OTOP541828
CSIT541828
Vicinity
CNOT541828
OTRL541828

PTN. OF NW 1/4 OF SEC 31, TWP 28 N, R7E W.M.

GARIBALDI PRD

ENGINEERING PERMIT PACKAGE

MAY 5, 2022

CITY OF MONROE SNOHOMISH COUNTY, WA

SURVEY DATA

EXISTING BOUNDARY, TOPOGRAPHIC, AND PLANIMETRIC INFORMATION SHOWN ON THIS PLAN AND OTHERS IN THIS SET WERE USED AS A BASIS FOR DESIGN AND REPRESENT FIELD SURVEY DATA AND MAPPING PREPARED BY MEAD GILMAN LAND SURVEYORS (JOB NO. 13120), AS PROVIDED BY THE PROJECT OWNER, AND DOES NOT REPRESENT WORK BY CPH CONSULTANTS. THE FOLLOWING SURVEY DATA WAS PROVIDED WITH THE TOPOGRAPHIC MAP BY MEAD GILMAN LAND SURVEYORS:

LEGAL DESCRIPTION

PARCEL A:

THAT PORTION OF THE SOUTH HALF OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 31, TOWNSHIP 28 NORTH, RANGE 7 EAST, W.M., LYING WESTERLY OF COUNTY ROAD DESCRIBED AS FOLLOWS:

COMMENCING AT A POINT ON THE NORTH LINE OF SAID SUBDIVISION, SOUTH 88°25'17" WEST 700 FEET WEST OF THE WEST RIGHT OF WAY LINE OF COUNTY ROAD; THENCE SOUTH AT RIGHT ANGLES TO SAID NORTH LINE 185 FEET TO THE TRUE POINT OF BEGINNING; THENCE NORTH ALONG THE FOREGOING HEADING, 185 FEET TO SAID NORTH LINE; THENCE WEST ALONG SAID NORTH LINE 230 FEET, MORE OR LESS, TO THE WEST LINE OF SAID SUBDIVISION; THENCE SOUTH ALONG SAID WEST LINE 660 FEET, MORE OR LESS, TO THE SOUTHWEST CORNER OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SAID SECTION 31; THENCE EAST ALONG THE SOUTH LINE OF SAID SUBDIVISION 570 FEET, MORE OR LESS, TO A POINT WHICH LIES 150 FEET WEST OF THE WEST RIGHT OF WAY LINE OF COUNTY ROAD; THENCE NORTHEASTERLY, PARALLEL WITH SAID WEST RIGHT OF WAY LINE, 380 FEET, MORE OR LESS, TO A POINT 300 FEET SOUTH OF THE NORTH
LINE OF THE SOUTH HALF OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SAID SECTION 31; THENCE EAST PARALLEL WITH THE NORTH LINE OF SAID SUBDIVISION 151.06 FEET TO THE WEST RIGHT OF WAY LINE OF COUNTY ROAD; THENCE NORTH 20°28'47" EAST, ALONG SAID WEST RIGHT OF WAY LINE 108.33 FEET; THENCE DEPARTING SAID RIGHT OF WAY NORTH 88°46'11" WEST FOR 93.80 FEET; THENCE NORTH 82°20'53" WEST FOR 120.79 FEET; THENCE NORTH 86°46'30" WEST FOR 106.47 FEET THENCE NORTH 79°12'05" WEST FOR 71.99 FEET;
THENCE SOUTH 01°34'43" EAST FOR 23.72 FEET TO THE SOUTH LINE OF THE NORTH 175 FEET OF SAID SUBDIVISION; THENCE SOUTH 88°25'17" WEST FOR 30.00 FEET; THENCE SOUTH 01° 34'43" EAST FOR 65.00 FEET; THENCE NORTH 80°03'53" WEST 275.55 FEET TO THE POINT OF BEGINNING.

(ALSO KNOWN AS A PORTION OF LOTS 1 AND 2 OF SHORT PLAT RECORDED UNDER RECORDING NO. 7801110243 AND REVISED BY CITY OF MONROE BOUNDARY LINE ADJUSTMENT BA 200207 RECORDED UNDER RECORDING NO. 200312305117, RECORDS OF SNOHOMISH COUNTY, WASHINGTON.)

SITUATE IN THE COUNTY OF SNOHOMISH, STATE OF WASHINGTON.

