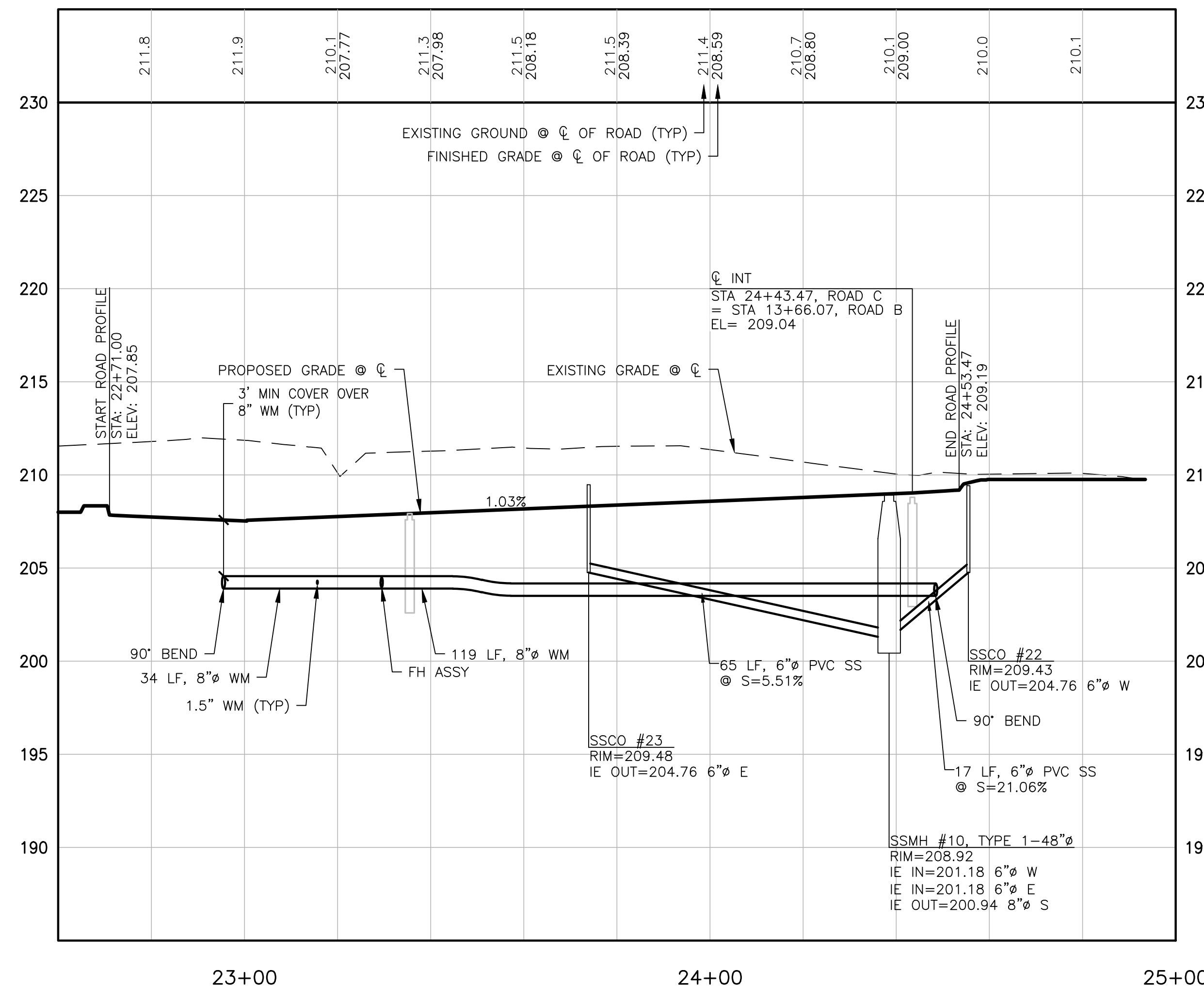
File: \\smc\ENR\ESM-JOB\2155\020\020\plans\SS-03.dwg
Printed: 12/10/2021 1:15 PM
Plotted By: Greg Fedore

PW21-079 / PW21-080

A PORTION OF NW 1/4 OF SECTION 11, T. 23 N., R. 1 E., W.M.



KEY MAP
N.T.S.



SCALE: 1"=20' HORIZ.
1"=5' VERT.

UTILITY CROSSING TABLE

⑧
N: 189369.51
E: 1190639.82
PROPOSED 12" SD BOTTOM=205.55
PROPOSED 8" WA TOP=204.55
CLEARANCE=1.00'

STRUCTURE TABLE

STRUCTURE NAME:	DETAILS:
SSMH #10, TYPE 1-48"Ø STA 13+47.70, 5.00' RT	RIM=208.92 IE IN=201.18, 6" (W) IE IN=201.18, 6" (E) IE OUT=200.94, 8" (S)

STRUCTURE TABLE

STRUCTURE NAME:	DETAILS:
SSCO #23 STA 23+73.93, 27.99' LT	RIM=209.48 IE OUT=204.76, 6" (E)

REVISIONS		
NO.	DESCRIPTION/DATE	BY

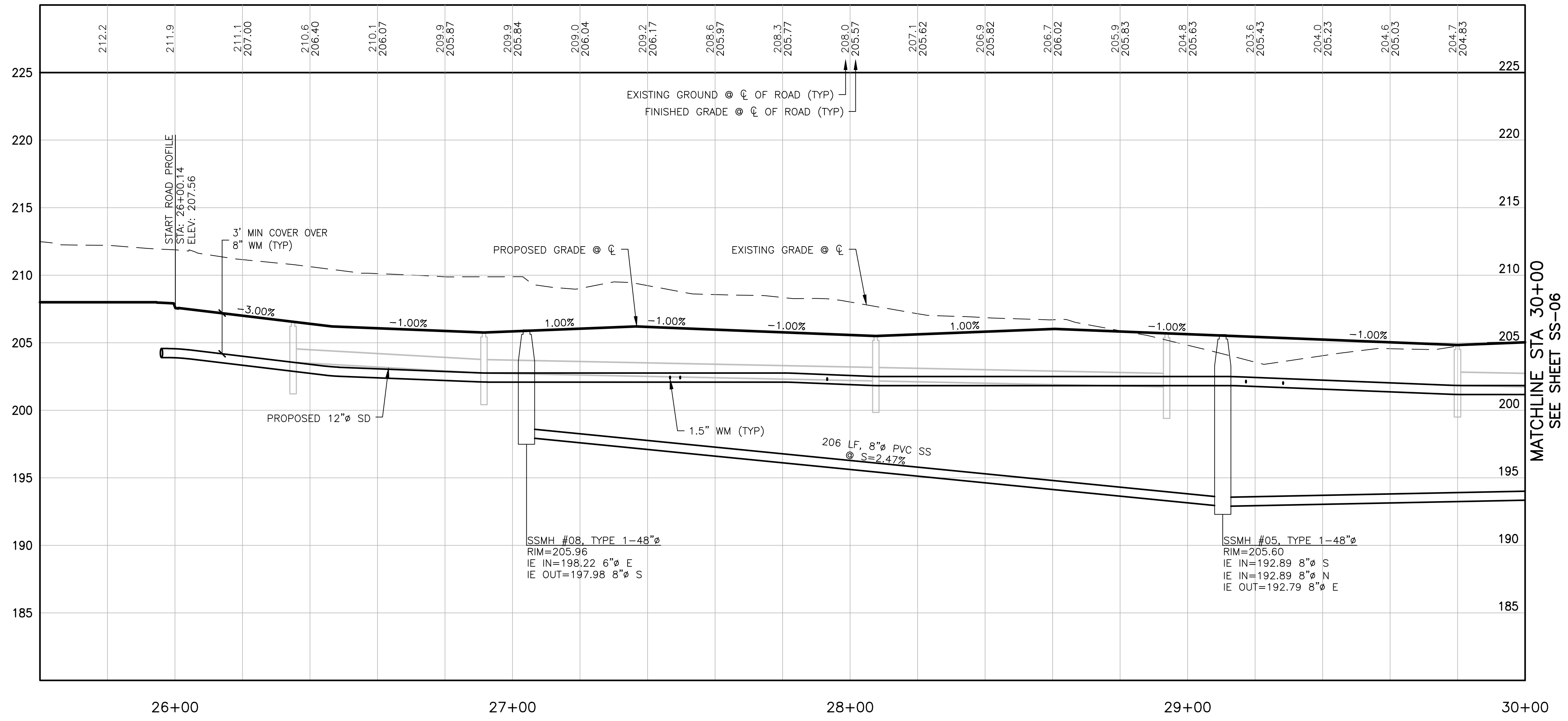
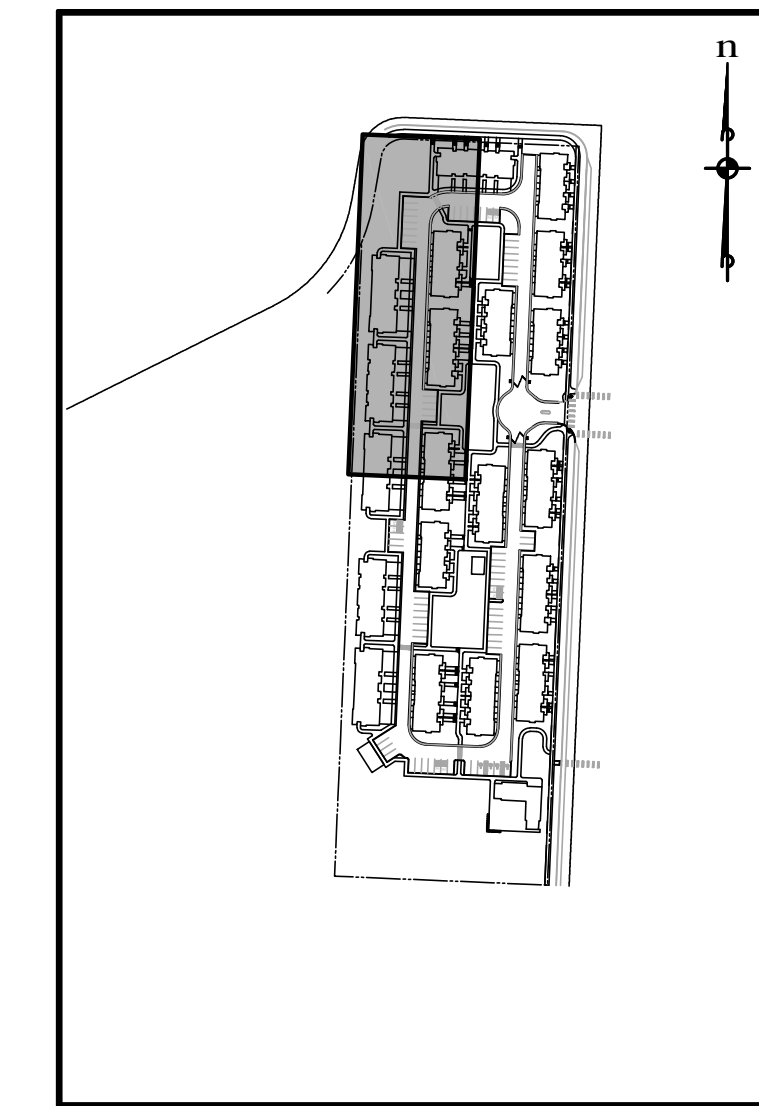
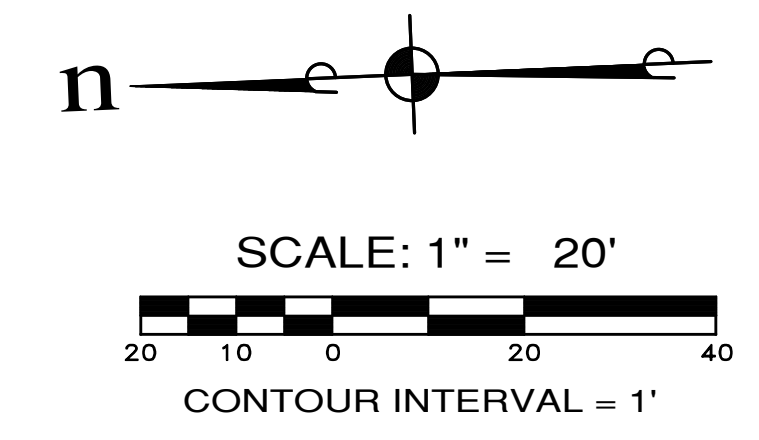
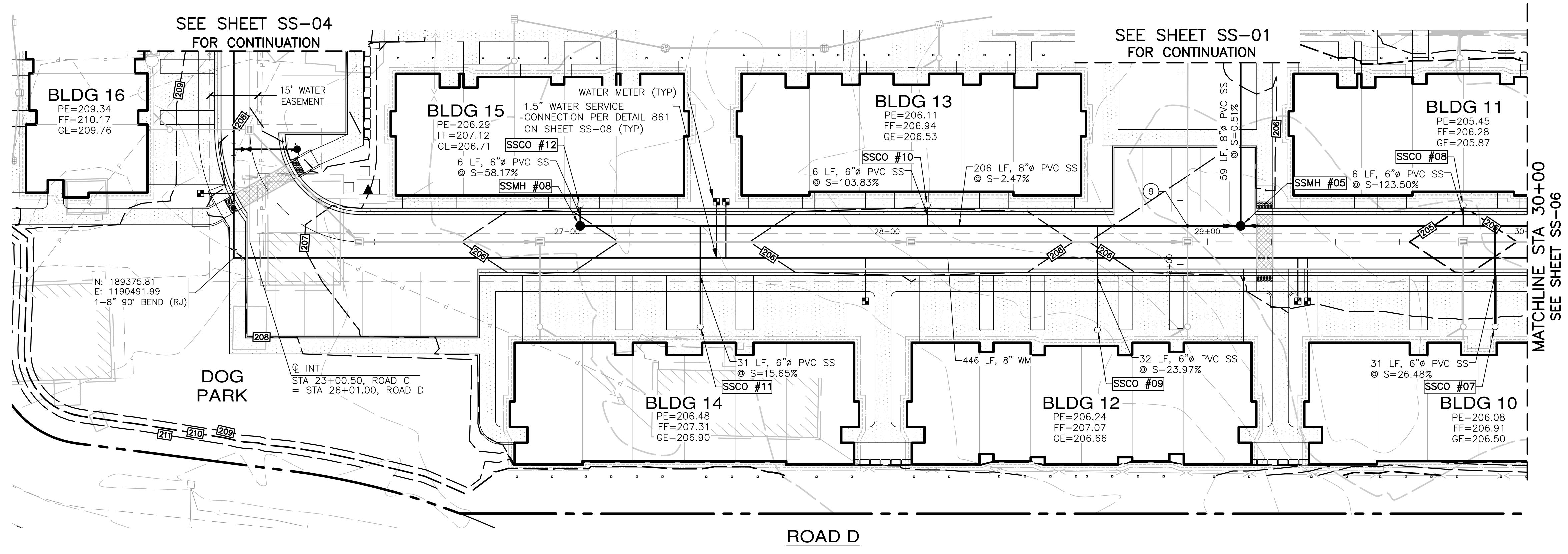
ESM CONSULTING ENGINEERS, LLC
33400 8th Ave S, Suite 205
Federal Way, WA 98003
www.esmcivil.com

Professional Engineer
Registered Professional Engineer
Land Surveying
Project Management
Landscape Architecture
Civil Engineering
Public Works

SIDNEY ROAD TOWNHOMES L.L.C.
HAVEN TOWNHOMES
CITY OF PORT ORCHARD
SEWER/WATER PLAN & PROFILE
WASHINGTON

JOB NO.:	2155-002-020
DWG. NAME:	SS-04
DESIGNED BY:	LGB
DRAWN BY:	OFF
CHECKED BY:	
DATE:	12/03/2021
DATE OF PRINT:	

File: \\smm\ENGR\ESM-JOB\2155\020\plans\SS-04.dwg
Plotted: 12/9/2021 8:19 AM
Plotted By: Greg Fedore



UTILITY CROSSING TABLE

⑨

N: 189077.86
E: 1190489.29
PROPOSED 12" SD BOTTOM=201.61
PROPOSED 8" SS TOP=193.97
CLEARANCE=7.64'

STRUCTURE TABLE

STRUCTURE NAME:	DETAILS:
SSMH #05, TYPE 1-48" @ STA 29+10.42, 5.00' LT	RIM=205.60 IE IN=192.89, 8" (S) IE IN=192.89, 8" (N) IE OUT=192.79, 8" (E)
SSMH #08, TYPE 1-48" @ STA 27+04.14, 5.00' LT	RIM=205.96 IE IN=198.22, 6" (E) IE OUT=197.98, 8" (S)

STRUCTURE TABLE

STRUCTURE NAME:	DETAILS:
SSCO #07 STA 29+89.84, 26.50' RT	RIM=206.18 IE OUT=201.50, 6" (E)
SSCO #08 STA 29+79.97, 11.50' LT	RIM=205.42 IE OUT=200.65, 6" (W)
SSCO #09 STA 28+65.76, 27.50' RT	RIM=206.62 IE OUT=201.66, 6" (E)
SSCO #10 STA 28+12.63, 11.50' LT	RIM=206.13 IE OUT=201.53, 6" (W)
SSCO #11 STA 27+41.67, 26.50' RT	RIM=206.84 IE OUT=201.90, 6" (E)
SSCO #12 STA 27+04.14, 11.50' LT	RIM=206.48 IE OUT=201.71, 6" (W)

REVISIONS

NO.	DESCRIPTION/DATE	BY

ESM CONSULTING ENGINEERS, LLC
33400 8th Ave S, Suite 205
Federal Way, WA 98003
www.esmcivil.com

REGISTERED PROFESSIONAL ENGINEER
12/09/2021

Land Surveying
Project Management
Land Planning
Landscape Architecture
Civil Engineering
Public Works

SIDNEY ROAD TOWNHOMES L.L.C.