PARCEL B:

THAT PART OF THE WEST HALF OF THE SOUTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 31, TOWNSHIP 28 NORTH, RANGE 7 EAST W.M. DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHWEST CORNER OF SAID SUBDIVISION; THENCE SOUTH ALONG WEST LINE 300 FEET; THENCE SOUTH 87°51'40" EAST 618.04 FEET TO A POINT ON THE WEST LINE OF THE COUNTY ROAD KNOWN AS TROMBLEY ROAD; THENCE NORTH ALONG SAID COUNTY ROAD 217.80 FEET TO THE EAST LINE OF THE WEST HALF; THENCE NORTH ALONG SAID EAST LINE 137.37 FEET TO THE NORTHEAST CORNER OF SAID SUBDIVISION; THENCE SOUTH 88°29'32" WEST TO POINT OF BEGINNING;

EXCEPT THE SOUTH 150 FEET AS MEASURED AT RIGHT ANGLES TO THE SOUTH LINE THEREOF.

SITUATE IN THE COUNTY OF SNOHOMISH, STATE OF WASHINGTON.

PARCEL C:

THE SOUTH 150 FEET, AS MEASURED AT RIGHT ANGLES TO THE SOUTH LINE OF THE FOLLOWING DESCRIBED TRACT:

THAT PART OF THE WEST HALF OF THE SOUTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 31, TOWNSHIP 28 NORTH, RANGE 7 EAST W.M. DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHWEST CORNER OF SAID WEST HALF; THENCE SOUTH ALONG THE WEST LINE THEREOF 300 FEET; THENCE SOUTH 87°51'40" EAST 618.04 FEET TO A POINT ON THE WEST LINE OF COUNTY ROAD KNOWN AS TROMBLEY ROAD; THENCE NORTHERLY ALONG SAID WEST LINE TO THE EAST LINE OF SAID WEST HALF; THENCE NORTH ALONG SAID EAST LINE TO THE NORTH LINE OF SAID WEST HALF; THENCE WEST ALONG SAID NORTH LINE TO THE POINT OF BEGINNING.

SITUATE IN THE COUNTY OF SNOHOMISH, STATE OF WASHINGTON.

PARCEL D:

THAT PORTION OF THE WEST ONE-HALF OF THE SOUTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 31, TOWNSHIP 28 NORTH, RANGE 7 EAST, W.M., DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHWEST CORNER OF SAID SUBDIVISION; THENCE SOUTH 0°57'33" EAST ALONG THE WEST LINE OF SAID SUBDIVISION, 300.00 FEET TO THE POINT OF BEGINNING; THENCE CONTINUE SOUTH 0°57'33" EAST 150.00 FEET; THENCE SOUTH 87°51'40" EAST 543.12 FEET TO A POINT ON THE WEST LINE OF THE COUNTY ROAD; THENCE NORTHEASTERLY ALONG A CURVE CONCAVE TO THE WEST HAVING A RADIUS OF 543.70 FEET THROUGH A CENTRAL ANGLE OF 14°03'26" AN ARC LENGTH OF 133.39 FEET (THE INITIAL RADIAL OF WHICH BEARS NORTH 55°27'34" WEST); THENCE NORTH 20°29' WEST 31.14 FEET; THENCE NORTH 87°51'40" WEST 618.04 FEET TO THE POINT OF BEGINNING;

EXCEPT ANY PORTION CONVEYED TO THE CITY OF MONROE FOR RIGHT OF WAY UNDER AUDITOR'S FILE NO. 202003020421;

PARCEL E:

THAT PORTION OF THE WEST HALF OF THE SOUTHEAST QUARTER OF THE NORTHWEST QUARTER OFSECTION 31, TOWNSHIP 28 NORTH, RANGE 7 EAST, W. M., DESCRIBED AS FOLLOWS:COMMENCING AT THE NORTHWEST CORNER OF SAID SUBDIVISION; THENCE SOUTH 00°57'33" ALONG WEST LINE OF SAID SUBDIVISION A DISTANCE OF 450 FEET TO THE TRUE POINT OF BEGINNING; THENCE SOUTH 87°51'40" EAST 543.12 FEET TO A POINT ON WEST LINE OF COUNTY ROAD; THENCE SOUTHWESTERLY ALONG SAID WEST LINE A DISTANCE OF 406.10 FEET TO A POINT 388.88 FEET AS MEASURED ALONG THE COUNTY ROAD FROM THE WEST LINE OF SAID WEST HALF OF THE SOUTHEAST
QUARTER OF THE NORTHWEST QUARTER; THENCE NORTHWESTERLY TO THE POINT OF BEGINNING;

(ALSO KNOWN AS LOT 1, SNOHOMISH COUNTY SHORT PLAT 303(6-78), RECORDED UNDER RECORDING NUMBER 7809080289, IN SNOHOMISH COUNTY, WASHINGTON);

EXCEPT THAT PORTION CONVEYED TO THE CITY OF MONROE FOR RIGHT OF WAY PURPOSES UNDER AUDITOR'S FILE NO. 202011020266;

SITUATE IN THE COUNTY OF SNOHOMISH, STATE OF WASHINGTON.

MERIDIAN

WASHINGTON STATE PLANE COORDINATE SYSTEM - NORTH ZONE
(NAD 83/91)
PER OPUS SOLUTIONS ON STATIC GPS OBSERVATIONS

VERTICAL DATUM

PER OPUS SOLUTIONS ON RAPID STATIC GPS OBSERVATIONS

BENCHMARKS

ORIGINAL SET 1/2" REBAR AND RED CAP ALONG EAST SIDE CHAIN LK ROAD 4' EAST OF EDGE ASPHALT ACROSS FROM DRIVEWAY #13424 AND ~37' NORTH OF POWER POLE
ELEV. = 311.85'

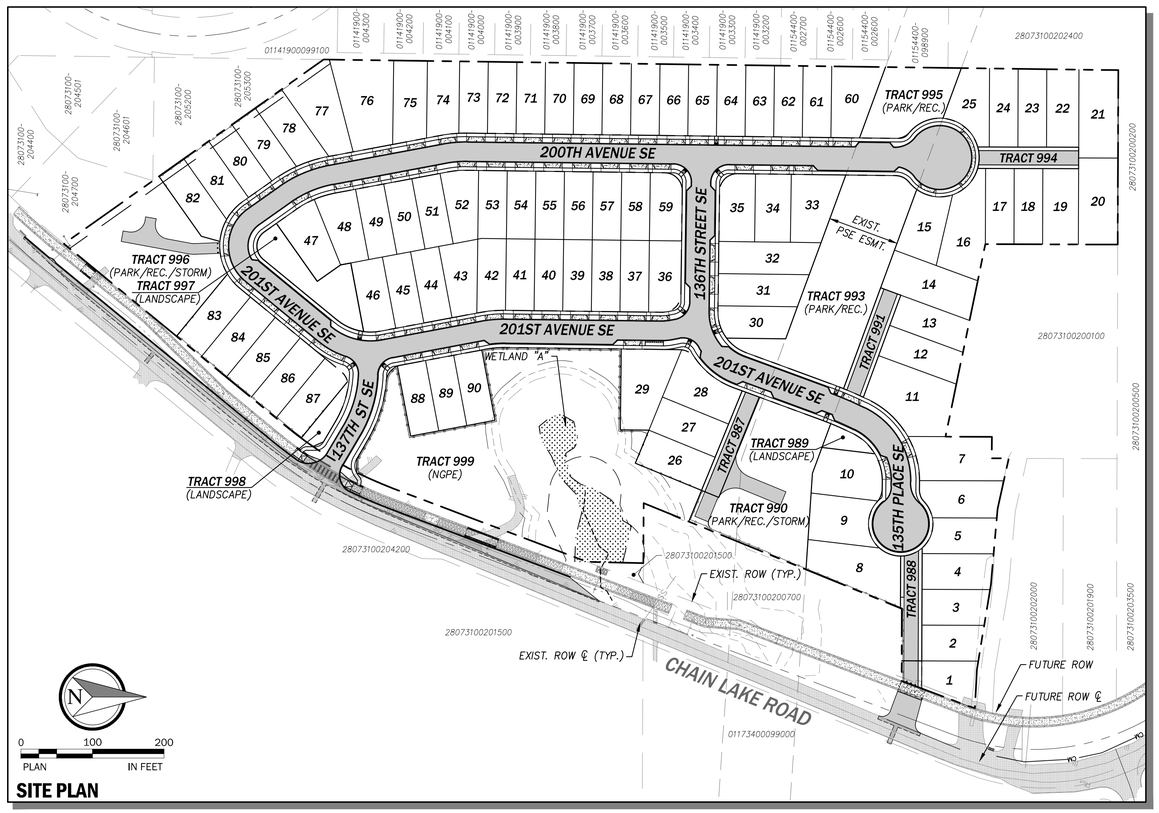
TBM-A SET 1/2" REBAR AND RED CAP ALONG EAST SIDE CHAIN LK ROAD ~73' NE OF DRIVEWAY #13582 AND 82' NORTH OF SEWER MANHOLE
ELEV. = 293.50'