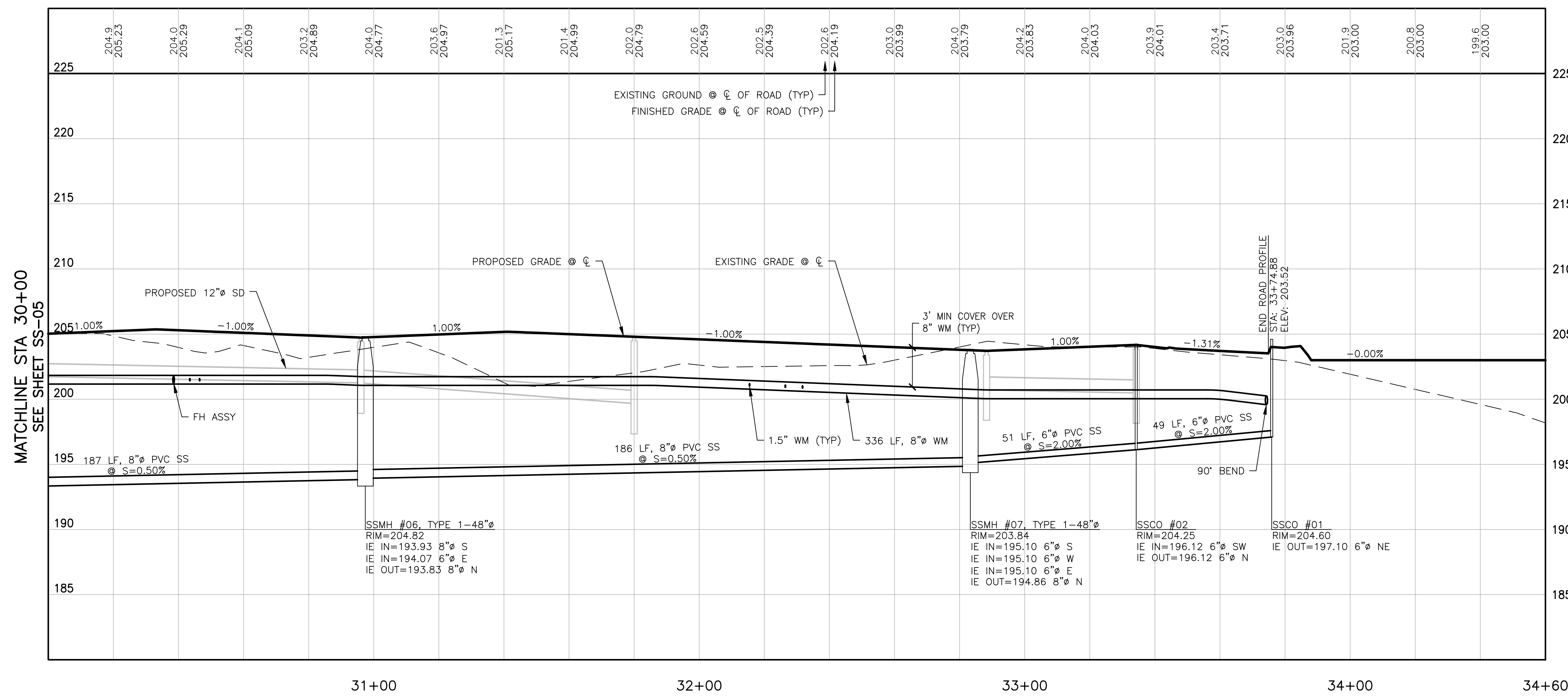
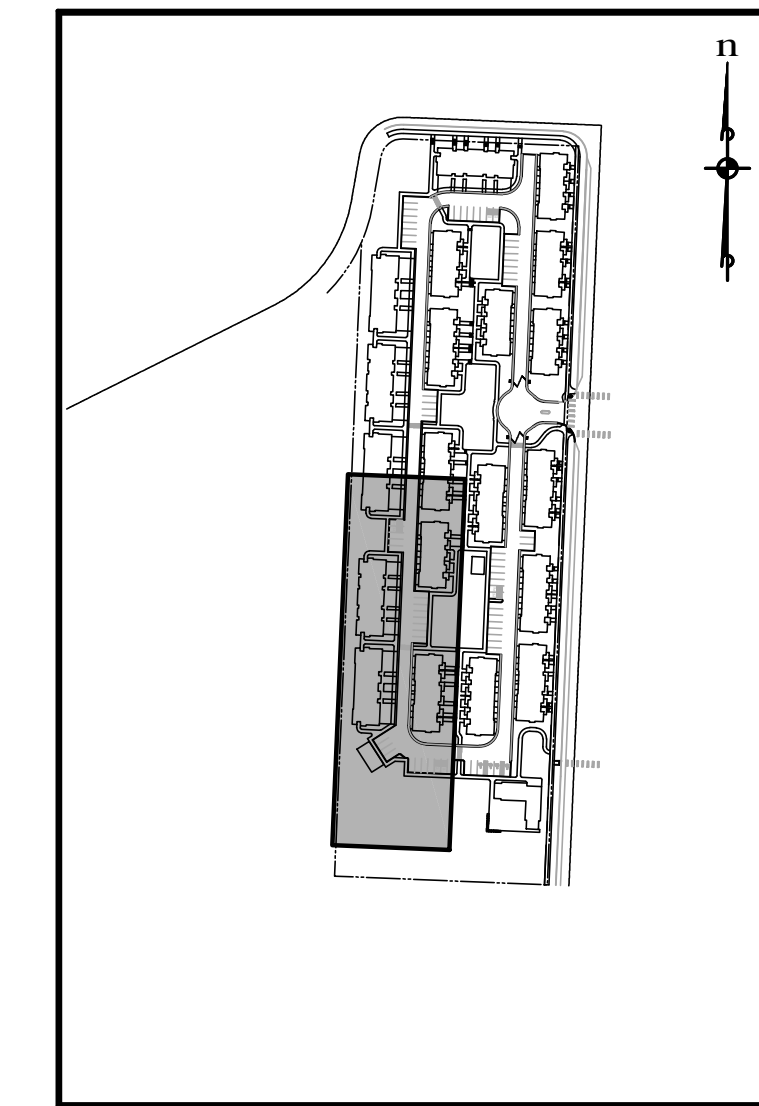
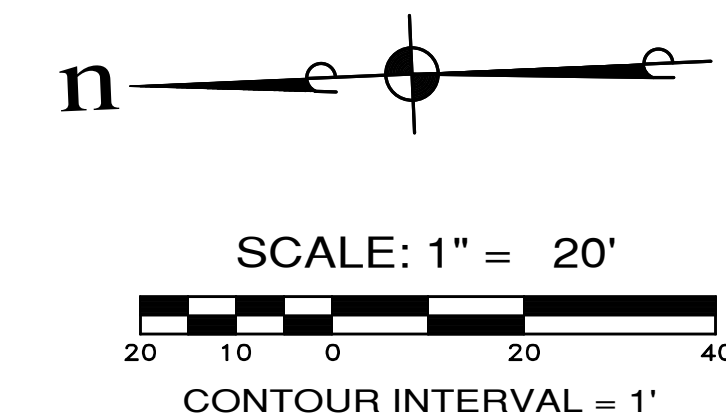
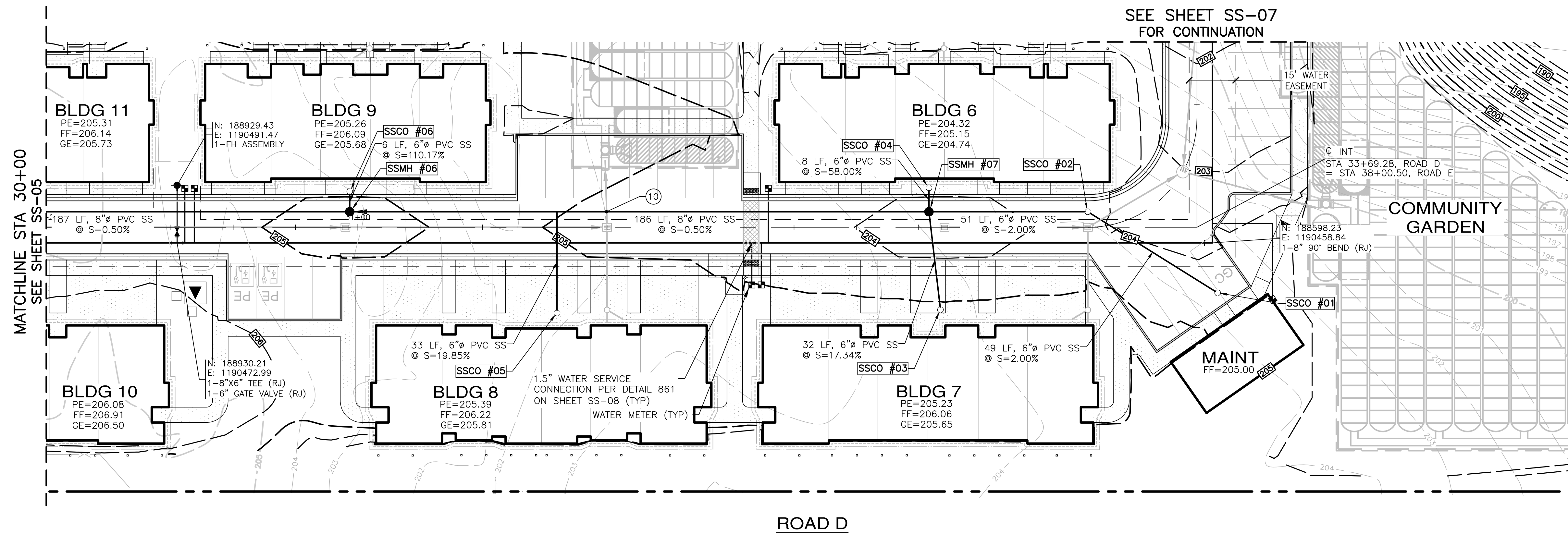
HAVEN TOWNHOMES

CITY OF PORT ORCHARD SEWER/WATER PLAN & PROFILE

WASHINGTON

JOB NO.: 2155-002-020
DWG. NAME: SS-05
DESIGNED BY: LGB
DRAWN BY: GFF
CHECKED BY:
DATE: 12/03/2021
DATE OF PRINT:

File: \\smc\ENR\ESM-JOB\2155\020\020\p\ss-05.dwg
Printed: 12/9/2021 8:36 AM
Printed By: Greg Fedore



UTILITY CROSSING TABLE

N: 188792.05
 E: 1190477.11
 PROPOSED 12" SD BOTTOM=198.51
 PROPOSED 8" SS TOP=195.01
 CLEARANCE=3.50'

STRUCTURE TABLE	
STRUCTURE NAME:	DETAILS:
SSMH #06, TYPE 1-48" Ø STA 30+97.42, 5.00' LT	RIM=204.82 IE IN=193.93, 8" (S) IE IN=194.07, 6" (E) IE OUT=193.83, 8" (N)
SSMH #07, TYPE 1-48" Ø STA 32+83.30, 5.00' LT	RIM=203.84 IE IN=195.10, 6" (S) IE IN=195.10, 6" (W) IE IN=195.10, 6" (E) IE OUT=194.86, 8" (N)

STRUCTURE TABLE	
STRUCTURE NAME:	DETAILS:
SSCO #01 STA 33+75.92, 21.05' RT	RIM=204.60 IE OUT=197.10, 6" (NE)
SSCO #02 STA 33+34.28, 5.00' LT	RIM=204.25 IE IN=196.12, 6" (SW) IE OUT=196.12, 6" (N)
SSCO #03 STA 32+86.99, 26.50' RT	RIM=205.23 IE OUT=200.65, 6" (E)
SSCO #04 STA 32+83.30, 12.67' LT	RIM=204.47 IE OUT=199.74, 6" (W)
SSCO #05 STA 31+63.92, 27.50' RT	RIM=205.73 IE OUT=200.81, 6" (E)
SSCO #06 STA ???, ???' ???T	RIM=205.31 IE OUT=200.68, 6" (W)

SCALE: 1"=20' HORIZ.
 1"=5' VERT.

PW21-079 / PW21-080

REVISIONS		
NO.	DESCRIPTION/DATE	BY

ESM CONSULTING ENGINEERS, LLC
 33400 Riva Ave S, Suite 205
 Federal Way, WA 98003
 www.esmcivil.com

Professional Engineer
 Registered Professional Engineer
 12/09/2021

Land Surveying
 Project Management
 Land Planning
 Landscape Architecture
 Civil Engineering
 Public Works

SIDNEY ROAD TOWNHOMES L.L.C.
HAVEN TOWNHOMES
 SEWER/WATER PLAN & PROFILE

CITY OF PORT ORCHARD
 WASHINGTON

JOB NO.: 2155-002-020
 DWG. NAME: SS-06
 DESIGNED BY: LGB
 DRAWN BY: GFF
 CHECKED BY:
 DATE: 12/03/2021
 DATE OF PRINT:

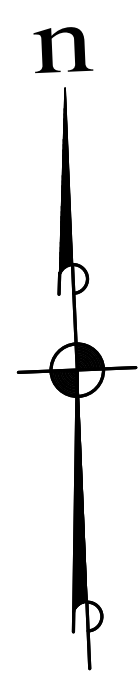
File: \\smc\ENGR\ESM-JOBES\2155\020\020\plans\SS-06.dwg
 Printed: 12/09/2021 8:40 AM
 Printed By: Greg Fedore

REVISIONS		
NO.	DESCRIPTION/DATE	BY

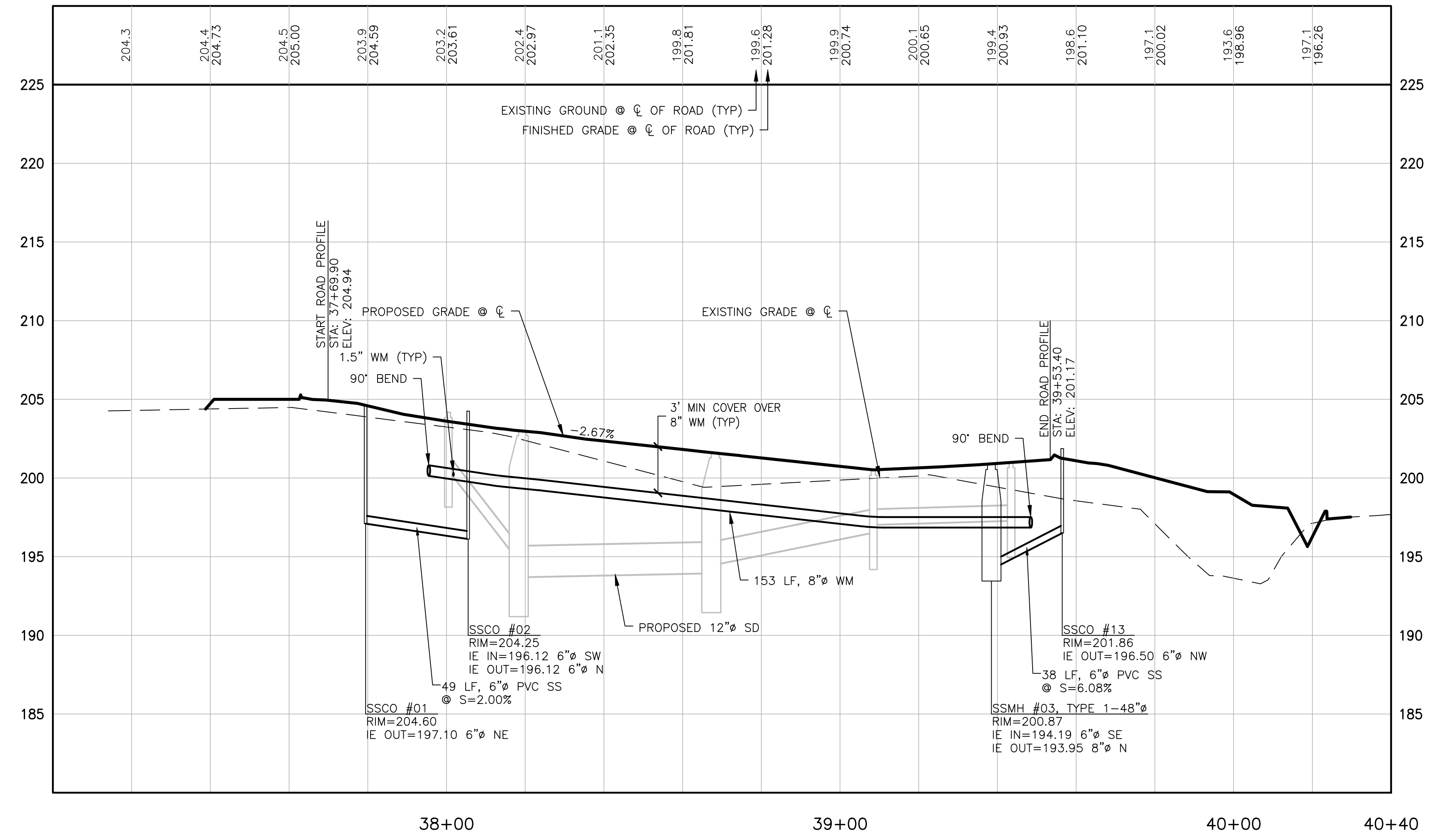
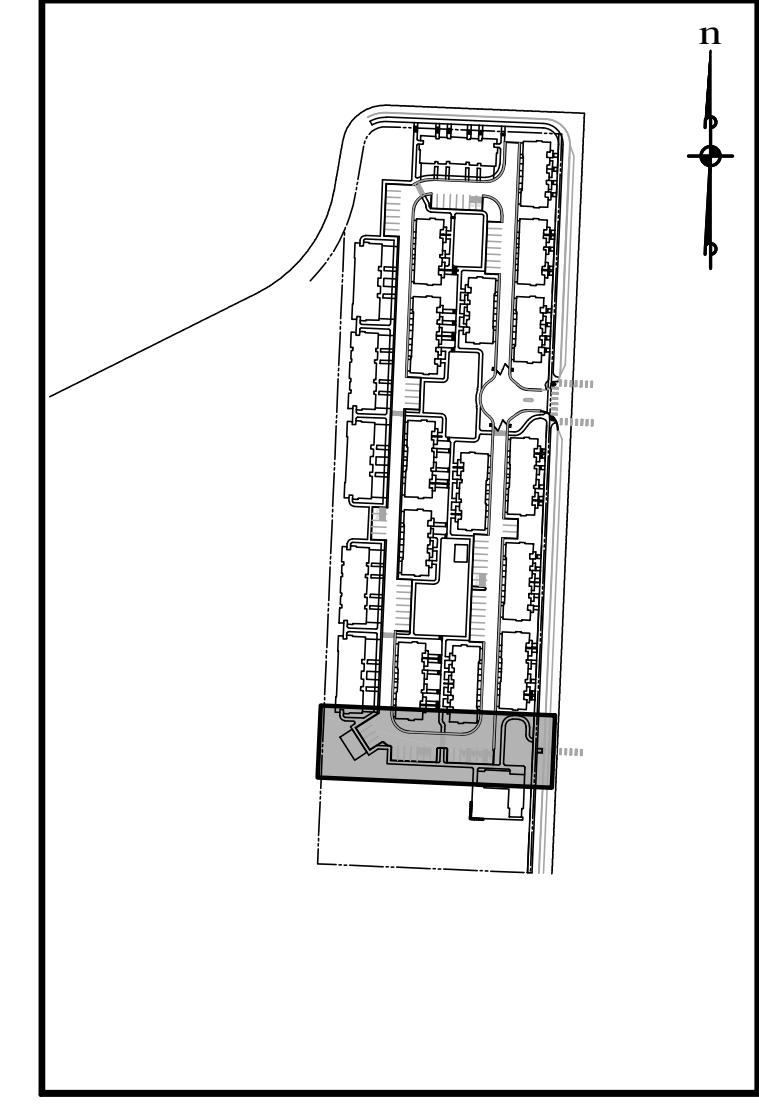
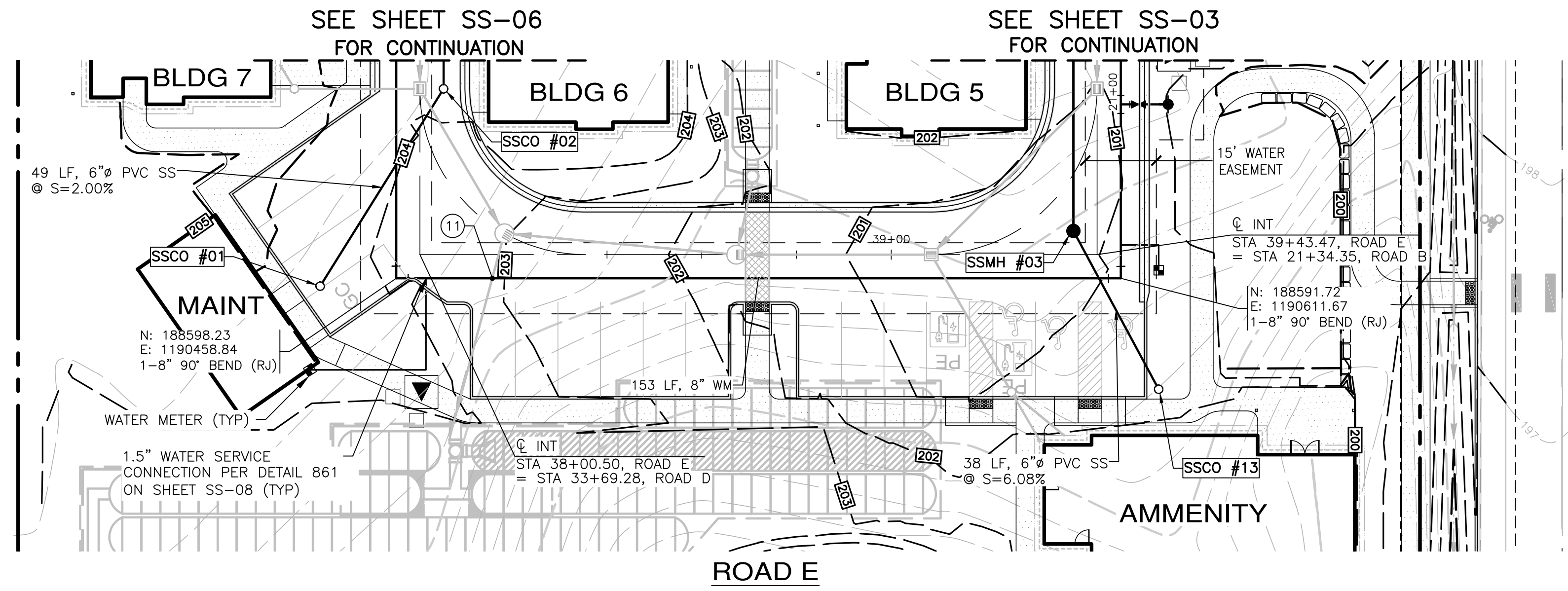
ESM CONSULTING ENGINEERS, LLC
 33400 8th Ave S, Suite 205
 Federal Way, WA 98003
 www.esmcivil.com

Professional Engineer
 State of Washington
 License No. 3011

Land Planning
 Project Management
 Landscape Architecture
 Civil Engineering
 Public Works



SCALE: 1" = 20'
 CONTOUR INTERVAL = 1'



SCALE: 1"=20' HORIZ.
 1"=5' VERT.

KEY MAP
 N.T.S.

UTILITY CROSSING TABLE

① N: 188597.37
 E: 1190479.12
 PROPOSED 8" WA BOTTOM=198.39
 PROPOSED 4" x 4" TOP=195.29
 CLEARANCE=3.10'

STRUCTURE TABLE	
STRUCTURE NAME:	DETAILS:
SSMH #03, TYPE 1-48"Ø STA 21+29.35, 5.00' RT	RIM=200.87 IE IN=194.19, 6" (SE) IE OUT=193.95, 8" (N)

STRUCTURE TABLE	
STRUCTURE NAME:	DETAILS:
SSCO #01 STA 33+75.92, 21.05' RT	RIM=204.60 IE OUT=197.10, 6" (NE)
SSCO #02 STA 33+34.28, 5.00' LT	RIM=204.25 IE IN=196.12, 6" (SW) IE OUT=196.12, 6" (N)
SSCO #13 STA 21+62.76, 13.00' LT	RIM=201.86 IE OUT=196.50, 6" (NW)

File: \\smm6\ENGR\ESM-JOBES\2155\020\020\plans\SS-07.dwg
 Plotted: 12/9/2021 1:17 PM
 Plotted By: Greg Fedore

SIDNEY ROAD TOWNHOMES L.L.C.
HAVEN TOWNHOMES
 CITY OF PORT ORCHARD SEWER/WATER PLAN & PROFILE
 WASHINGTON

JOB NO.: 2155-002-020
 DWG. NAME: SS-07
 DESIGNED BY: LGB
 DRAWN BY: GFF
 CHECKED BY:

DATE: 12/10/2021
 DATE OF PRINT:
SS-07
 28 OF 38 SHEETS

PW21-079 / PW21-080

REVISIONS		
NO.	DESCRIPTION/DATE	BY

ESM CONSULTING ENGINEERS, LLC

33400 8th Ave S, Suite 205
Federal Way, WA 98003

www.esmcivil.com

Civil Engineering | Land Surveying | Project Management | Landscape Architecture

Public Works | Sewer & Water Details

SIDNEY ROAD TOWNHOMES L.L.C.