TBM-B FOUND 4"X4" CONC MON WITH 2-1/2" BRASS DISC STAMPED "ORCA 20719" DOWN 0.5' IN CASE 0.3' N OF INTX 136TH PL SE AND 199TH AVE SE.
ELEV. =348.12'

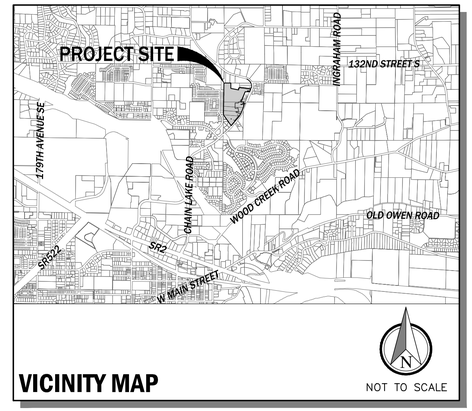
NOTES

1. *A 5" ELECTRONIC TOTAL STATION WAS USED FOR THIS FIELD TRAVERSE SURVEY. ACCURACY MEETS OR EXCEEDS W.A.C. 332-130-090.*
2. *ALL TITLE INFORMATION SHOWN ON THIS SURVEY WAS EXTRACTED FROM CHICAGO TITLE INSURANCE COMPANY COMMITMENT NUMBER 500076741, UPDATE 3, DATED JANUARY 30, 2020. MEAD GILMAN AND ASSOCIATES HAS CONDUCTED NO INDEPENDENT TITLE RESEARCH, AND HAS RELIED WHOLLY ON THE TITLE COMPANY'S REPRESENTATIONS OF THE TITLE'S CONDITION TO PREPARE THIS SURVEY AND QUALIFIES THE MAP'S ACCURACY AND COMPLETENESS TO THAT EXTENT.*
3. *THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF A SURVEY MADE ON THE DATE INDICATED AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITION EXISTING AT THAT TIME. ALL CONTROL INDICATED AS "FOUND" WAS RECOVERED FOR THIS PROJECT IN SEPTEMBER, 2018, UNLESS OTHERWISE NOTED.*
4. *PROPERTY AREA = 788,385 ± SQUARE FEET. (18.10 ACRES)*
5. *ALL DISTANCES ARE IN FEET.*
6. *6. UNDERGROUND UTILITIES WERE LOCATED BASED ON SURFACE EVIDENCE (I.E. PAINT MARKS, SAW CUTS IN PAVEMENT, COVERS, LIDS, ETC.). THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION, ELEVATION, AND SIZE OF EXISTING UTILITIES PRIOR TO CONSTRUCTION.*

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



SITE PLAN



VICINITY MAP

DRAWING INDEX

SHEET	DWG	DESCRIPTION
1	C0.00	COVER
2	C0.01	STANDARD NOTES AND ABBREVIATIONS
3	C0.10	EXISTING CONDITIONS
4	C0.20	HORIZONTAL CONTROL PLAN
5	C0.21	CHANNELIZATION PLAN
6	C0.22	CHANNELIZATION DETAILS
7	C1.00	DEMOLITION PLAN
8	C1.01	TESC PLAN
9	C1.100	TESC DETAILS
10	C2.00	OVERALL SITE GRADING PLAN
11	C2.01	WALL PLAN
12	C2.02	WALL PLAN
13	C2.03	WALL PLAN
14	C2.04	WALL PLAN
15	C2.05	WALL PLAN
16	C2.06	WALL PLAN
17	C3.00	OVERALL STORM DRAINAGE IMPROVEMENTS
18	C3.01	GRADING AND DRAINAGE PLAN AND PROFILE
19	C3.02	GRADING AND DRAINAGE PLAN AND PROFILE
20	C3.03	GRADING AND DRAINAGE PLAN AND PROFILE
21	C3.04	GRADING AND DRAINAGE PLAN AND PROFILE
22	C3.05	GRADING AND DRAINAGE PLAN AND PROFILE
23	C3.06	GRADING AND DRAINAGE PLAN AND PROFILE
24	C3.07	GRADING AND DRAINAGE PLAN AND PROFILE
25	C3.08	GRADING AND DRAINAGE PLAN AND PROFILE
26	C3.09	GRADING AND DRAINAGE PLAN AND PROFILE
27	C3.10	GRADING AND DRAINAGE PLAN AND PROFILE
28	C3.11	GRADING AND DRAINAGE PLAN AND PROFILE
29	C3.12	GRADING AND DRAINAGE PLAN AND PROFILE
30	C3.13	GRADING AND DRAINAGE PLAN AND PROFILE
31	C3.14	FRONTAGE PLAN AND PROFILE
32	C3.15	FRONTAGE PLAN AND PROFILE
33	C3.16	FRONTAGE PLAN AND PROFILE
34	C3.17	FRONTAGE PLAN AND PROFILE
35	C3.20	VAULT PLAN AND SECTIONS
36	C3.21	VAULT PLAN AND SECTIONS
37	C3.22	WATER QUALITY DETAILS
38	C3.100	TYPICAL ROADWAY SECTIONS
39	C3.101	GRADING AND DRAINAGE DETAILS
40	C3.102	GRADING AND DRAINAGE DETAILS
41	C3.103	GRADING AND DRAINAGE DETAILS
42	C3.104	GRADING AND DRAINAGE DETAILS
43	C3.105	CURB RETURN AND RAMP DETAILS
44	C3.106	CURB RETURN AND RAMP DETAILS
45	C4.00	OVERALL UTILITY PLAN
46	C4.01	UTILITY PLAN AND PROFILE
47	C4.02	UTILITY PLAN AND PROFILE
48	C4.03	UTILITY PLAN AND PROFILE
49	C4.04	UTILITY PLAN AND PROFILE
50	C4.05	UTILITY PLAN AND PROFILE
51	C4.06	UTILITY PLAN AND PROFILE
52	C4.07	UTILITY PLAN AND PROFILE
53	C4.08	UTILITY PLAN AND PROFILE
54	C4.09	UTILITY PLAN AND PROFILE
55	C4.10	UTILITY PLAN AND PROFILE
56	C4.11	UTILITY PLAN AND PROFILE
57	C4.12	UTILITY PLAN AND PROFILE
58	C4.13	UTILITY PLAN AND PROFILE
59	C4.100	SANITARY SEWER DETAILS
60	C4.101	WATER DETAILS
61	L1.00	LANDSCAPE PLAN
62	L1.01	LANDSCAPE ENLARGEMENTS
63	L1.02	LANDSCAPE ENLARGEMENTS
64	L1.03	LANDSCAPE ENLARGEMENTS
65	L1.04	LANDSCAPE ENLARGEMENTS
66	L1.05	LANDSCAPE ENLARGEMENTS
67	L1.10	PLANTING LEGEND, NOTES, AND DETAILS
68	L1.11	SITE DETAILS
69	L1.12	SITE DETAILS
70	L2.00	OVERALL IRRIGATION PLAN
71	L2.01	IRRIGATION ENLARGEMENTS
72	L2.02	IRRIGATION ENLARGEMENTS
73	L2.03	IRRIGATION ENLARGEMENTS
74	L2.04	IRRIGATION ENLARGEMENTS
75	L2.05	IRRIGATION ENLARGEMENTS
76	L2.10	IRRIGATION DETAILS
77	L3.00	LANDSCAPE SPECIFICATIONS
78	L3.01	LANDSCAPE SPECIFICATIONS
79	L3.10	IRRIGATION SPECIFICATIONS
80	L4.00	WETLAND BUFFER MITIGATION PLAN
81	S1	STRUCTURAL NOTES & TYPICAL DETAILS
82	S2	SOUTH VAULT FOUNDATION PLAN AND DETAILS
83	S3	SOUTH VAULT LID PLAN & DETAILS
84	S4	NORTH VAULT LID & FOUNDATION PLANS
85	S5	WALL SECTIONS & DETAILS