HAVEN TOWNHOMES

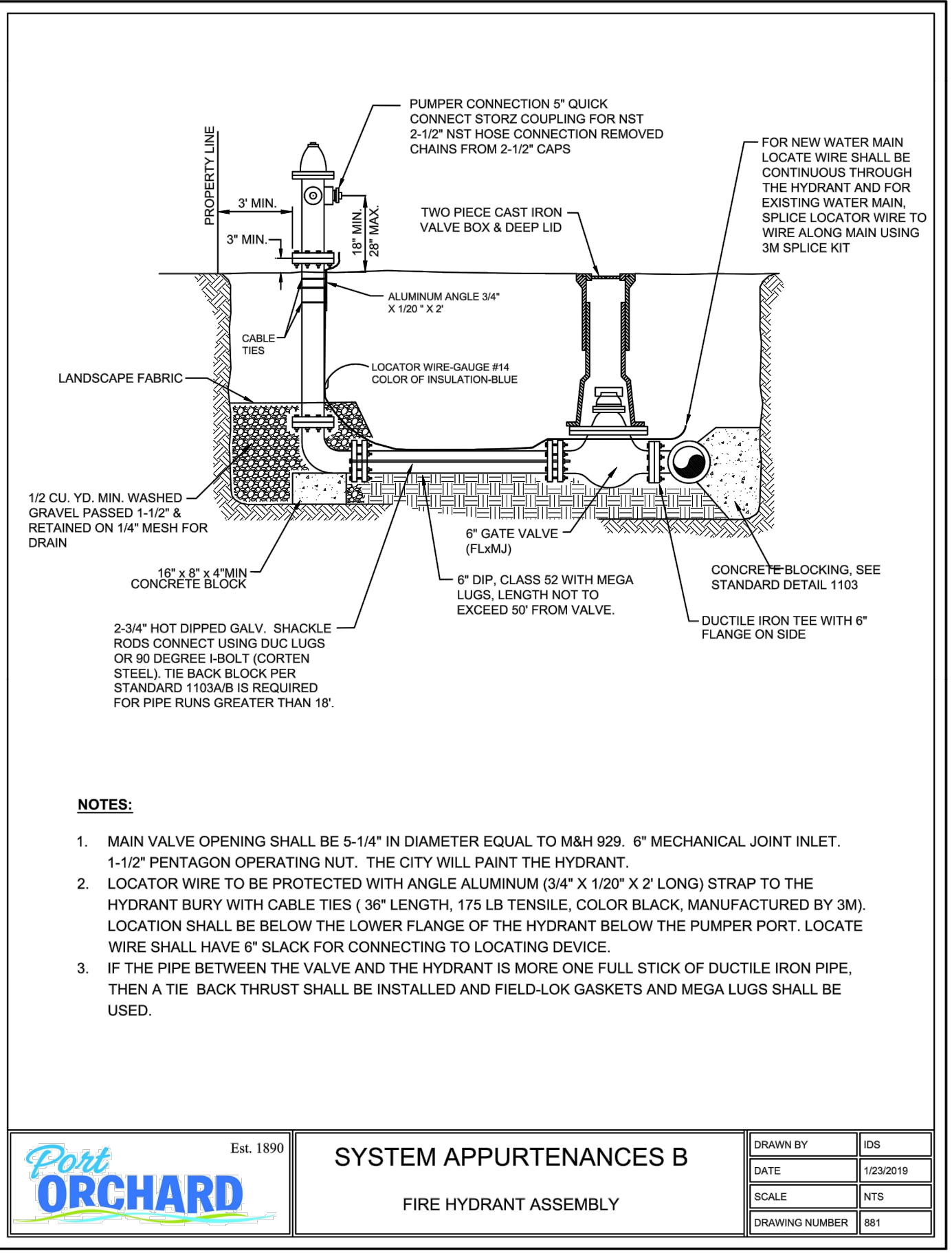
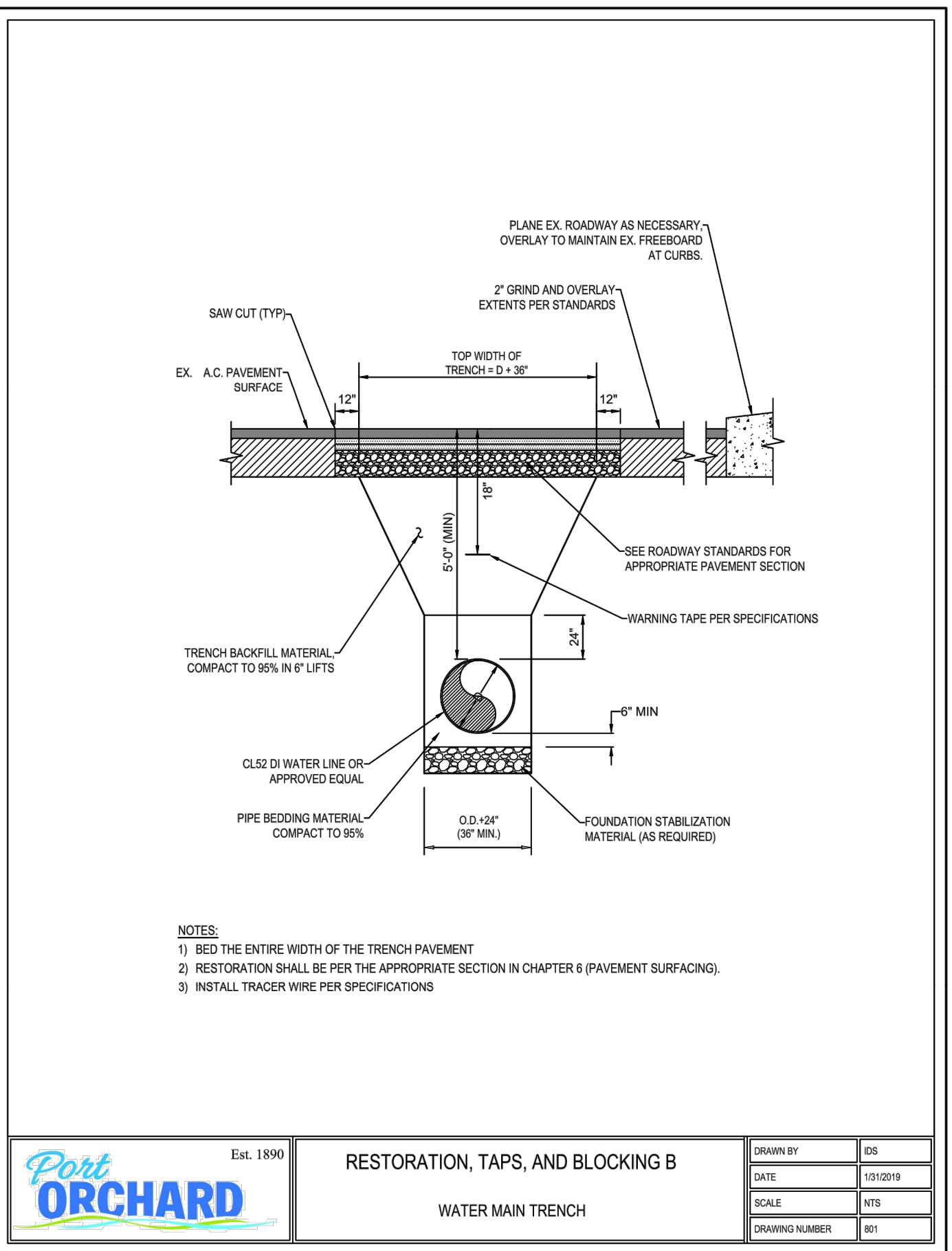
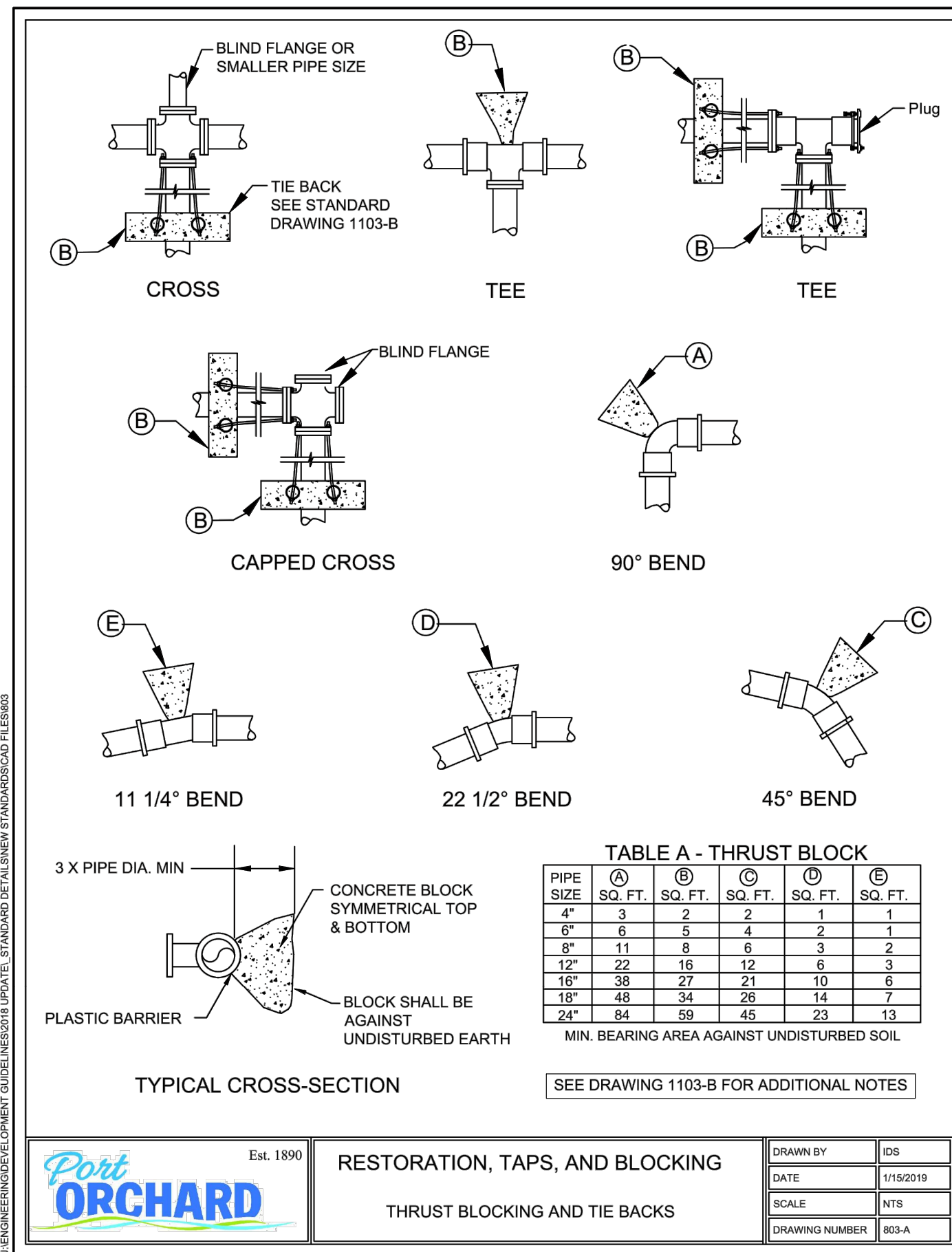
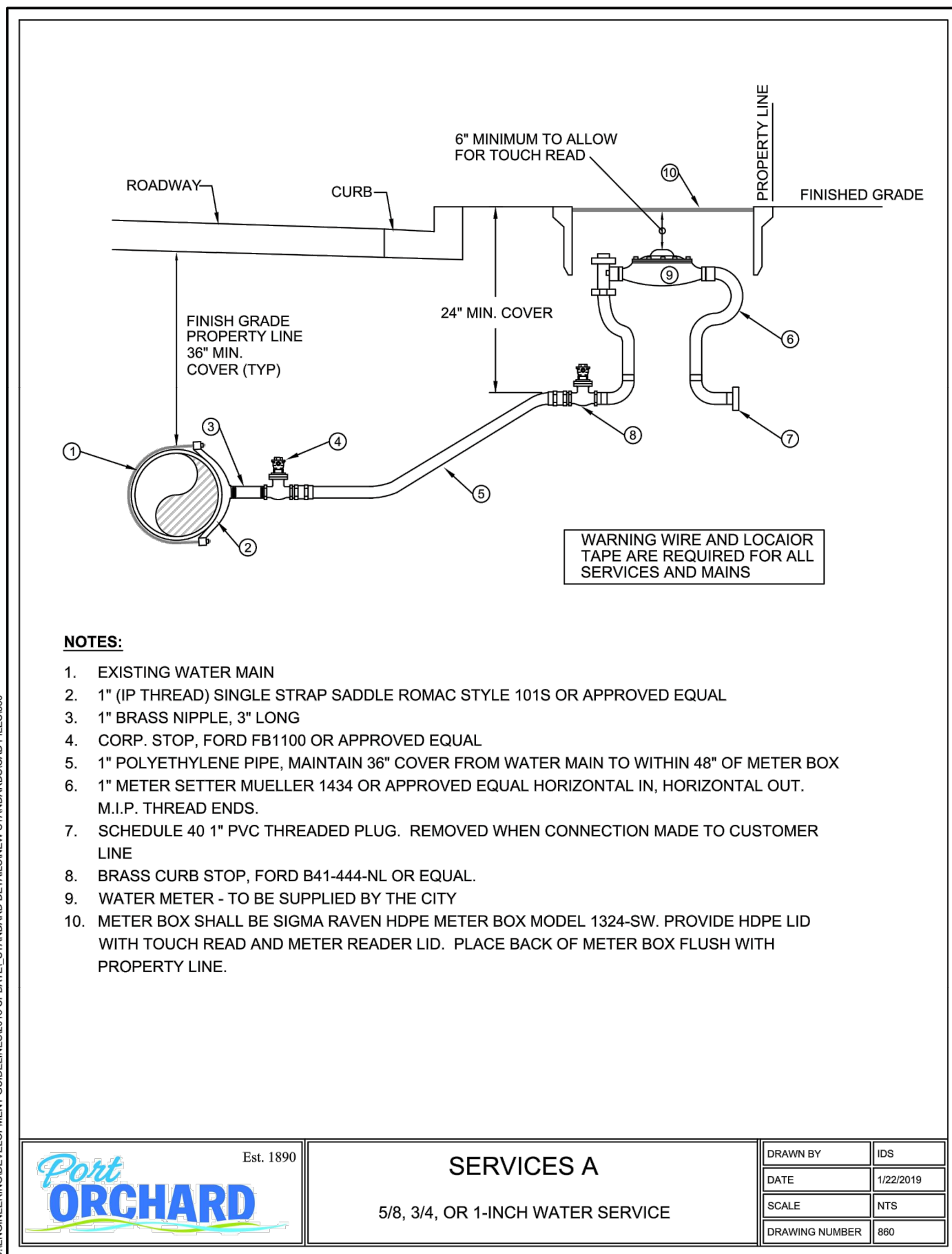
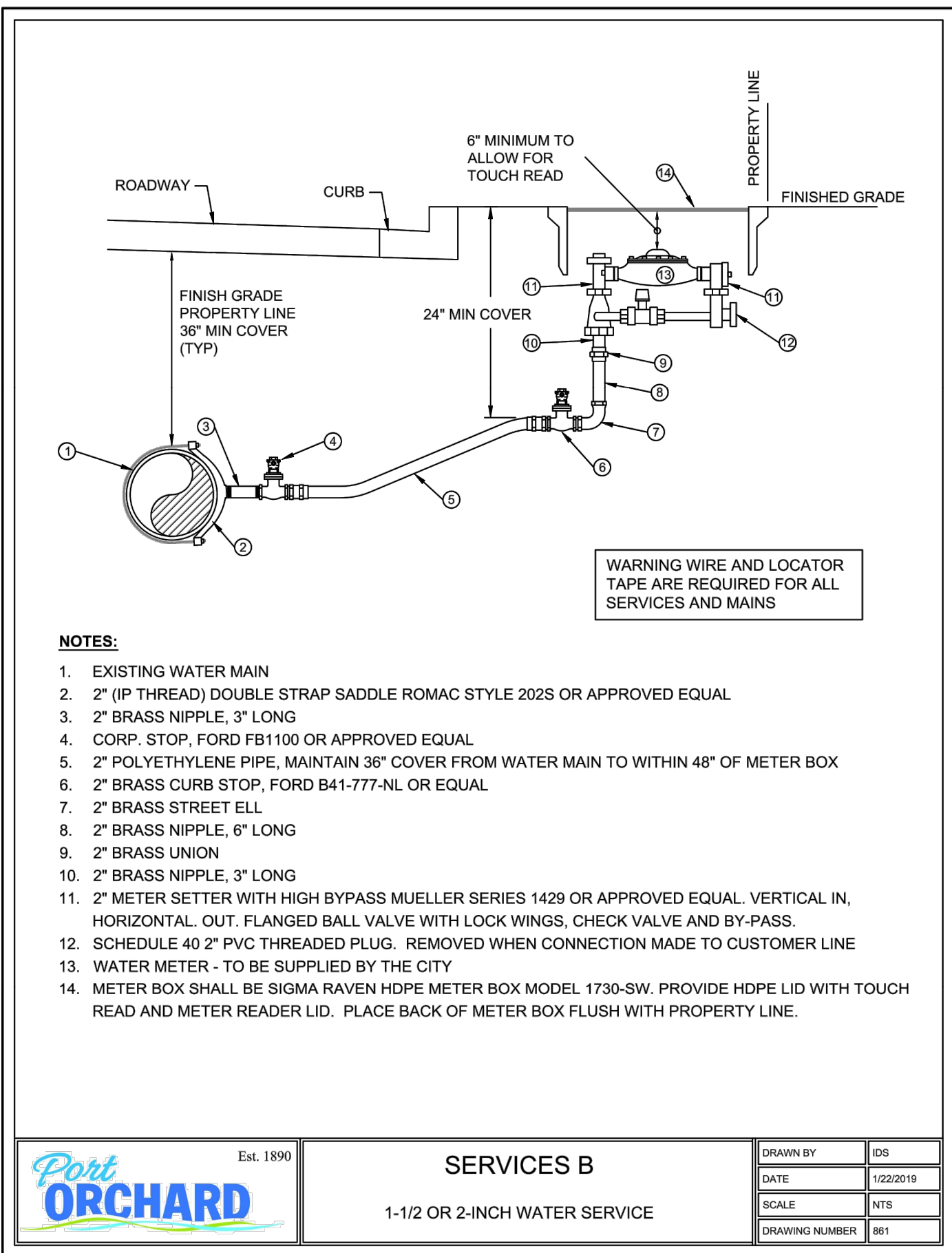
SEWER & WATER DETAILS

CITY OF PORT ORCHARD WASHINGTON

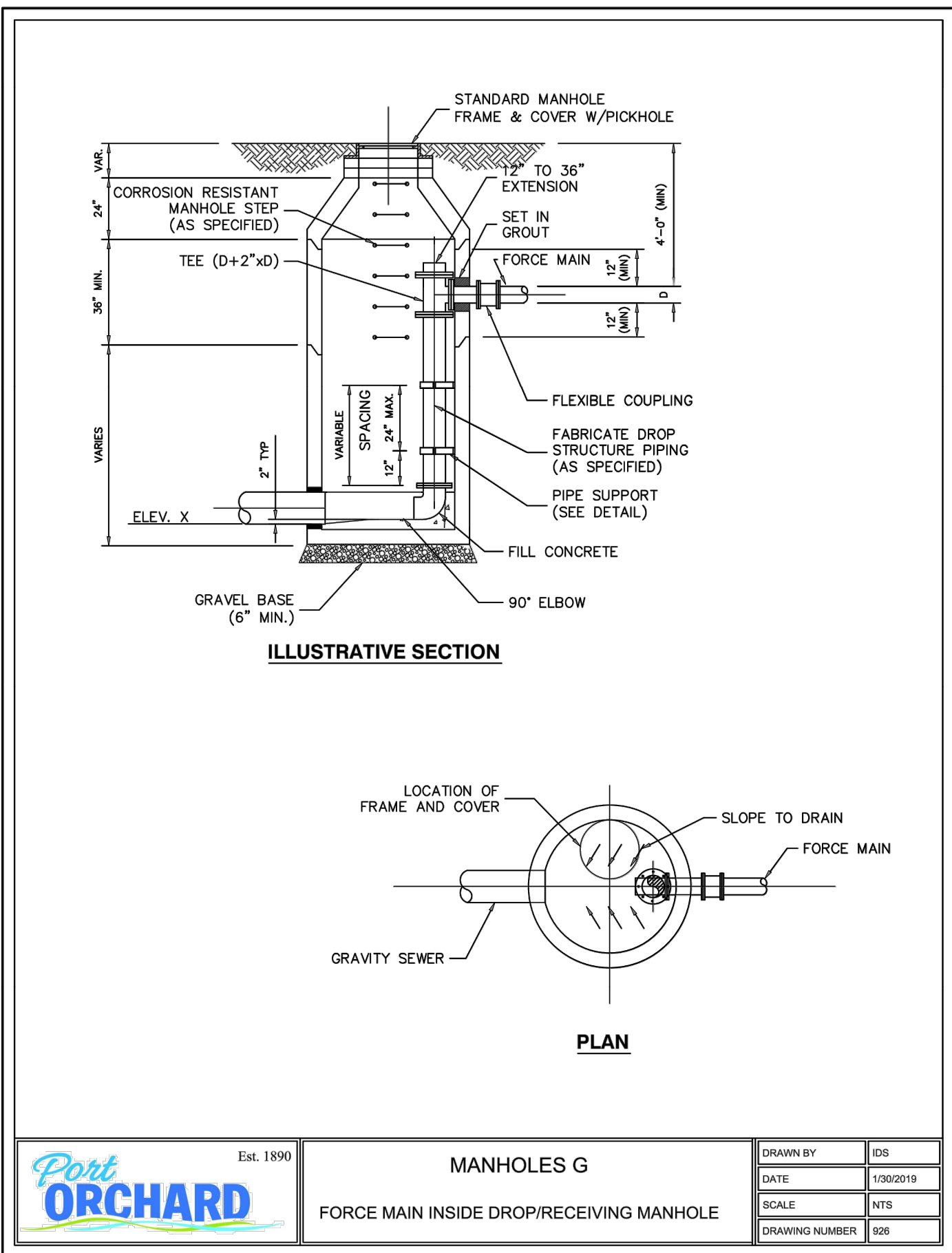
JOB NO.: 2155-002-020
 DWG. NAME: SS-08
 DESIGNED BY: LGB
 DRAWN BY: GFF
 CHECKED BY:
 DATE: 12/03/2021
 DATE OF PRINT:

SS-08

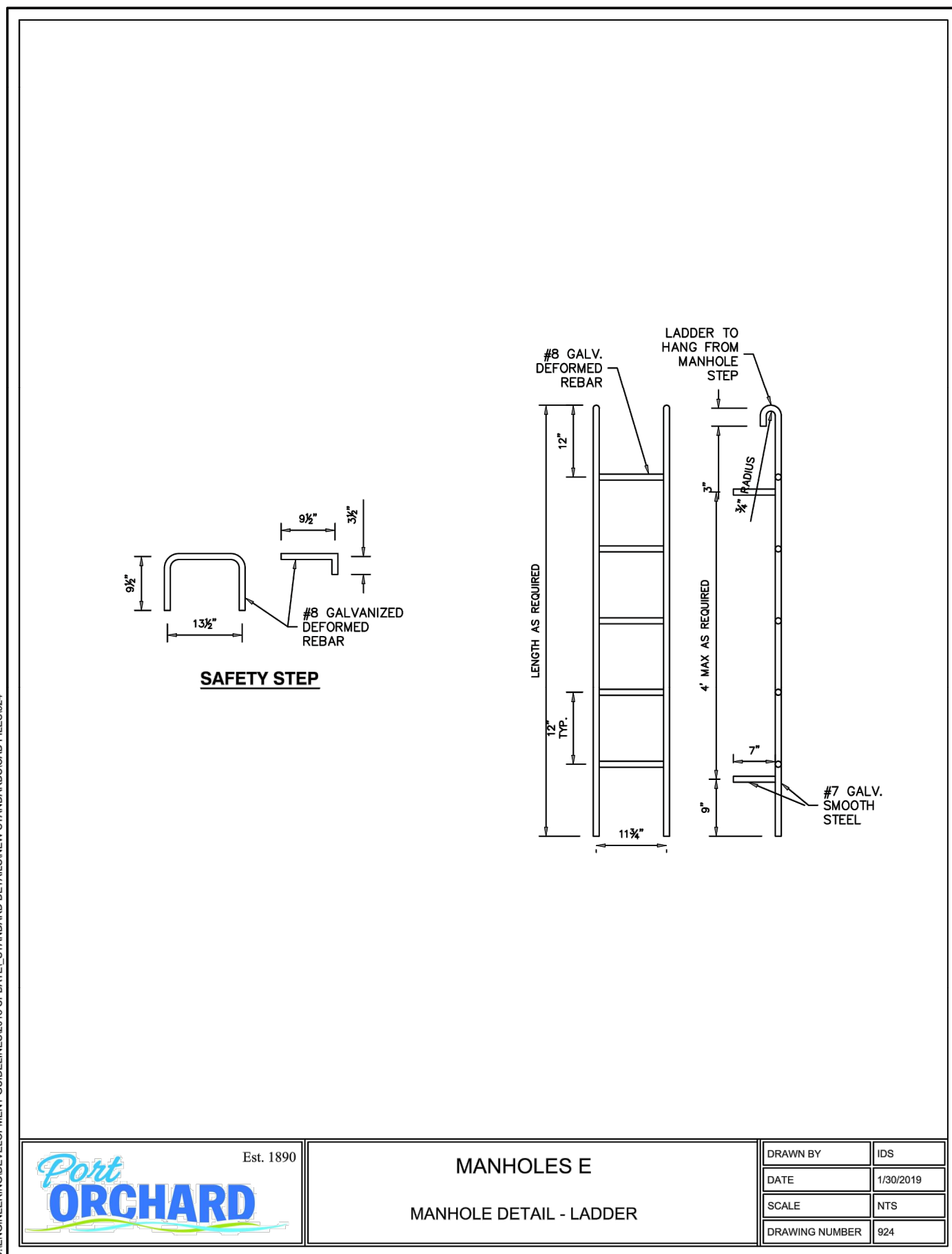
29 OF 38 SHEETS



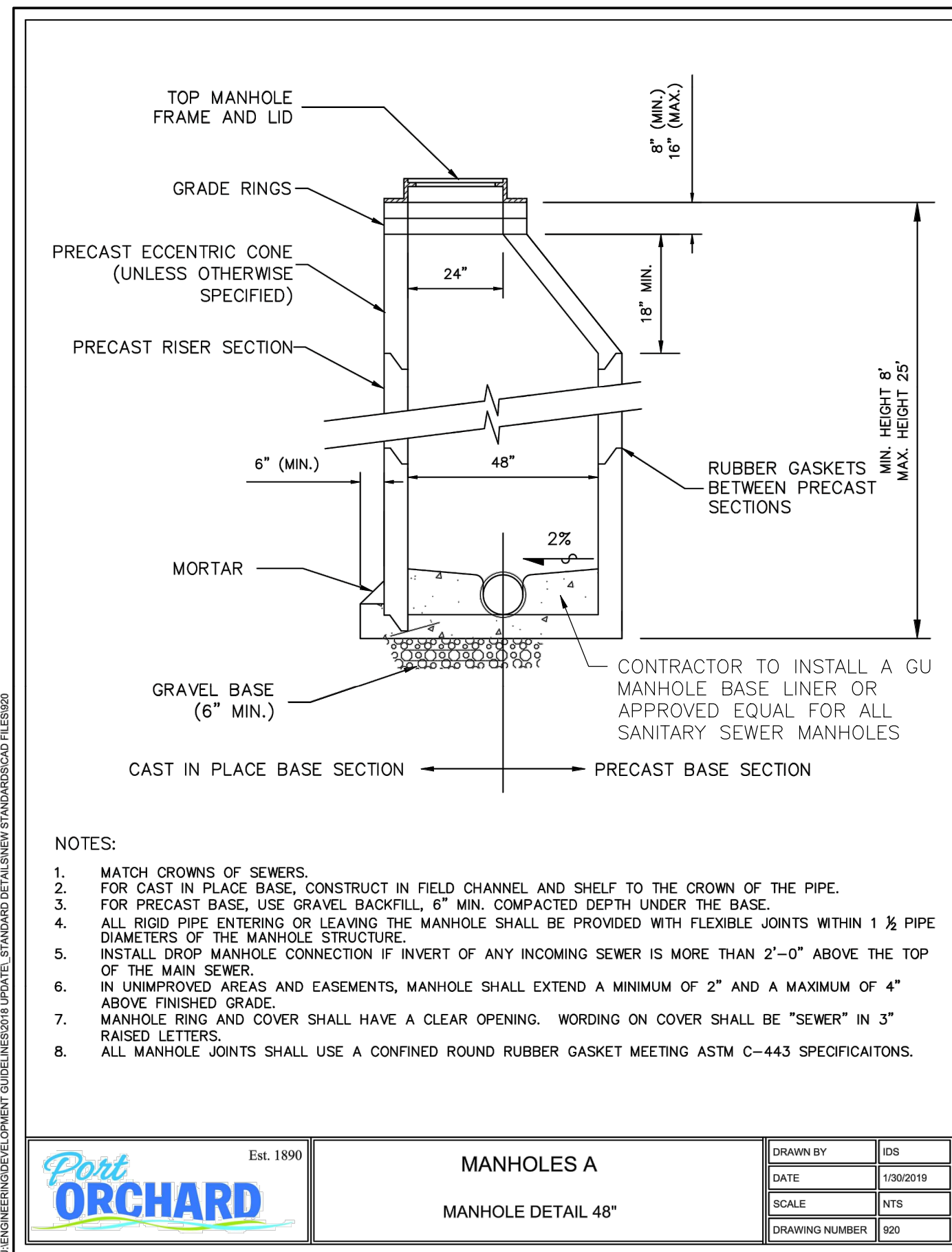
File: \\mm8\ENGR\ESM-JOB\2155\020\020\pds\SS-08.dwg
 Plotted: 12/7/2021 1:01 PM
 Plotted By: Brandon Avolio



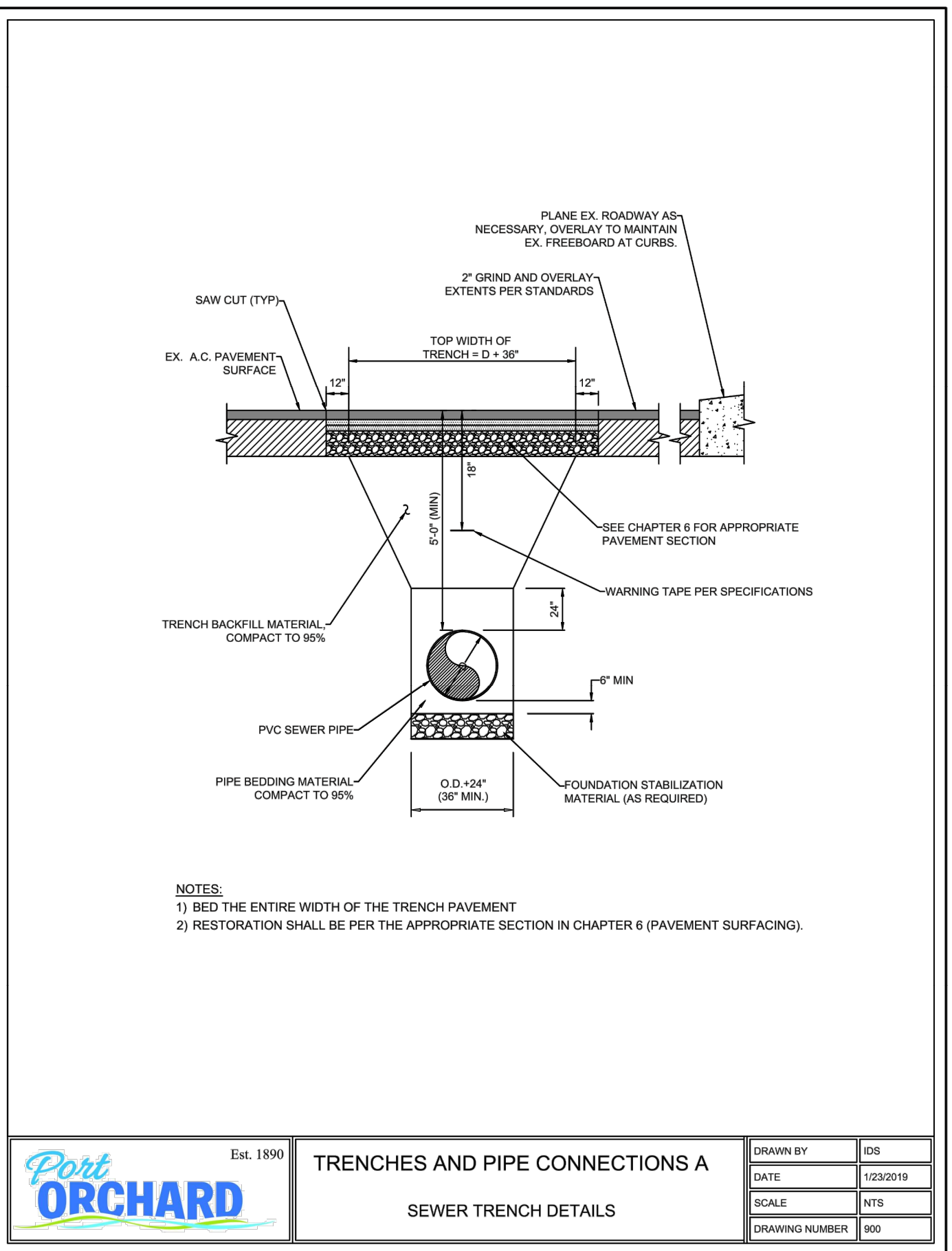
MANHOLES G
 FORCE MAIN INSIDE DROP/RECEIVING MANHOLE
 DRAWN BY: GFF
 DATE: 1/30/2019
 SCALE: NTS
 DRAWING NUMBER: 026



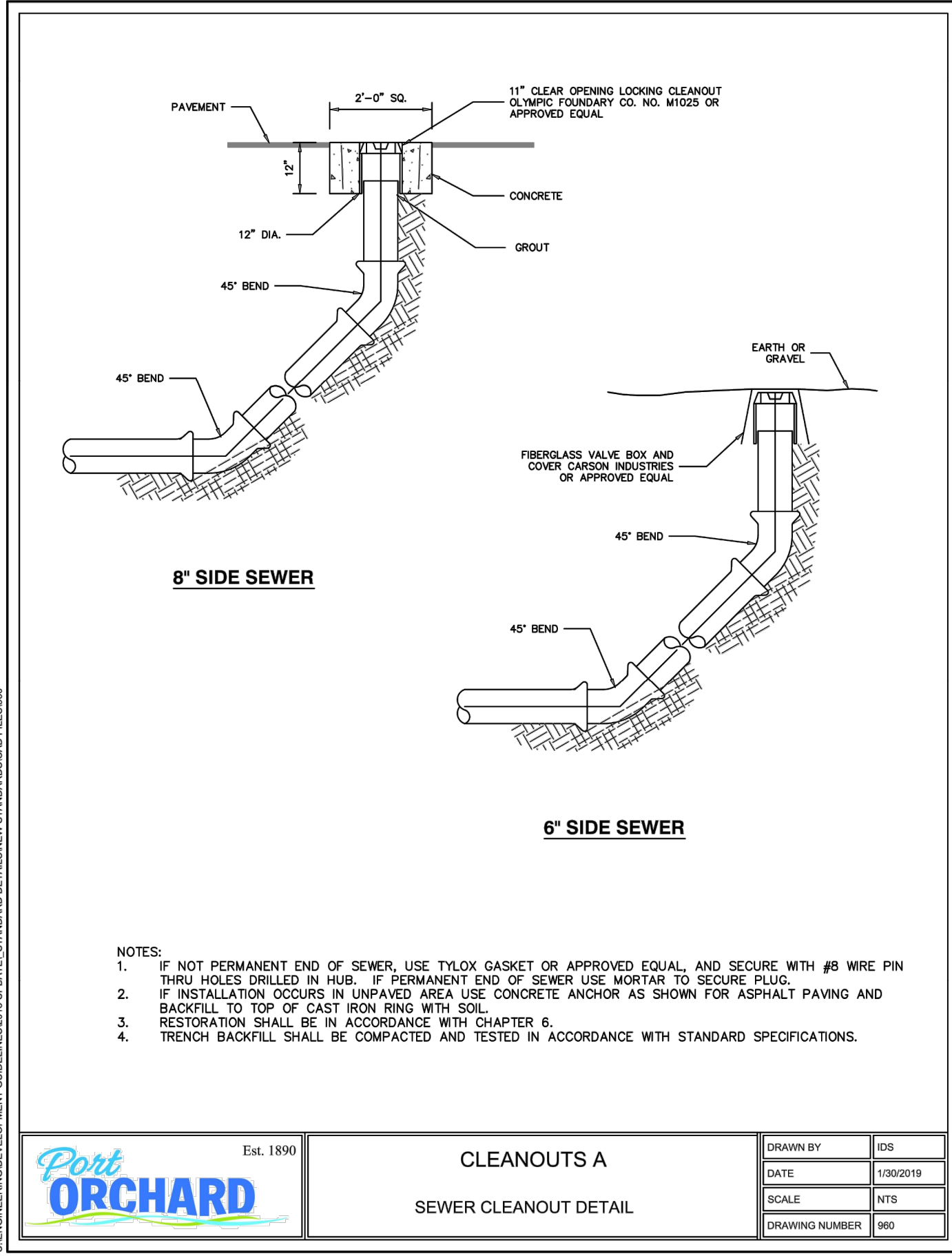
MANHOLES E
 MANHOLE DETAIL - LADDER
 DRAWN BY: IDS
 DATE: 1/30/2019
 SCALE: NTS
 DRAWING NUMBER: 024



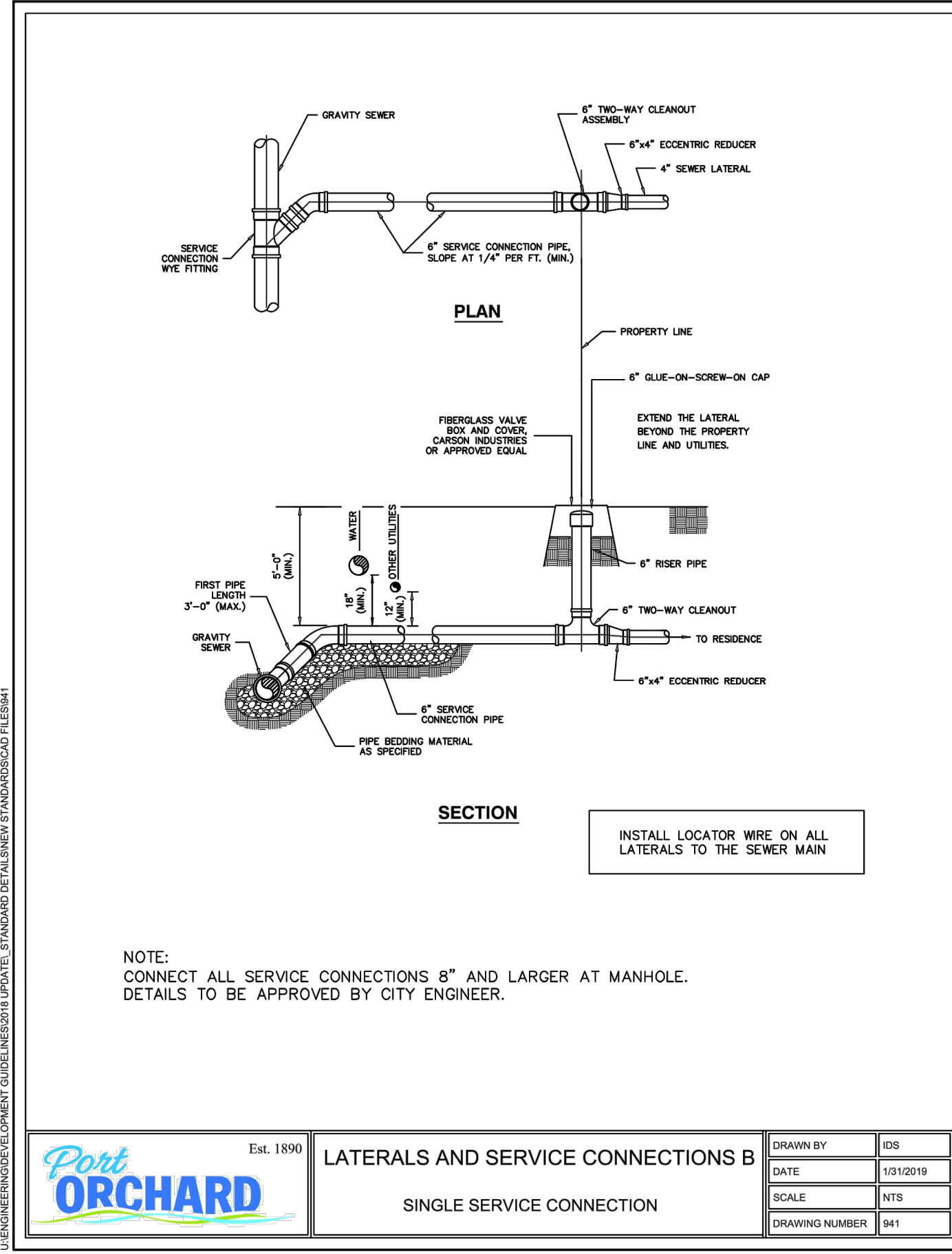
MANHOLES A
 MANHOLE DETAIL 48"
 DRAWN BY: IDS
 DATE: 1/30/2019
 SCALE: NTS
 DRAWING NUMBER: 020



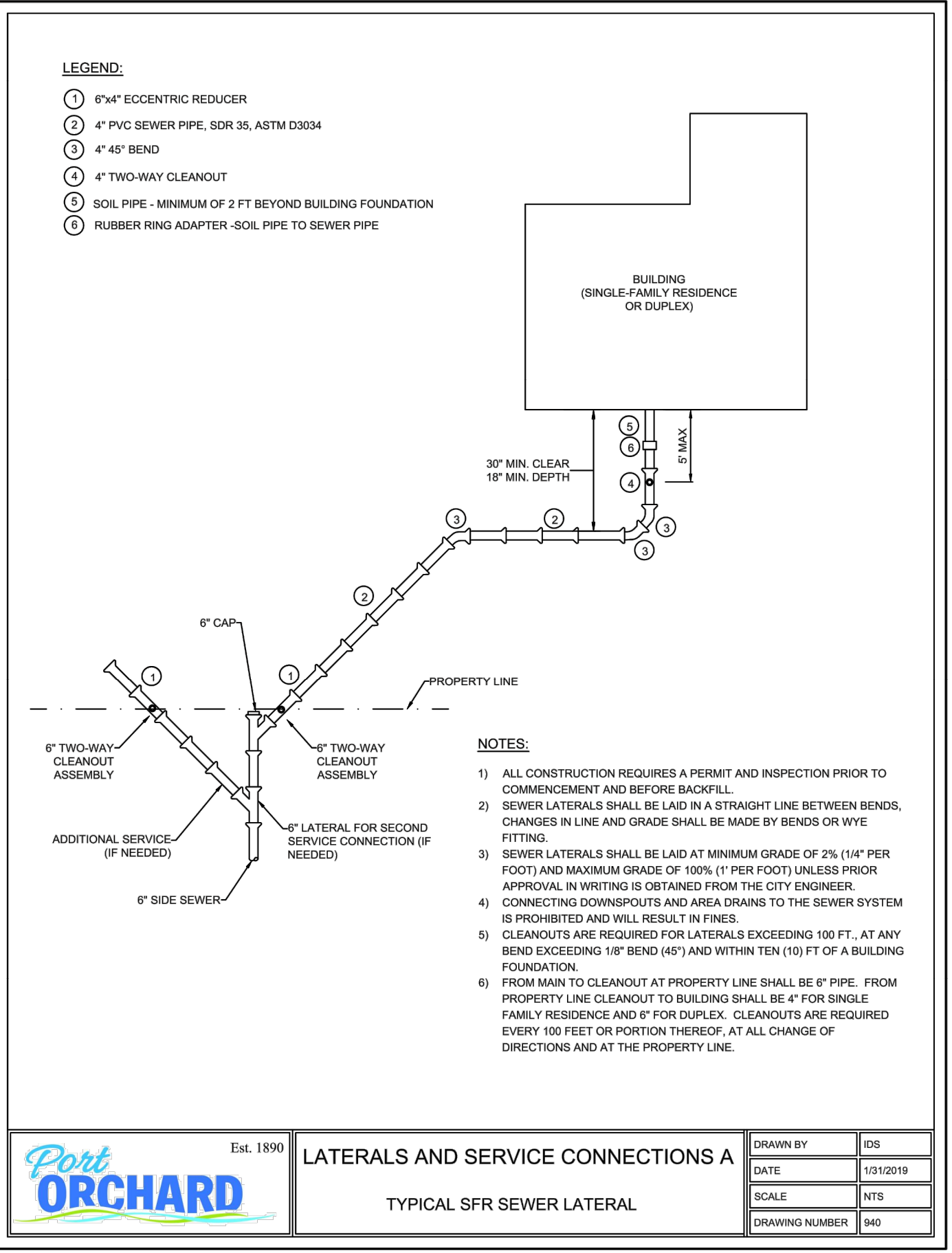
TRENCHES AND PIPE CONNECTIONS A
 SEWER TRENCH DETAILS
 DRAWN BY: IDS
 DATE: 1/23/2019
 SCALE: NTS
 DRAWING NUMBER: 020



CLEANOUTS A
 SEWER CLEANOUT DETAIL
 DRAWN BY: IDS
 DATE: 1/30/2019
 SCALE: NTS
 DRAWING NUMBER: 020



LATERALS AND SERVICE CONNECTIONS B
 SINGLE SERVICE CONNECTION
 DRAWN BY: IDS
 DATE: 1/31/2019
 SCALE: NTS
 DRAWING NUMBER: 041



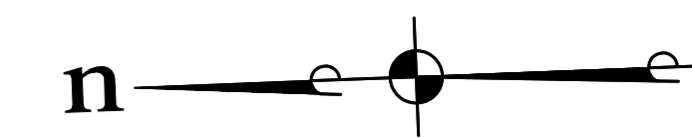
LATERALS AND SERVICE CONNECTIONS A
 TYPICAL SFR SEWER LATERAL
 DRAWN BY: IDS
 DATE: 1/31/2019
 SCALE: NTS
 DRAWING NUMBER: 040

File: \\mm6\ENGR\ESM-JOB\2155\020\020\pds\SS-09.dwg
 Plotted By: Brandon Avolio
 Printed: 12/7/2021 1:03 PM

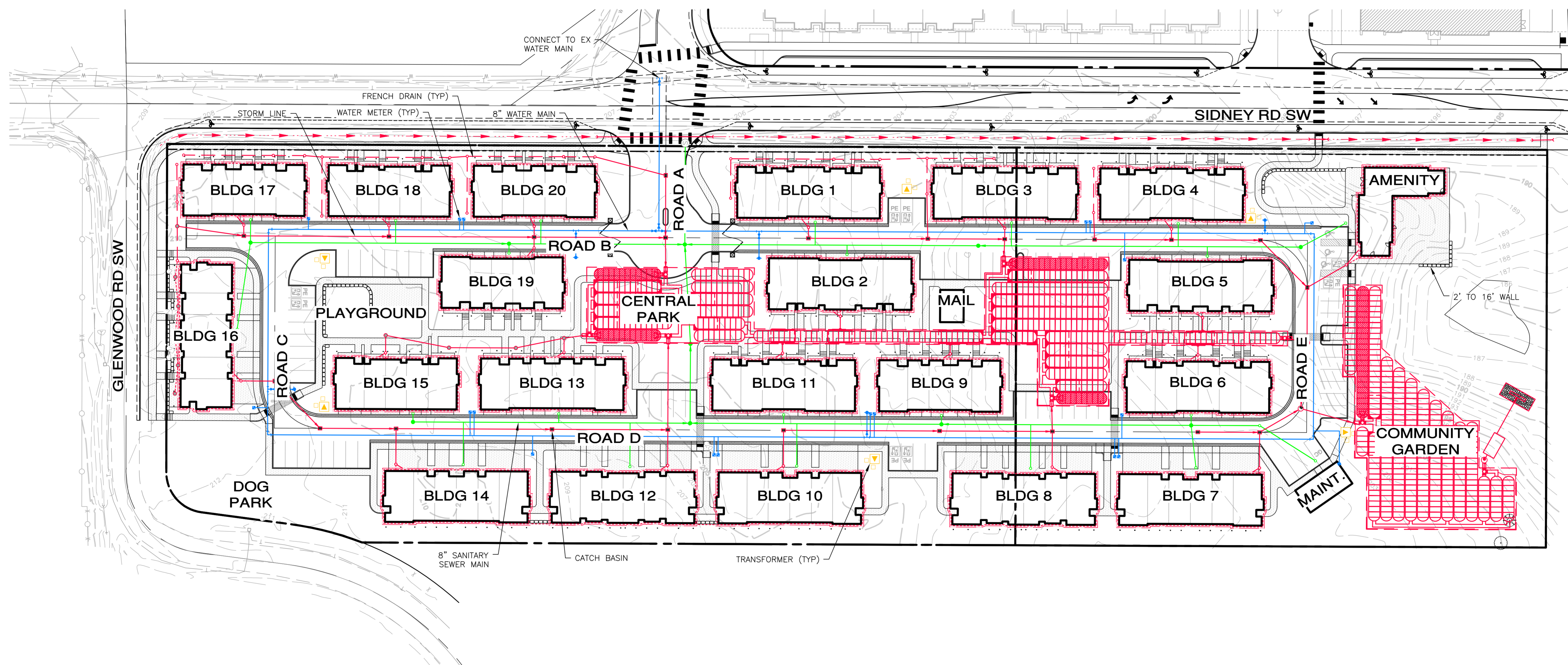
A PORTION OF NW 1/4 OF SECTION 11, T. 23 N., R. 1 E., W.M.

LEGEND

- SANITARY SEWER LINE
- SANITARY SEWER CLEANOUT
- WATER MAIN
- WATER SERVICE LINE
- FIRE HYDRANT
- FIRE DEPARTMENT CONNECTION
- WATER METER
- STORM DRAIN LINE
- FRENCH DRAIN LINE
- ROOF DRAIN LINE
- FOOTING DRAIN LINE
- YARD DRAIN
- TRANSFORMER LOCATION
- 186- EXISTING MINOR CONTOUR
- 190- EXISTING MAJOR CONTOUR



SCALE: 1" = 40'



REVISIONS

NO.	DESCRIPTION/DATE	BY

12/09/2021

ESM CONSULTING ENGINEERS LLC
 35400 RAY AVE., SUITE 205
 FEDERAL WAY, WA 98003

LAURA G. BARTENHOGEN
 STATE OF WASHINGTON
 LICENSED PROFESSIONAL ENGINEER
 4011

www.esmcivil.com
 Civil Engineering
 Land Surveying
 Project Management
 Public Works
 Land Planning
 Landscape Architecture

FEDERAL WAY WA 98003 (253) 838-6113 (253) 297-9900

SIDNEY ROAD TOWNHOMES L.L.C.

HAVEN TOWNHOMES

CITY OF PORT ORCHARD

WASHINGTON

COMPOSITE UTILITY PLAN

JOB NO.: 2155-002-020

DWG. NAME: UT-01

DESIGNED BY: LGB

DRAWN BY: GFF

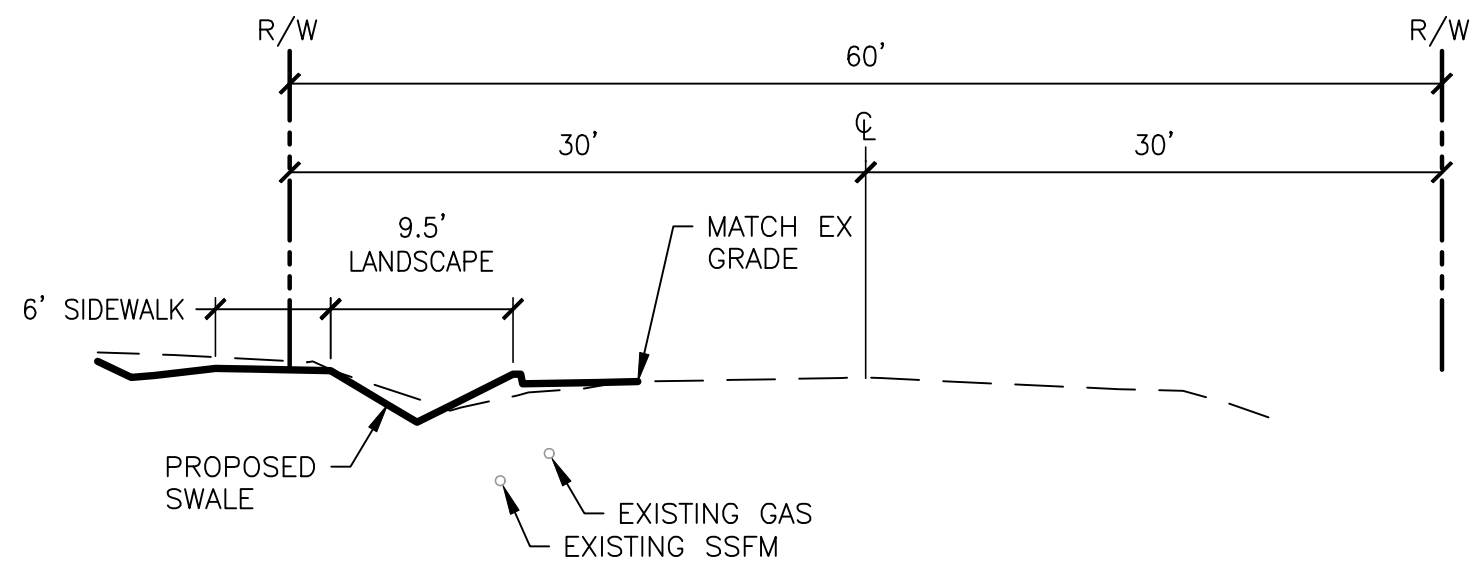
CHECKED BY:

DATE: 12/10/2021

DATE OF PRINT:

PW21-079 / PW21-080

File: \\esm\ENR\ESM-JOBS\2155\020\020\020\020\UT-01.dwg
 Plotted By: Laura Bartenhogen
 12/9/2021 4:41 PM



10 CURB R TABLE

STATION	OFFSET	ELEV.
BCR 83+47.05	10.00' RT	209.64
1/4 Δ	-----	209.18
1/2 Δ	-----	208.77
3/4 Δ	-----	208.45
ECR 72+28.60	17.83' LT	208.14

Δ=90°06'36" R=35.00' L=55.05'

11 CURB R TABLE

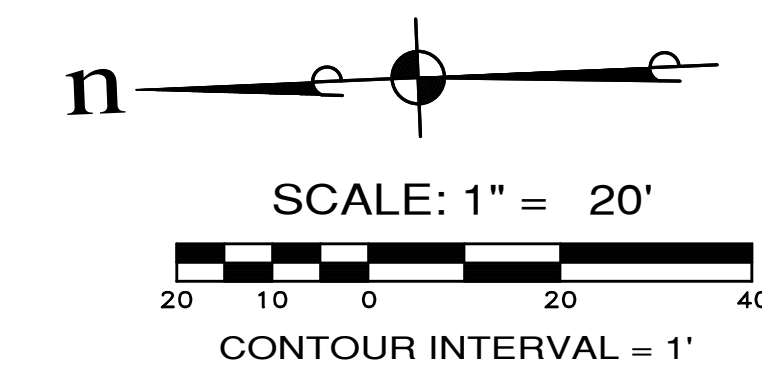
STATION	OFFSET	ELEV.
BCR 69+23.90	17.81' LT	206.68
1/4 Δ	-----	206.62
1/2 Δ	-----	206.54
3/4 Δ	-----	206.43
ECR 11+05.29	26.50' LT	206.36

Δ=90°00'00" R=25.00' L=39.27'

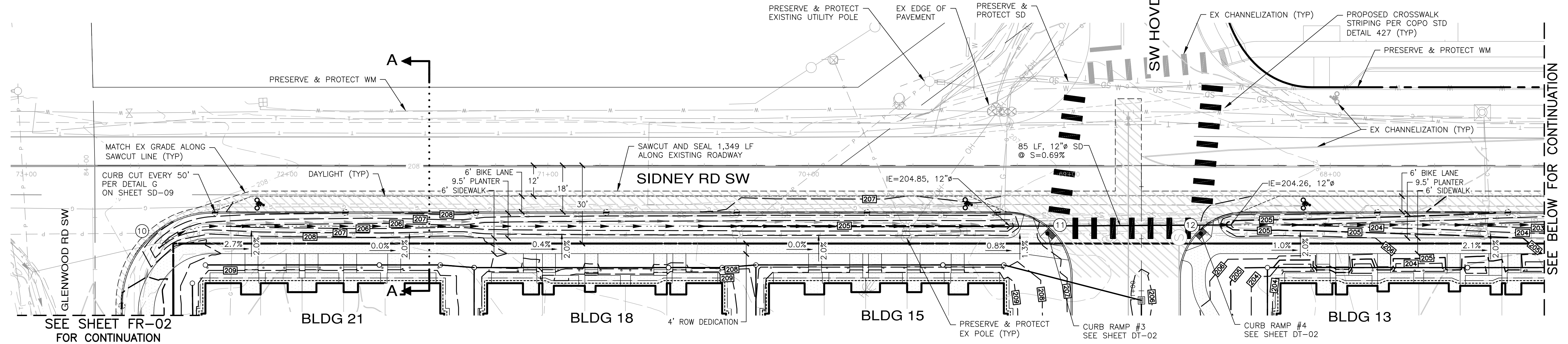
12 CURB R TABLE

STATION	OFFSET	ELEV.
BCR 11+05.29	14.50' RT	206.18
HP 11+10.90	15.14' RT	206.19
1/4 Δ	-----	206.16
1/2 Δ	-----	206.01
3/4 Δ	-----	205.85
ECR 68+32.90	17.81' LT	205.75

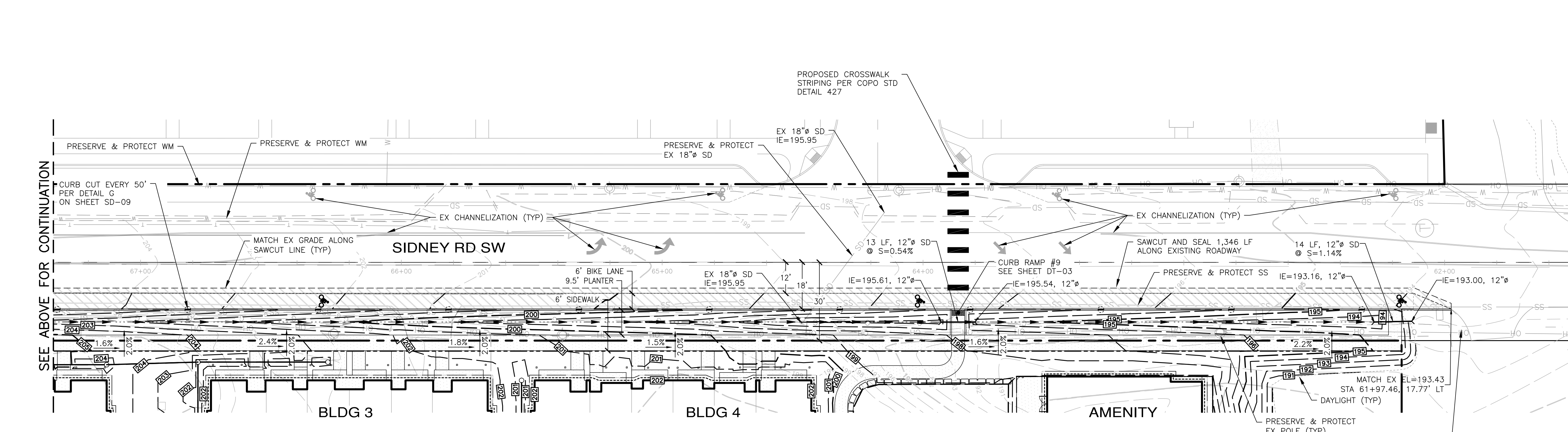
Δ=90°00'00" R=25.00' L=39.27'



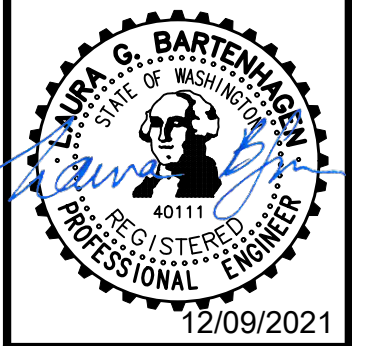
SIDNEY RD SW SECTION A-A
SCALE: 1"=10'



SEE BELOW FOR CONTINUATION



SEE ABOVE FOR CONTINUATION



ESM CONSULTING ENGINEERS LLC
33400 8th Ave S, Suite 205
Federal Way, WA 98003
www.esmcivil.com

Civil Engineering
Land Surveying
Public Works
Project Management
Landscape Architecture

SIDNEY ROAD TOWNHOMES L.L.C.
HAVEN TOWNHOMES
FRONTAGE IMPROVEMENTS
CITY OF PORT ORCHARD
WASHINGTON

NO.	REVISIONS	DESCRIPTION/DATE	BY

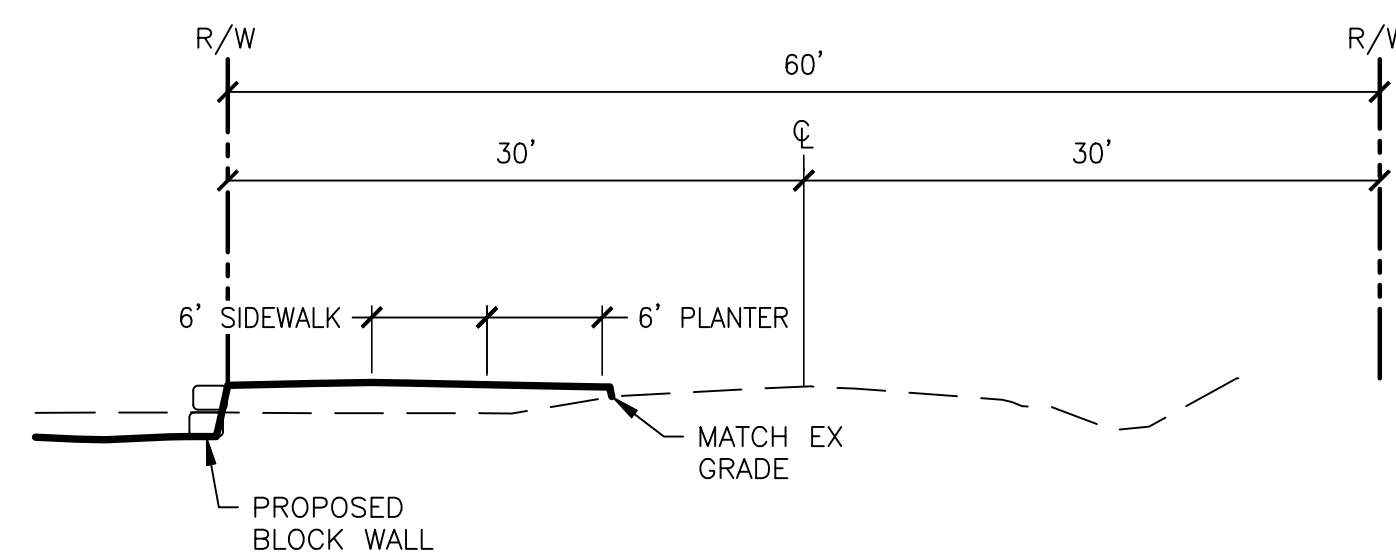
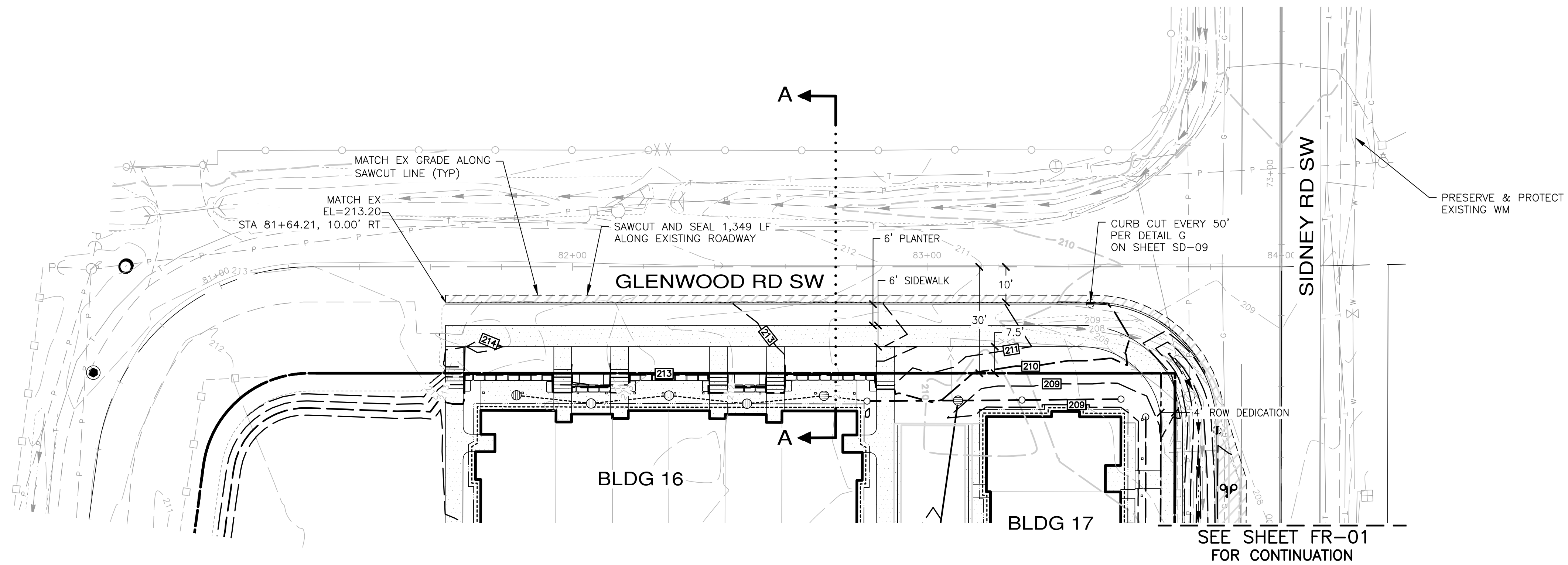
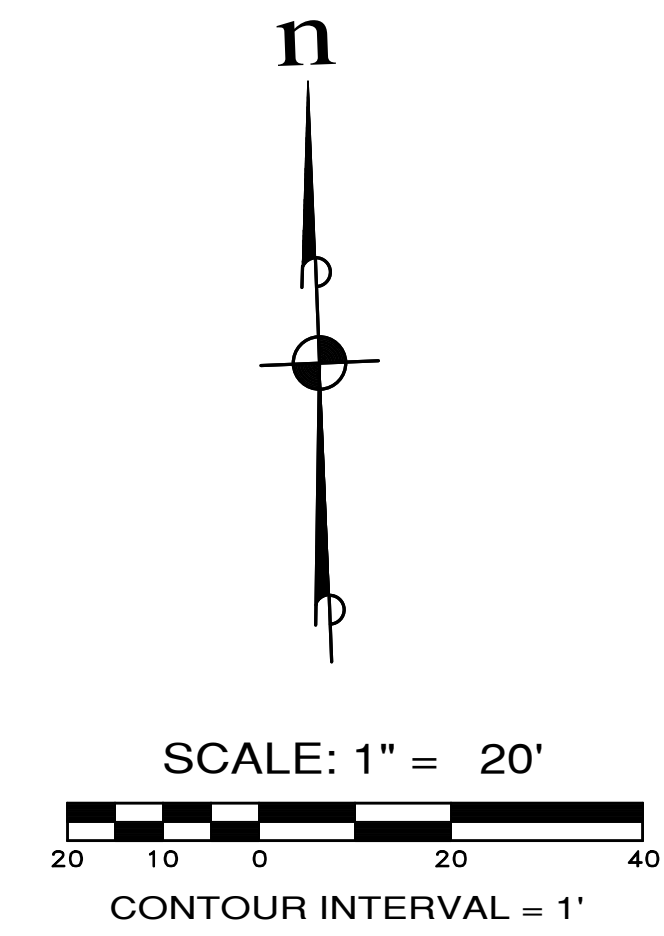
JOB NO.: 2155-002-020
DWG. NAME: FR-01
DESIGNED BY: LGB
DRAWN BY: GFF
CHECKED BY:
DATE: 12/03/2021
DATE OF PRINT:

FR-01
32 OF 38 SHEETS

File: \\smm8\ENGR\ESM-JOBES\2155\002\020\020\plans\FR-01.dwg
Printed: 12/9/2021 9:57 AM
Plotted By: Greg Fenderson

PW21-079 / PW21-080

A PORTION OF NW 1/4 OF SECTION 11, T. 23 N., R. 1 E., W.M.