PROJECT INFORMATION

SNOHOMISH CO. TAX PARCEL NO.	PARCEL AREA	
28073100200800	8.94 AC	389,232 SF
28073100201600	2.69 AC	117,344 SF
28073100203900	2.17 AC	94,534 SF
28073100202800	1.96 AC	85,386 SF
28073100202900	2.09 AC	90,952 SF
TOTAL SITE AREA	17.85 AC	777,448 SF

	R4 - PRD
MINIMUM DENSITY	n/a
MINIMUM NO. LOTS	
BASE DENSITY	4.00 DU/AC
BASE ALLOWABLE NO. LOTS	71
MAXIMUM (PRD) DENSITY	5.20 DU/AC
MAXIMUM ALLOWABLE NO. LOTS	93
PROPOSED RESIDENTIAL LOTS	**90**
MINIMUM LOT AREA REQUIRED	n/a
MINIMUM LOT WIDTH REQUIRED	30 FT
MAXIMUM LOT COVERAGE ALLOWED	60 FT
MAXIMUM BUILDING HEIGHT ALLOWED	35 FT
FRONT YARD SETBACK	10 FT
GARAGE SETBACK	20 FT
SIDE YARD SETBACK	5 FT
REAR YARD SETBACK	10 FT
MINIMUM LOT SIZE PROPOSED	3,800 SF
MINIMUM LOT WIDTH PROPOSED	40 FT
AVERAGE LOT AREA PROPOSED	4,821 SF
MAXIMUM LOT SIZE PROPOSED	9,281 SF
RESIDENTIAL LOT MIX (MMC 18.84.080.D)	31.1% ≤ 4,000 SF
	43.3% 4,001 TO 5,000 SF
	25.6% > 5,000 SF
REQUIRED PARK AND REC. OPEN SPACE:	900 SF/DU 64,252 SF

PARK AND RECREATION OPEN SPACE PROVIDED:

TRACT 990	25,562 SF
TRACT 993	31,332 SF
TRACT 995	9,572 SF
TOTAL CENTRAL PARK	66,467 SF
TRACT 996	25,471 SF
TOTAL PARK/RECREATION OPEN SPACE	91,938 SF

OTHER ADDITIONAL OPEN SPACE AREAS:

Tract 999, CRITICAL AREA OPEN SPACE (NGPE)	81,159 SF
Tract 998, LANDSCAPE COMMON AREA	1,935 SF
Tract 997, LANDSCAPE COMMON AREA	7,810 SF
Tract 989, LANDSCAPE COMMON AREA	1,594 SF
TOTAL OTHER OPEN SPACE AREAS	92,498 SF
TOTAL PARK/RECREATION OPEN SPACE	184,436 SF 4.23 AC

UTILITY PURVEYORS AND PUBLIC SERVICE PROVIDERS

WATER	CITY OF MONROE
SANITARY SEWER	CITY OF MONROE
STORM DRAINAGE	CITY OF MONROE
FIRE DISTRICT	SNOHOMISH REGIONAL FIRE & RESCUE
SCHOOL DISTRICT	MONROE SCHOOL DIST. NO. 103
POWER (ELECTRICITY)	PUGET SOUND ENERGY
NATURAL GAS	PUGET SOUND ENERGY

PROJECT TEAM

APPLICANT/CESCL
GARIBALDI LAKE, LLC
CONTACT: MELANIE DAVIES
1010 MARKET STREET
KIRKLAND, WA 98033
PHONE: (425) 576-9390
EMAIL: MDAVIES@WESTCOTTHOMES.COM

CIVIL ENGINEER
CPH CONSULTANTS
CONTACT: MATT HOUGH, PE
11321-B NE 120TH STREET
KIRKLAND, WA 98034
PHONE: (425) 285-2390
FAX: (425) 285-2389
EMAIL: MATT@CPHCONSULTANTS.COM

SURVEYOR
MEAD GILMAN
CONTACT: SHANE BARNES, PLS
PO BOX 289
WOODINVILLE, WA 98072
PHONE: (425) 486-1252
FAX: (425) 486-6108

HABITAT/BIOLOGIST
TALASAEA CONSULTANTS, INC.
CONTACT: ANN OLSEN, PLA
15020 BEAR CREEK ROAD NE
WOODINVILLE, WA 98077
PHONE: (425)861-7550