GLENWOOD RD SW SECTION A-A
SCALE: 1"=10'

REVISIONS		
NO.	DESCRIPTION/DATE	BY

ESM CONSULTING ENGINEERS LLC
 33400 8th Ave S, Suite 205
 Federal Way, WA 98003
 www.esmcivil.com
 Civil Engineering | Land Surveying | Project Management | Landscape Architecture
 (253) 838-0113
 (253) 837-9900

SIDNEY ROAD TOWNHOMES L.L.C.
HAVEN TOWNHOMES
 CITY OF PORT ORCHARD
 FRONTAGE IMPROVEMENTS
 WASHINGTON

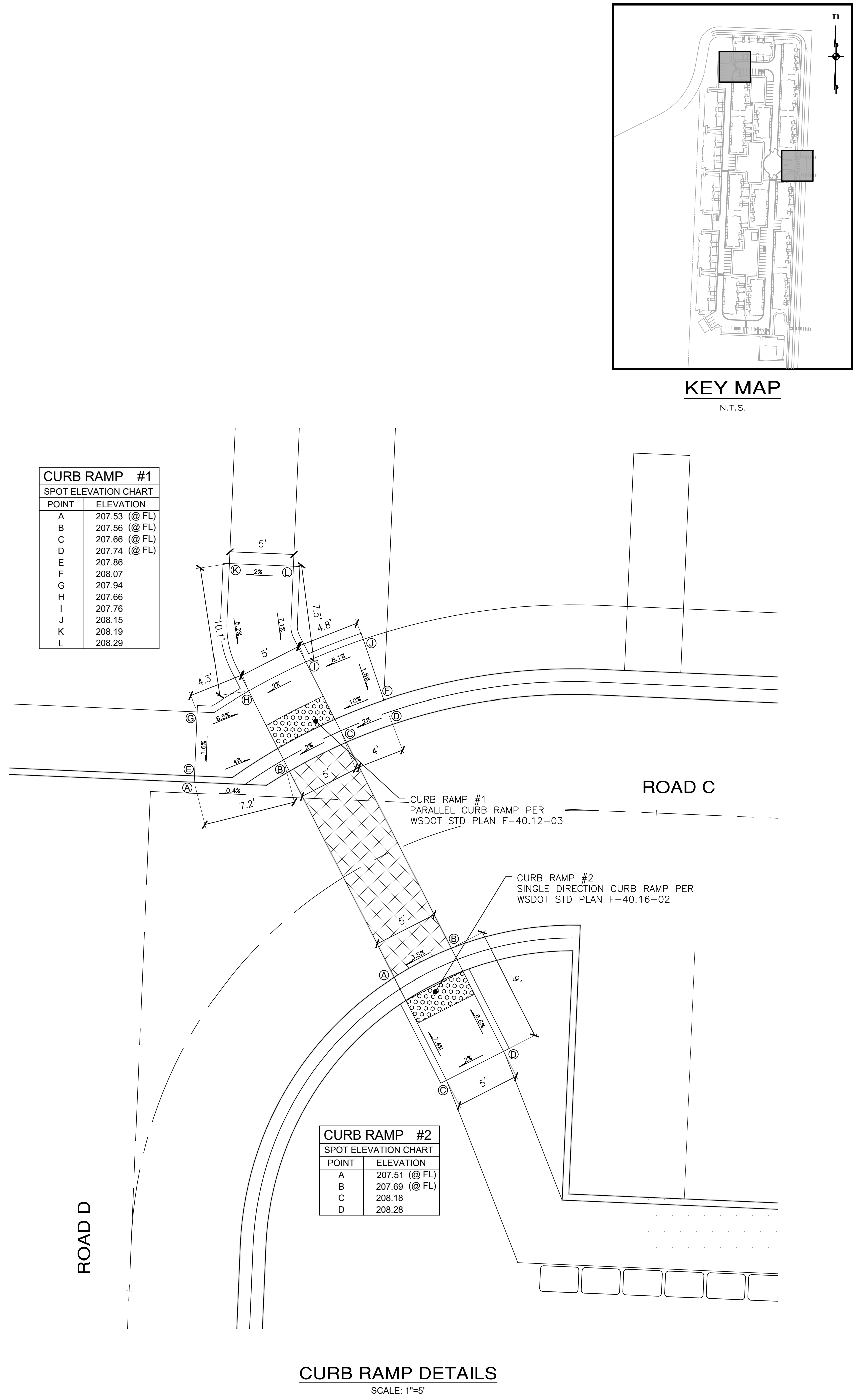
JOB NO.:	2155-002-020
DWG. NAME:	FR-02
DESIGNED BY:	LGB
DRAWN BY:	OFF
CHECKED BY:	
DATE:	12/03/2021
DATE OF PRINT:	

FR-02
 33 OF 38 SHEETS

PW21-079 / PW21-080

File: \\smm6\ENGR\ESM-JOB\2155\020\020\plans\FR-02.dwg
 Plotted: 12/9/2021 10:21 AM
 Plotted By: Greg Fedore

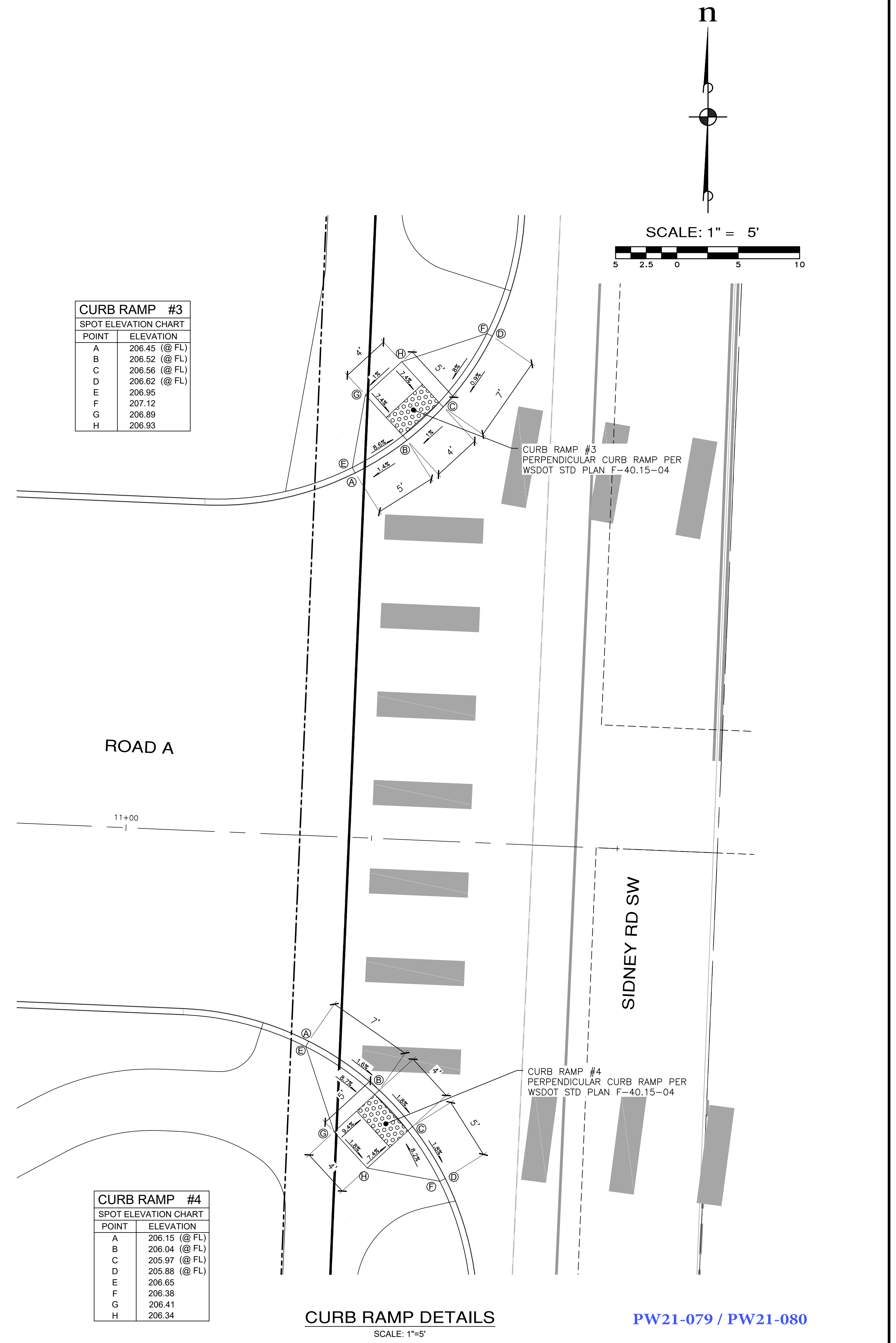
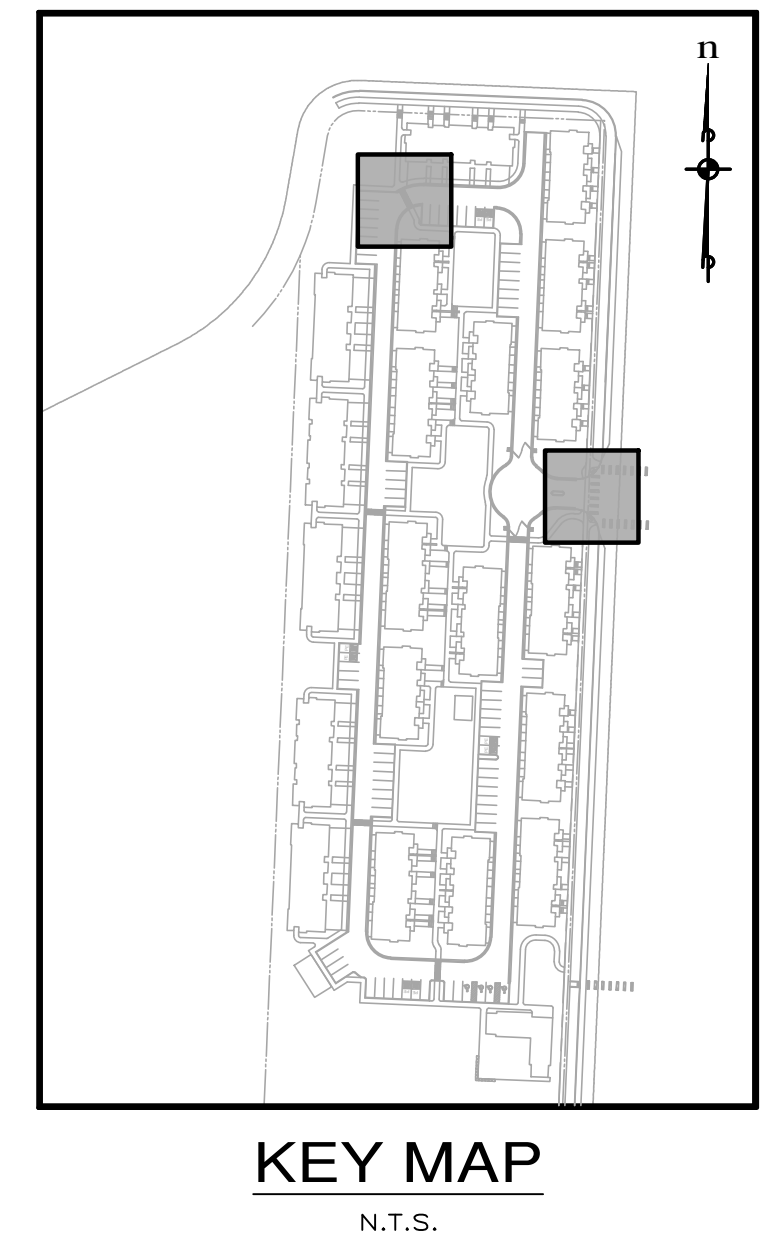
File: \\nms\ENR\ESM-JOB\2155\020\020\plans\DT-01.dwg
 Plotted By: Greg Fedore
 Plotted: 12/7/2021 1:34 PM



CURB RAMP #2
 SPOT ELEVATION CHART

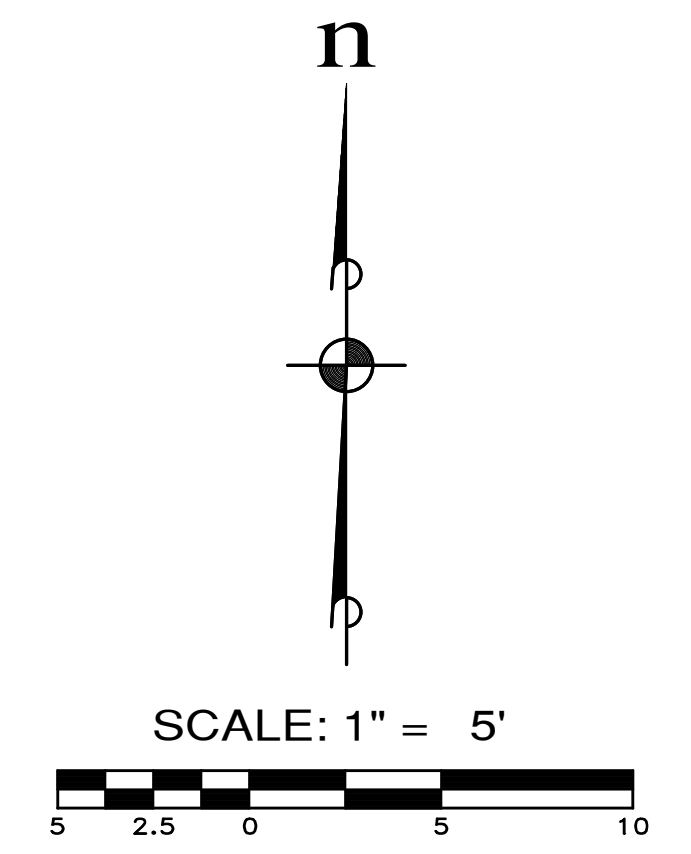
POINT	ELEVATION
A	207.51 (@ FL)
B	207.69 (@ FL)
C	208.18
D	208.28

SCALE: 1"=5'



CURB RAMP #4
 SPOT ELEVATION CHART

SCALE: 1"=5'



REVISIONS		
NO.	DESCRIPTION/DATE	BY

12/09/2021

ESM CONSULTING ENGINEERS, LLC
 33400 8th Ave S, Suite 205
 Federal Way, WA 98003
 www.esmcivil.com

PAUL G. BARTENGER
 LICENSED PROFESSIONAL ENGINEER
 No. 10111

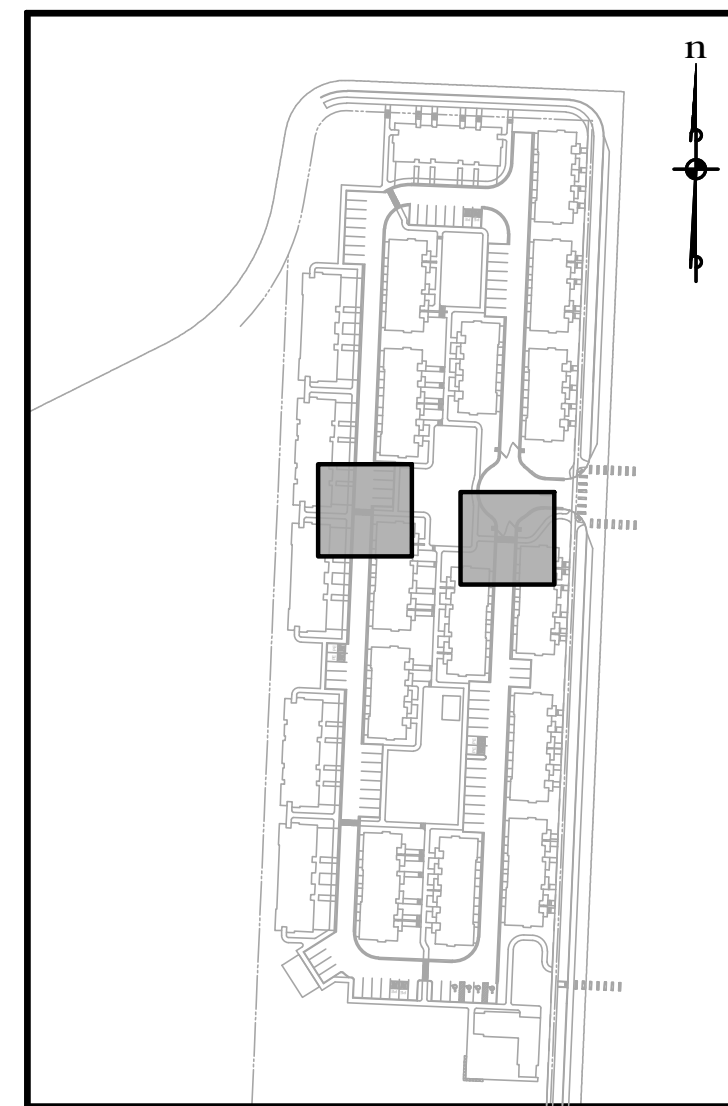
Civil Engineering | Land Surveying | Project Management | Landscape Architecture
 Public Works | Land Planning

SIDNEY ROAD TOWNHOMES L.L.C.
HAVEN TOWNHOMES
 CITY OF PORT ORCHARD

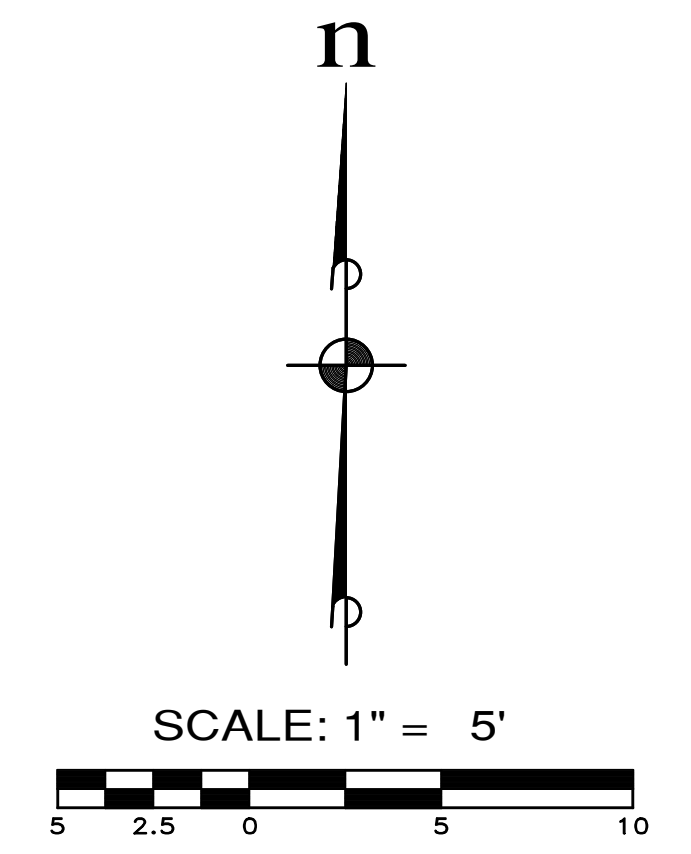
WASHINGTON
 CURB RAMP DETAILS

JOB NO.: 2155-002-020
 DWG. NAME: DT-01
 DESIGNED BY: LGB
 DRAWN BY: GFF
 CHECKED BY:
 DATE: 12/03/2021
 DATE OF PRINT:
DT-01
 34 OF 38 SHEETS

File: \\smm6\ENGR\ESM-JOB\21155\020\020\plans\DT-02.dwg
 Plotted: 12/7/2021 1:31 PM
 Plotted By: Greg Fedore

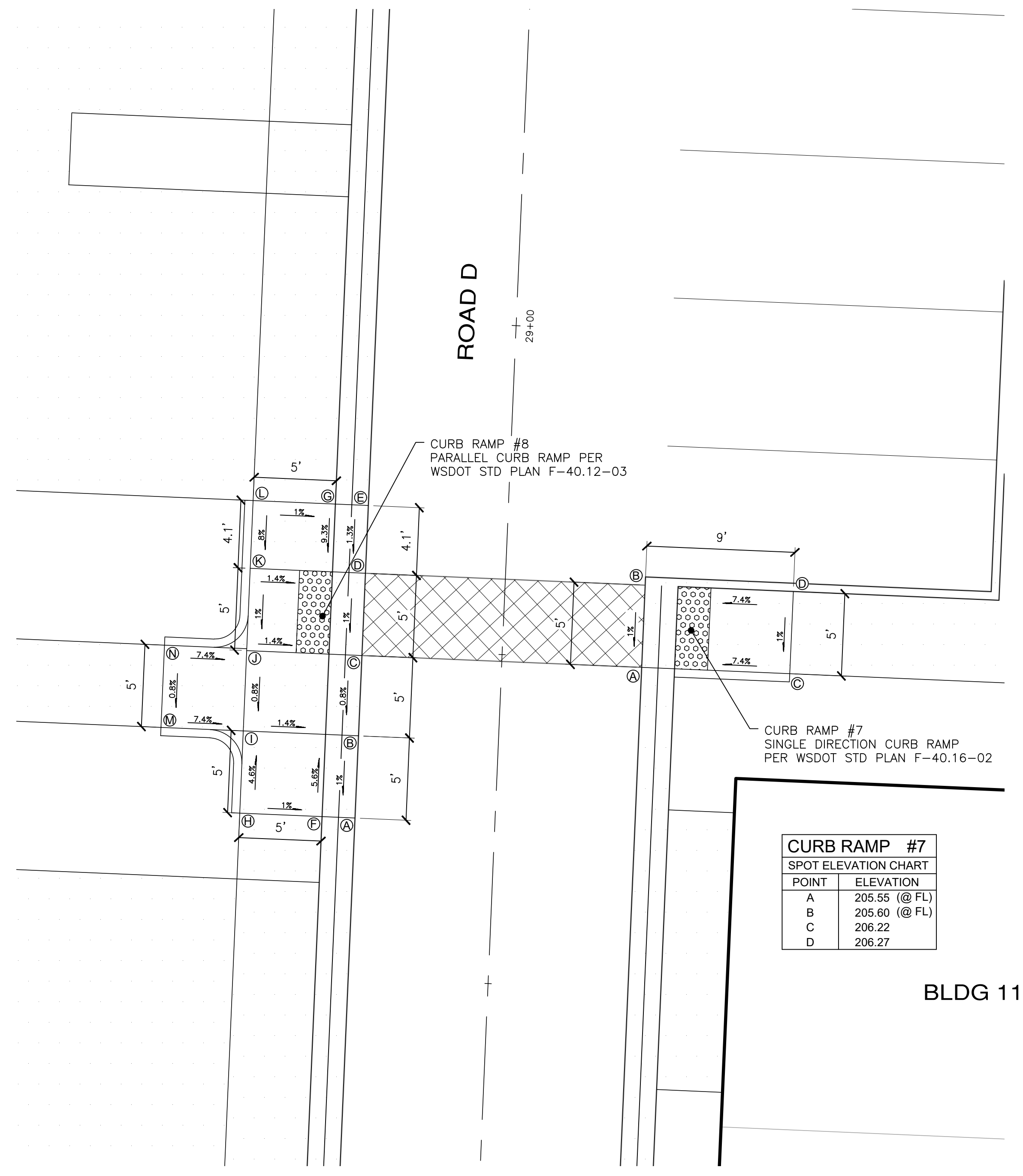


KEY MAP
N.T.S.

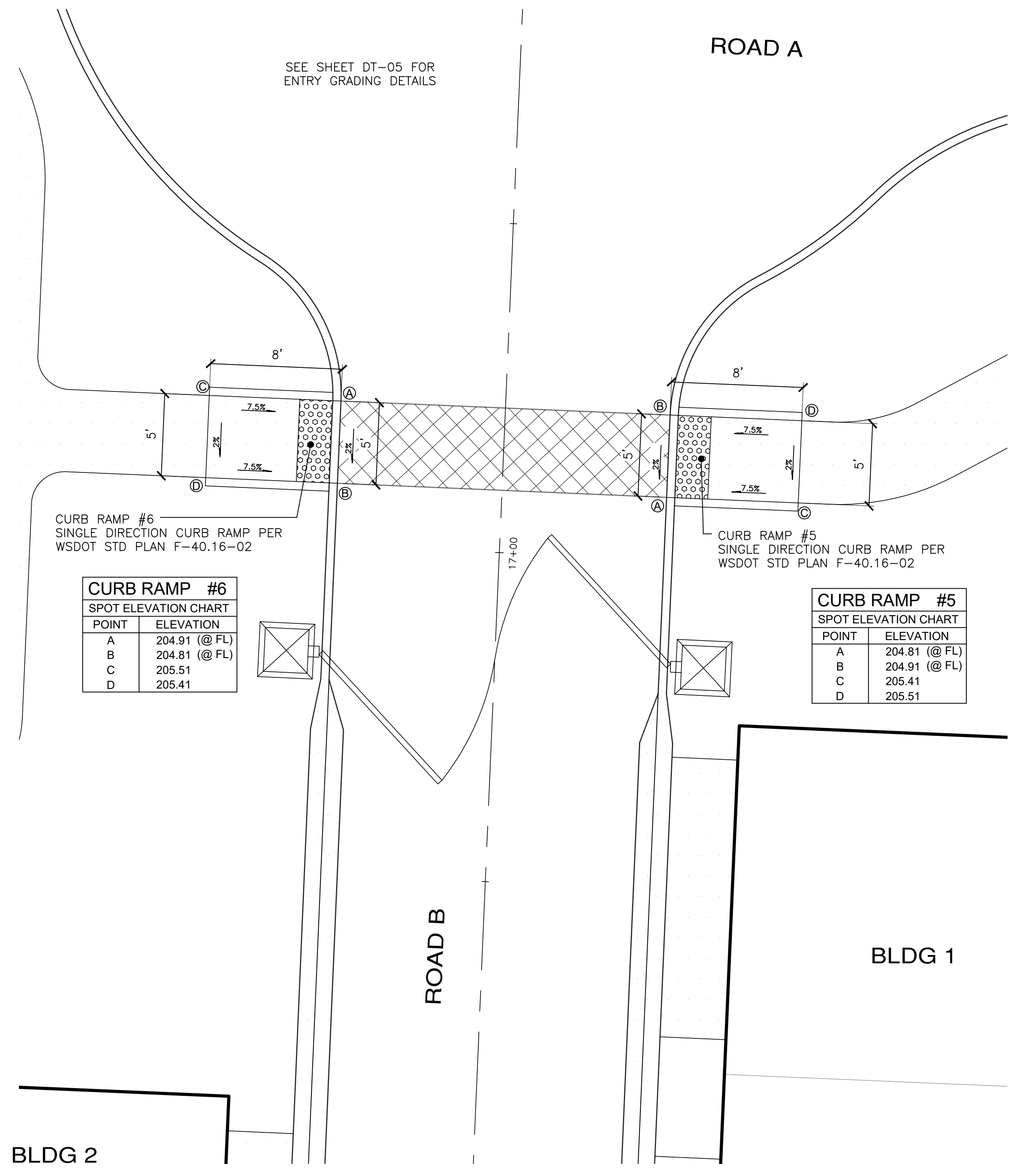


CURB RAMP #8
SPOT ELEVATION CHART

POINT	ELEVATION
A	205.46 (@ FL)
B	205.51 (@ FL)
C	205.55 (@ FL)
D	205.60 (@ FL)
E	205.65 (@ FL)
F	205.79
G	205.98
H	205.84
I	205.61
J	205.65
K	205.70
L	206.03
M	205.98
N	206.02



CURB RAMP DETAILS
SCALE: 1"=5'



CURB RAMP DETAILS
SCALE: 1"=5'

PW21-079 / PW21-080

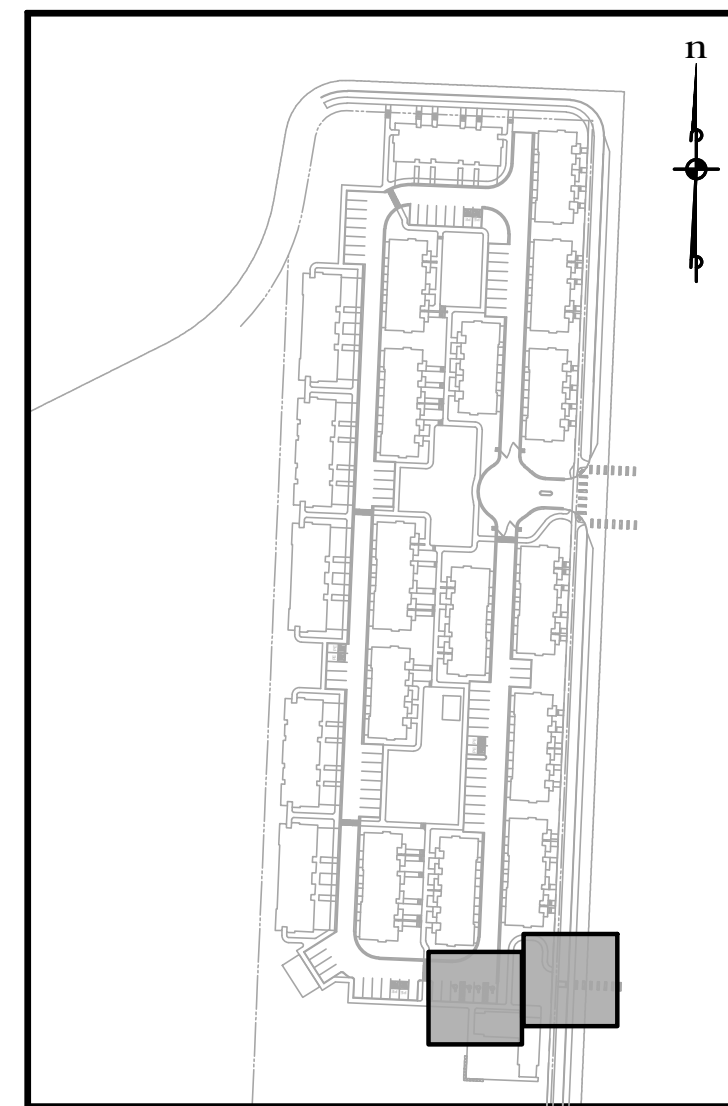
REVISIONS

NO.	DESCRIPTION/DATE	BY

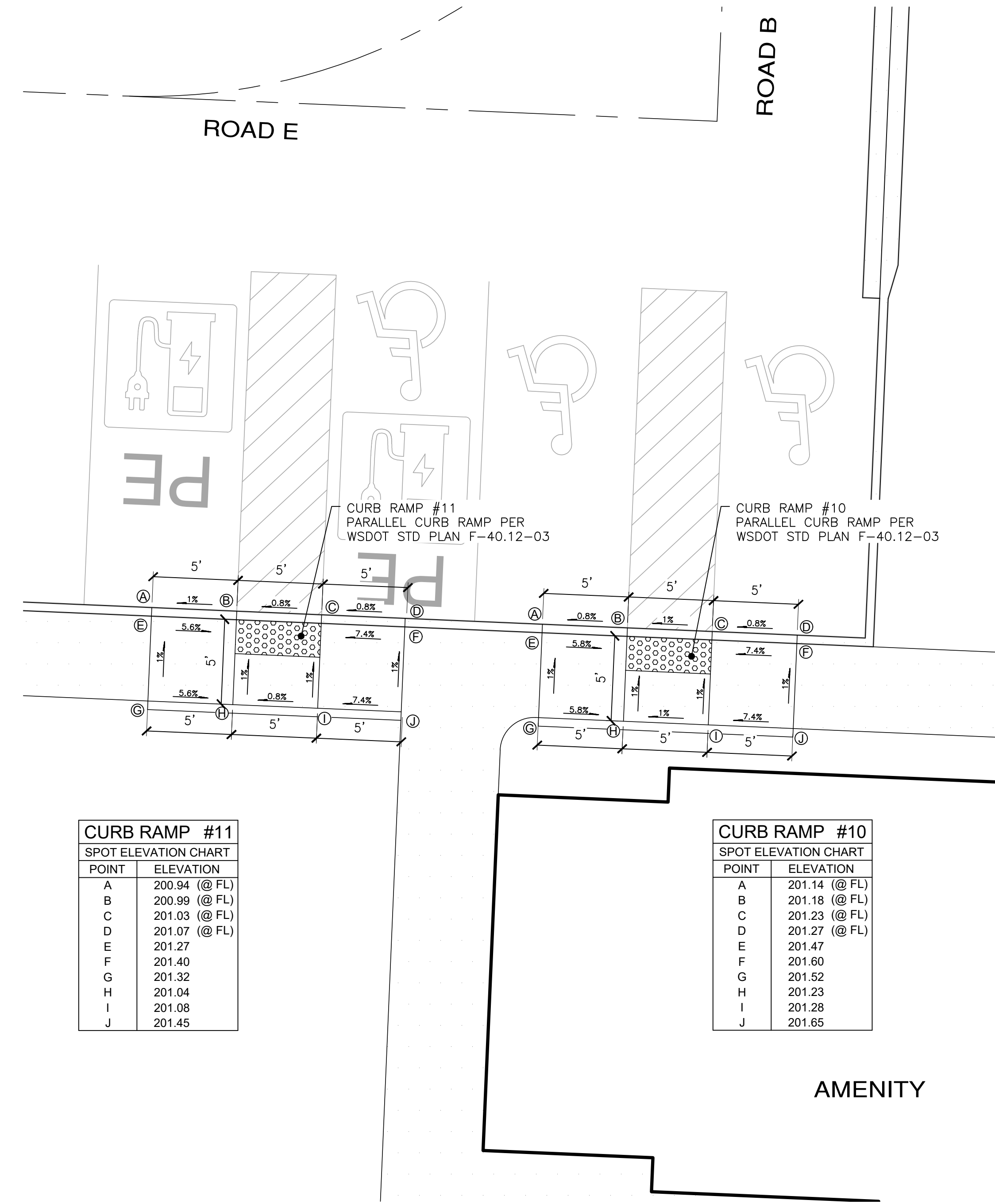
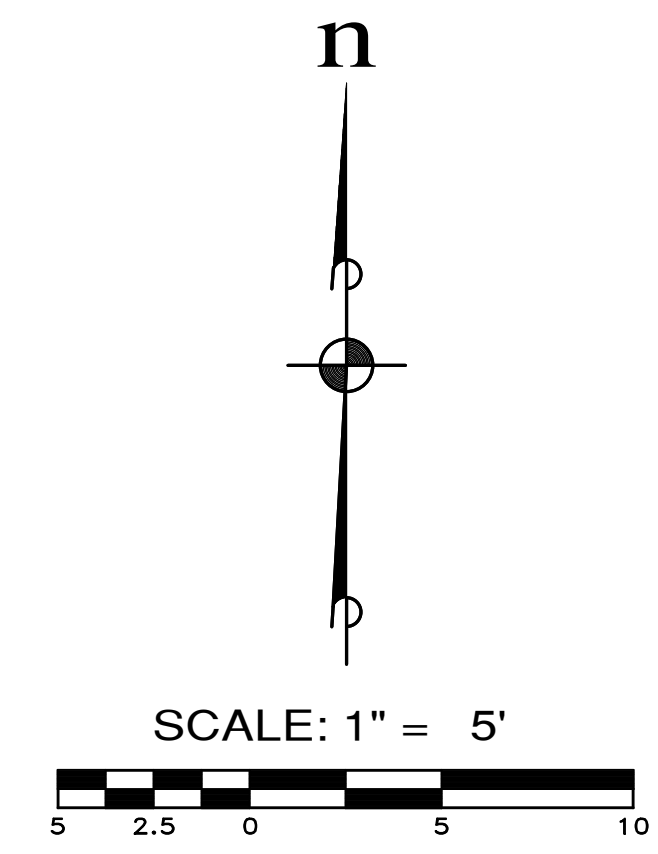
ESM CONSULTING ENGINEERS LLC
 33400 8th Ave S, Suite 205
 Federal Way, WA 98003
 www.esmcivil.com
 Civil Engineering | Land Surveying | Project Management | Landscape Architecture
 (253) 836-6113
 (253) 857-9900

SIDNEY ROAD TOWNHOMES L.L.C.
HAVEN TOWNHOMES
 CITY OF PORT ORCHARD CURB RAMP DETAILS
 WASHINGTON

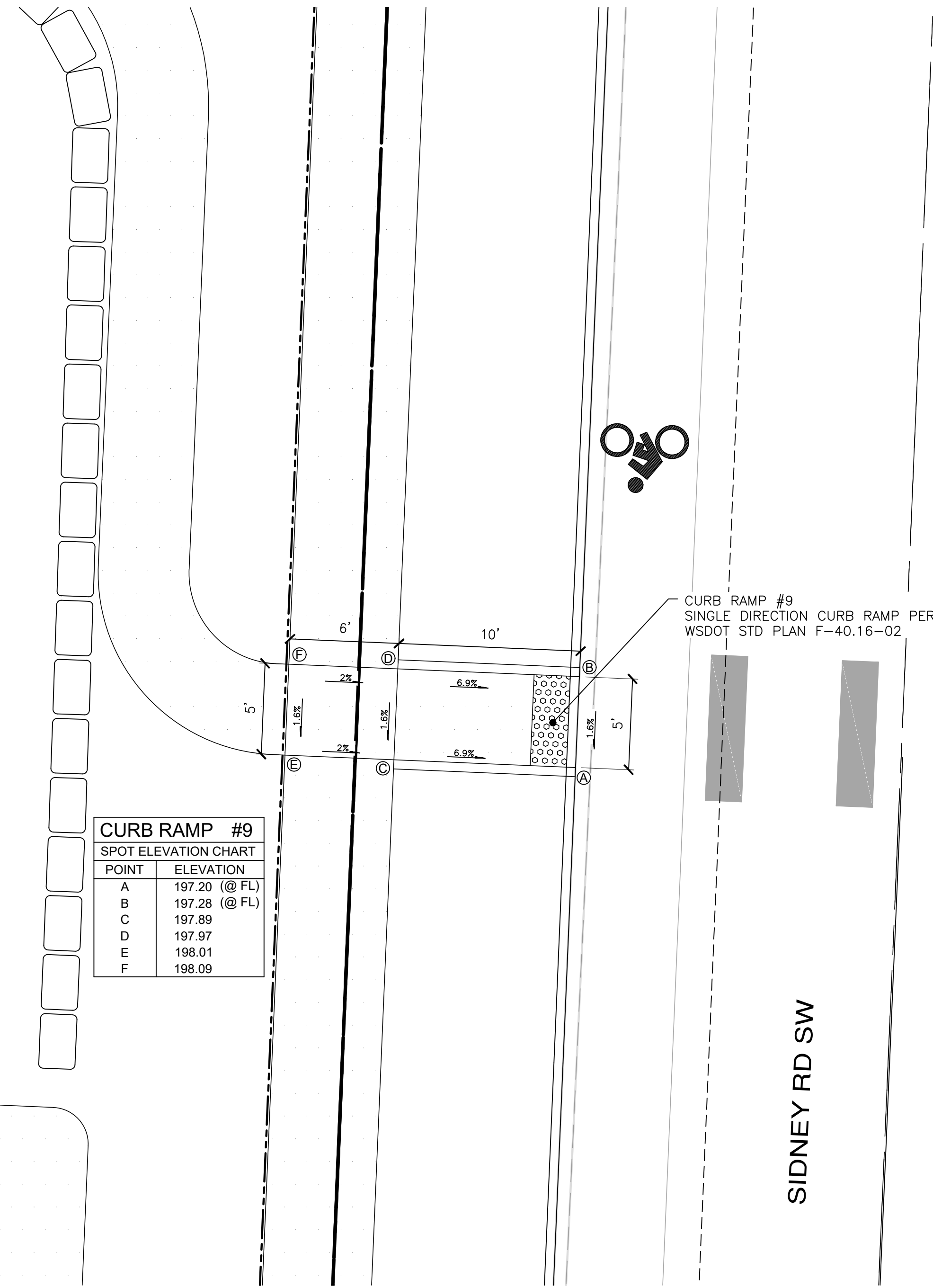
JOB NO.: 2155-002-020
 DWG. NAME: DT-02
 DESIGNED BY: LGB
 DRAWN BY: GFF
 CHECKED BY:
 DATE: 12/03/2021
 DATE OF PRINT:



KEY MAP
N.T.S.



CURB RAMP DETAILS
SCALE: 1"=5'



CURB RAMP DETAILS
SCALE: 1"=5'

PW21-079 / PW21-080

CURB RAMP #11	
SPOT ELEVATION CHART	
POINT	ELEVATION
A	200.94 (@ FL)
B	200.99 (@ FL)
C	201.03 (@ FL)
D	201.07 (@ FL)
E	201.27
F	201.40
G	201.32
H	201.04
I	201.08
J	201.45

CURB RAMP #10	
SPOT ELEVATION CHART	
POINT	ELEVATION
A	201.14 (@ FL)
B	201.18 (@ FL)
C	201.23 (@ FL)
D	201.27 (@ FL)
E	201.47
F	201.60
G	201.52
H	201.23
I	201.28
J	201.65

CURB RAMP #9	
SPOT ELEVATION CHART	
POINT	ELEVATION
A	197.20 (@ FL)
B	197.28 (@ FL)
C	197.89
D	197.97
E	198.01
F	198.09

REVISIONS		
NO.	DESCRIPTION/DATE	BY

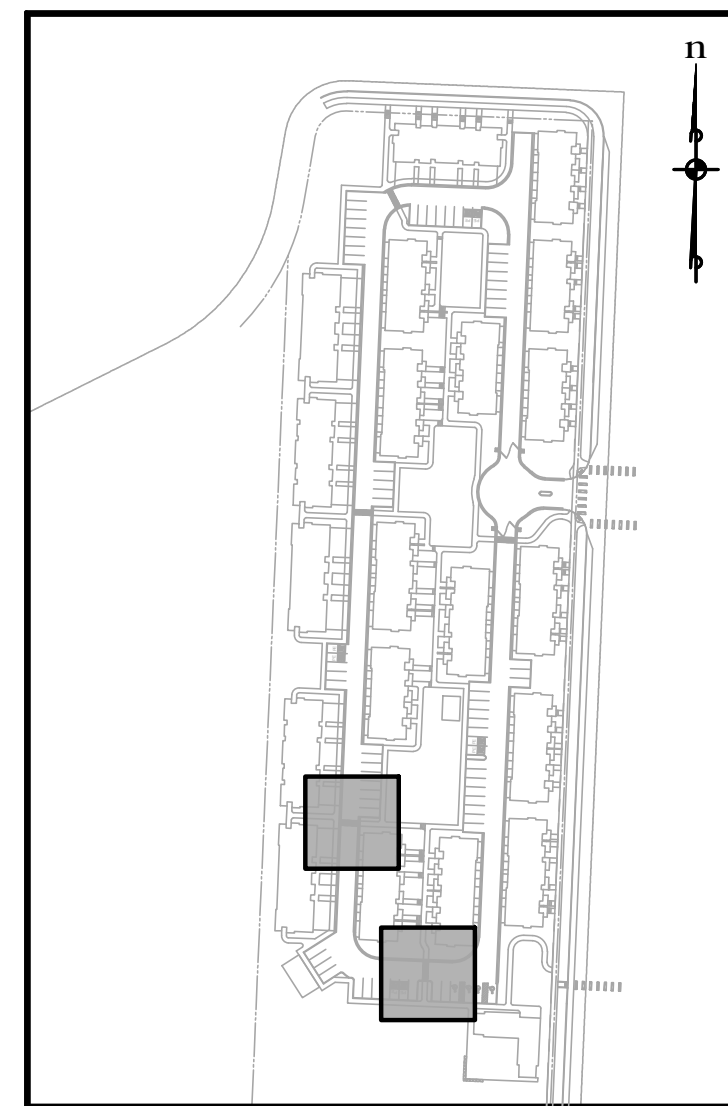


ESM CONSULTING ENGINEERS LLC
 32400 8th Ave S, Suite 205
 Federal Way, WA 98003
 www.esmcivil.com
 Civil Engineering | Land Surveying | Project Management | Landscape Architecture
 Public Works | Land Planning | Landscape Architecture

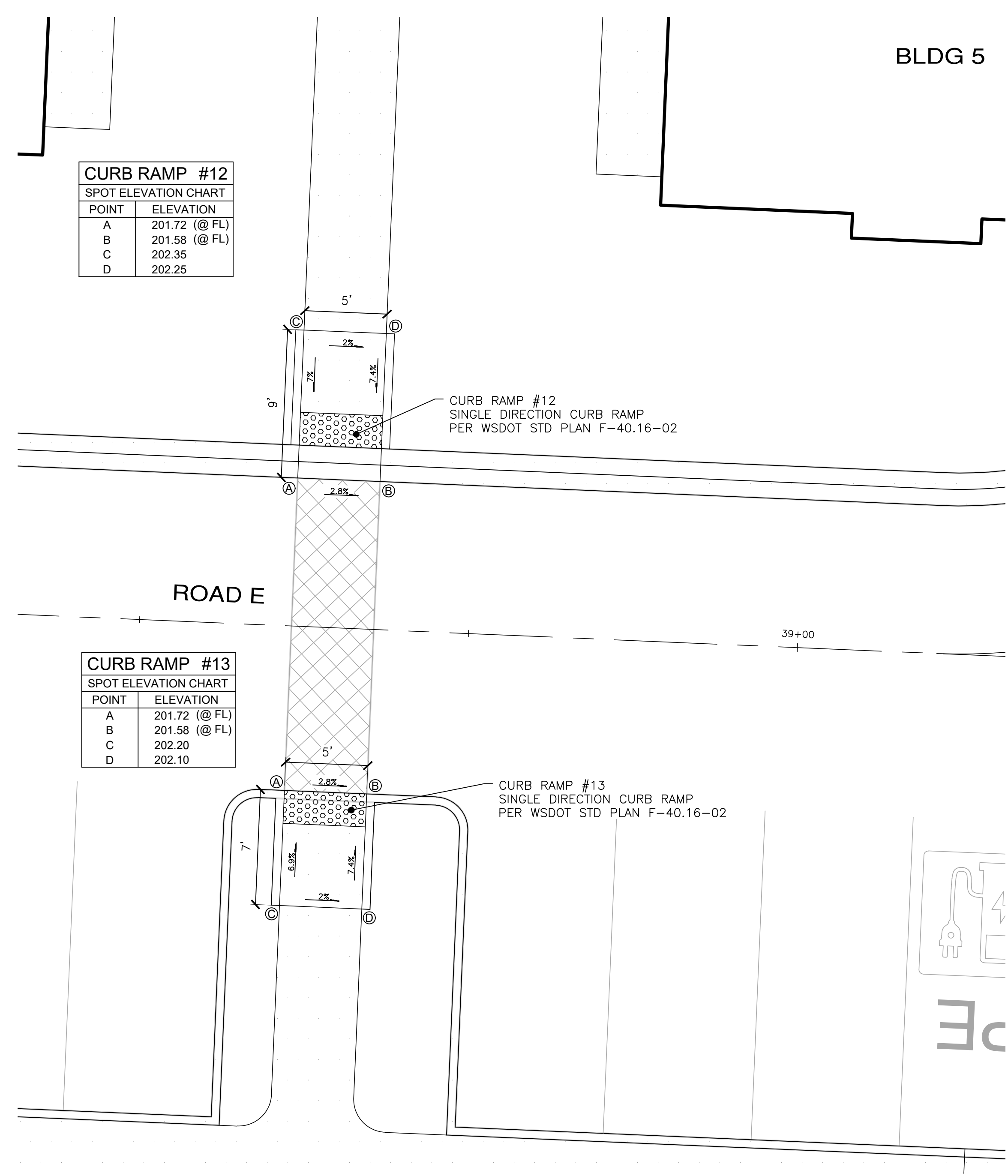
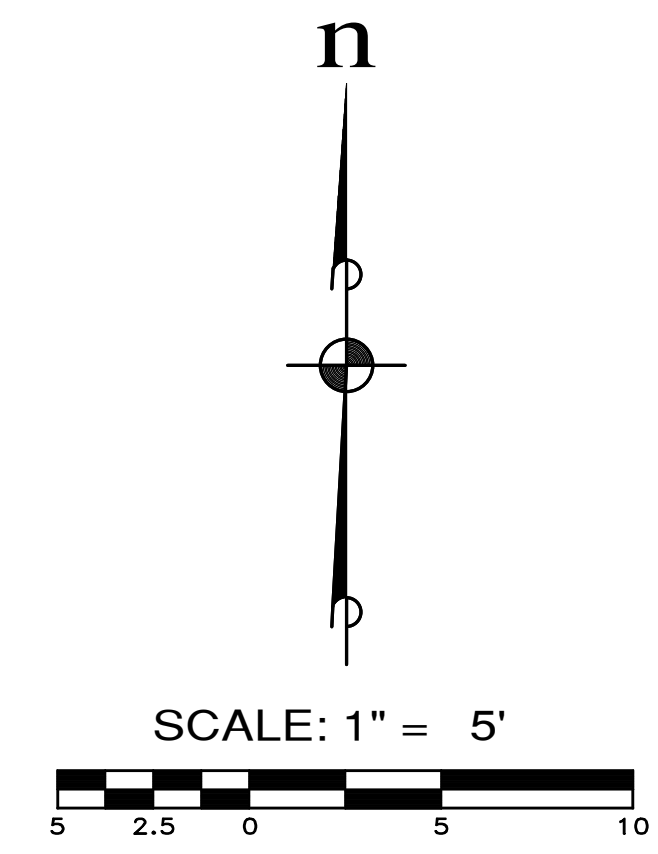
SIDNEY ROAD TOWNHOMES L.L.C.
HAVEN TOWNHOMES
 CURB RAMP DETAILS
 CITY OF PORT ORCHARD WASHINGTON

JOB NO.: 2155-002-020
 DWG. NAME: DT-03
 DESIGNED BY: LGB
 DRAWN BY: GFF
 CHECKED BY:
 DATE: 12/03/2021
 DATE OF PRINT:

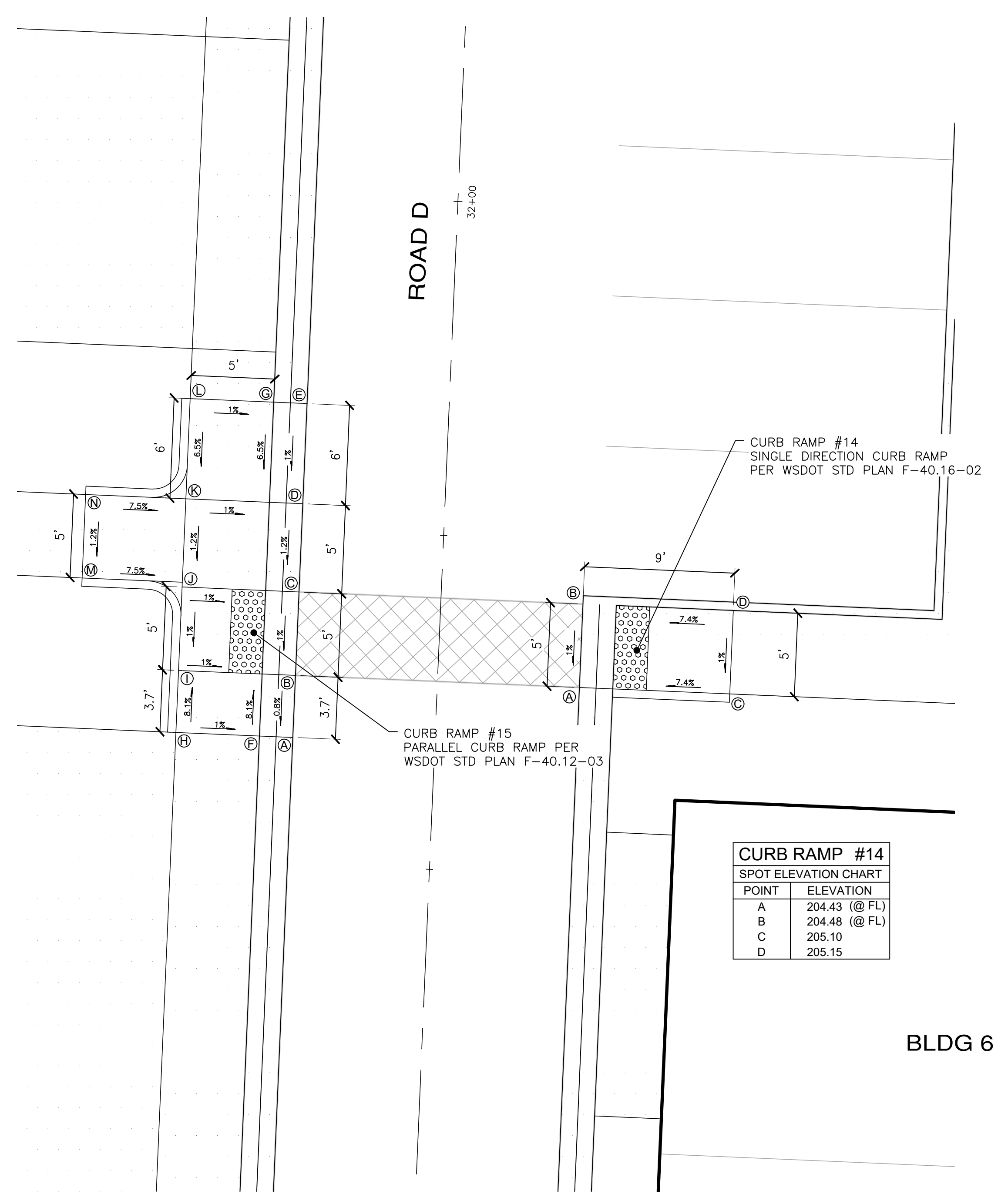
File: \\sm\ENR\ESM-JOB\2155\020\020\plans\DT-03.dwg
 Plotted: 12/7/2021 1:30 PM
 Plotted By: Greg Fedore



KEY MAP
N.T.S.



CURB RAMP DETAILS
SCALE: 1"=5'



CURB RAMP DETAILS
SCALE: 1"=5' **PW21-079 / PW21-080**

File: \\smm6\ENGR\ESM-JOB\21155\020\020\plans\DT-04.dwg
Plotted: 12/7/2021 1:24 PM
Plotted By: Greg Fodora

REVISIONS		
NO.	DESCRIPTION/DATE	BY

ESM CONSULTING ENGINEERS L.L.C.
33400 8th Ave S, Suite 205
Federal Way, WA 98003
www.esmcivil.com

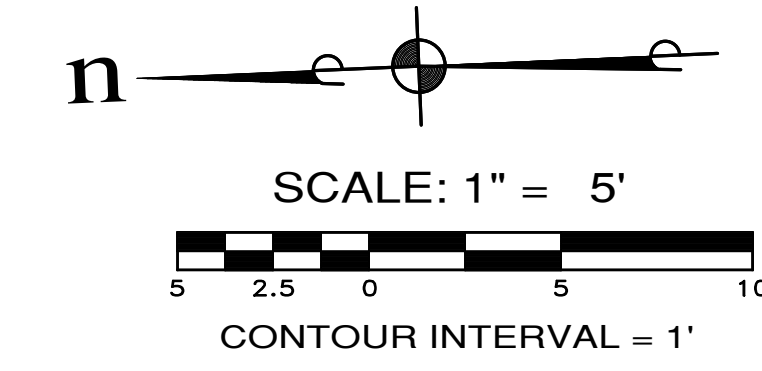
PAUL G. BARTENIGER
REGISTERED PROFESSIONAL ENGINEER
12/09/2021

Civil Engineering | Land Surveying | Project Management | Landscape Architecture
Public Works | Land Planning

SIDNEY ROAD TOWNHOMES L.L.C.
HAVEN TOWNHOMES
CITY OF PORT ORCHARD CURB RAMP DETAILS WASHINGTON

JOB NO.:	2155-002-020
DWG. NAME:	DT-04
DESIGNED BY:	LGB
DRAWN BY:	GFF
CHECKED BY:	
DATE:	12/03/2021
DATE OF PRINT:	
DT-04	
37 OF 38 SHEETS	

SEE SHEET FR-01 FOR
SIDNEY RD SW FRONTAGE
IMPROVEMENTS



1 CURB R TABLE

STATION	OFFSET	ELEV.
BCR 16+20.07	10.00' LT	208.11
1/4 Δ		207.80
1/2 Δ		207.24
3/4 Δ		206.72
ECR 10+70.00	26.50' LT	206.52
Δ=90°00'00" R=10.00' L=15.71'		

2 CURB R TABLE

STATION	OFFSET	ELEV.
BCR 16+21.93	10.00' RT	208.03
1/4 Δ		207.91
1/2 Δ		207.79
3/4 Δ		207.67
ECR 16+30.59	15.00' RT	207.55
Δ=60°00'00" R=10.00' L=10.47'		

3 CURB R TABLE

STATION	OFFSET	ELEV.
BCR 16+30.59	15.00' RT	207.55
1/4 Δ		206.91
1/2 Δ		206.44
3/4 Δ		205.98
ECR 16+82.55	15.00' RT	205.38
Δ=120°00'00" R=30.00' L=62.83'		

4 CURB R TABLE

STATION	OFFSET	ELEV.
BCR 16+82.55	15.00' LT	205.38
1/4 Δ		205.26
1/2 Δ		205.14
3/4 Δ		205.02
ECR 16+91.21	10.00' RT	204.91
Δ=60°00'00" R=10.00' L=10.47'		

5 CURB R TABLE

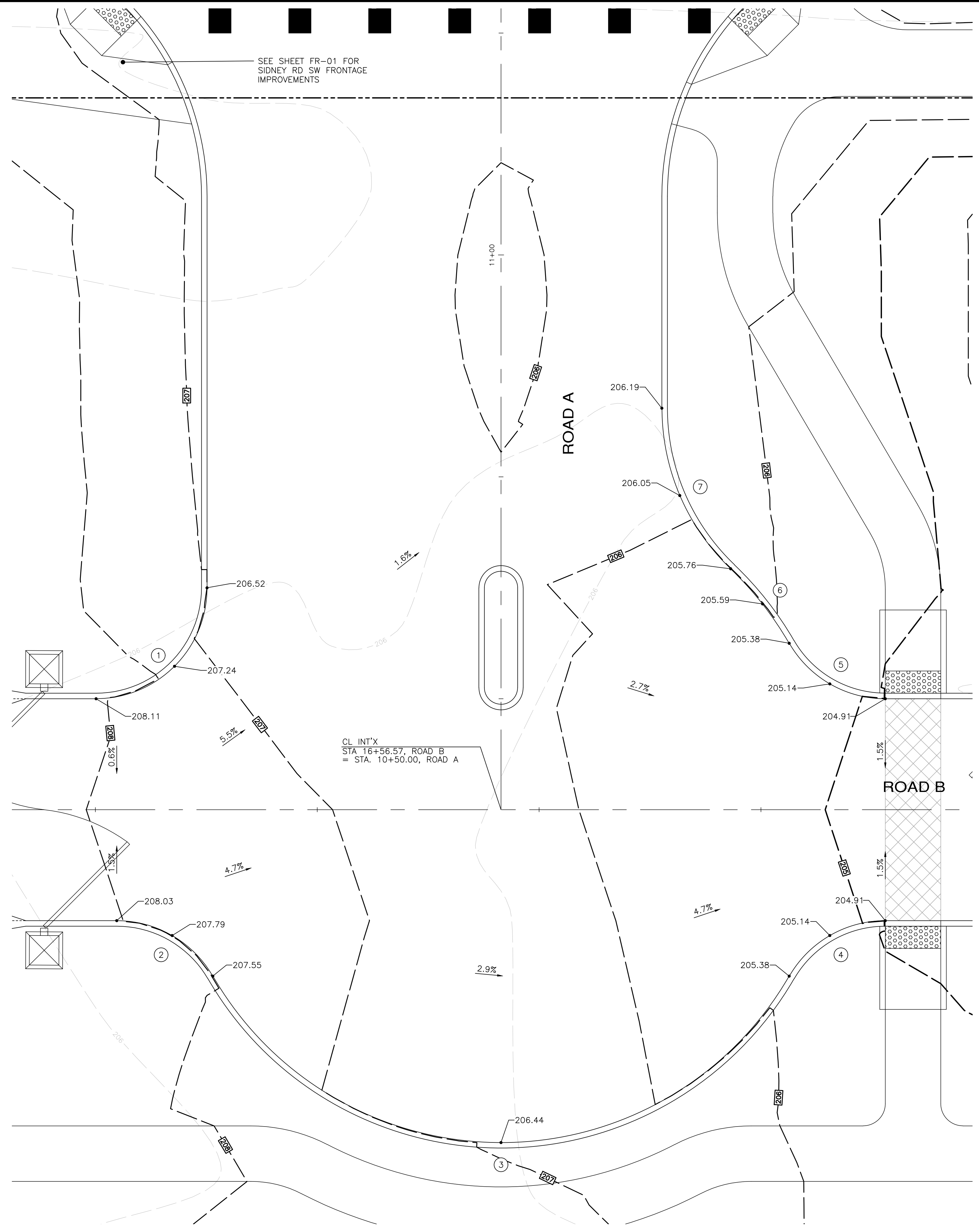
STATION	OFFSET	ELEV.
BCR 16+82.55	15.00' LT	205.38
1/4 Δ		205.26
1/2 Δ		205.14
3/4 Δ		205.02
ECR 16+91.21	10.00' LT	204.91
Δ=60°00'00" R=10.00' L=10.47'		

6 CURB R TABLE

STATION	OFFSET	ELEV.
BCR 10+71.71	20.70' RT	205.76
1/4 Δ		205.67
1/2 Δ		205.57
3/4 Δ		205.47
ECR 16+82.55	15.00' LT	205.38
Δ=16°22'12" R=30.00' L=8.57'		

7 CURB R TABLE

STATION	OFFSET	ELEV.
BCR 10+86.19	14.50' RT	206.19
1/4 Δ		206.13
1/2 Δ		206.05
3/4 Δ		205.95
ECR 10+71.71	20.70' RT	205.76
Δ=46°22'12" R=20.00' L=16.19'		



ENTRY GRADING DETAIL
SCALE: 1"=5'

PW21-079 / PW21-080

REVISIONS		
NO.	DESCRIPTION/DATE	BY



ESM CONSULTING ENGINEERS, L.L.C.
33400 8th Ave S, Suite 205
Federal Way, WA 98003
www.esmcivil.com

REGISTERED PROFESSIONAL ENGINEER
LAND SURVEYOR
LAND PLANNING ARCHITECTURE
CIVIL ENGINEERING
PUBLIC WORKS

SIDNEY ROAD TOWNHOMES L.L.C.
HAVEN TOWNHOMES
CITY OF PORT ORCHARD ENTRY GRADING DETAILS WASHINGTON

JOB NO.: 2155-002-020
DWG. NAME: DT-05
DESIGNED BY: LGB
DRAWN BY: GFF
CHECKED BY:
DATE: 12/03/2021
DATE OF PRINT:
DT-05
38 OF 38 SHEETS

File: \\smm8\ENR\ESM-JOB\2155\020\020\plans\DT-05.dwg
Plotted: 12/7/2021 12:59 PM
Plotted By: Greg Fendler