LANDSCAPE ARCHITECT
CPH CONSULTANTS
CONTACT: DAVE ANDREWS, LA
11321-B NE 120TH STREET
KIRKLAND, WA 98034
PHONE: (425) 285-2390
FAX: (425) 285-2389
EMAIL: DAVE@CPHCONSULTANTS.COM

GEOTECH
TERRA ASSOCIATES, INC.
CONTACT: KEVIN ROBERS, PE
12220 113TH AVENUE NE
KIRKLAND, WA 98034
PHONE: (425) 821-7777

MATTHEIN J. HOUGH — STATE OF WASHINGTON — 21605 — REGISTERED PROFESSIONAL ENGINEER — 5/5/2022

C|P|H CONSULTANTS
Site Planning • Civil Engineering
Landscape Architecture • Land Use Consulting
11321-B NE 120th Street
Kirkland, WA 98034 • (425) 285-2390
101 South Wenatchee Avenue, Suite C3
Wenatchee, WA 98801 • (509) 293-7731
www.cphconsultants.com

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These plans have been reviewed for compliance with the City of Monroe Public Works Design and Construction Standards and required conditions regarding water, sanitary sewer, storm water management, and streets only. Prior to beginning construction additional approvals may be required from other city departments or state or federal agencies.

☐ Approved ☒ Approved as corrected

The granting of this approval does not presume to give authority to violate or cancel the provisions of any law, conditions or regulation regarding this development activity or the performance of construction. Subject to field inspection and correction. No changes authorized unless approved by the City Engineer.

CITY OF MONROE ENGINEERING

By _____ Date 05/12/2022

Refer ONLY to Horizontal Control Plan Sht. C0.20 for the official and accurate street names and the beginning and ending points for the names - this is especially important for the required address signage on all private tracts with building lots.

RECEIVED
05/09/2022
CITY OF MONROE

P:\project\0054\18028\Dwg\Sheets\Final Engineering\C0.00.dwg
5/5/2022 9:59 AM PETER EVANS

TBLOCK

PTN. OF NW 1/4 OF SEC 31, TWP 28 N, R7E W.M.

LEGEND

	EXISTING	PROPOSED
ROADWAY CENTERLINE		
PROJECT BOUNDARY LINE		
PROPERTY BOUNDARY LINE		
RIGHT-OF-WAY LINE		
EASEMENT LINE		
EDGE OF PAVEMENT LINE		
10' CONTOUR LINE	290	
2' CONTOUR LINE		
SANITARY SEWER MAIN	SS	SS SS
WATER LINE	W	
FIRE SUPPLY	F	
STORM PIPE	SD	
GAS LINE	G	
FENCE LINE	X	
POWER LINE	PO	
BURIED POWER LINE	UGP	
UTILITY EASEMENT		
TELEPHONE LINE	TL	
BURIED TELEPHONE LINE	TL	
SWALE		
SILT FENCE		X X X X X X
CONSTRUCTION FENCING		// // // //
CLEARING LIMIT		
SANITARY SEWER CLEAN OUT		
SANITARY SEWER MANHOLE		
STORM DRAIN CATCH BASIN - TYPE I		
STORM DRAIN CATCH BASIN - TYPE II		
STORM DRAIN INLET (NO CATCH)		
STORM DRAIN CULVERT		
WATER CAP/PLUG		
WATER COUPLING		
GUARD POST		
REDUCER		
THRUST BLOCK		
WATER METER		
2 NOZZLE FIRE HYDRANT		
3 NOZZLE FIRE HYDRANT		
FLANGE/BUND FL JOINT		
MECHANICAL JOINT		
PUSH-ON/HUB JOINT		
THREAD JOINT		
AIR RELIEF VALVE		
BLOW-OFF VALVE		
BUTTERFLY VALVE		
CHECK VALVE		
GATE/GENERAL VALVE		
PLUG VALVE		
GAS METER		
GAS VALVE		
PAD MOUNTED TRANSFORMER		
POWER VAULT	P	P
TRANSMISSION TOWER (SCALEABLE)		
UTILITY POLE		
POWER POLE		
UTILITY POLE ANCHOR		
TELEPHONE RISER		
TELEPHONE VAULT	T	T
BUS STOP	BUS	BUS
MAIL BOX		
RIP RAP		
ROCKERY		
SHRUB		
GENERAL SIGN		
REGULATORY SIGN		
TREE (CONIFER)		
TREE (DECIDUOUS)		
YARD LIGHT		
BRIDGE/TUNNEL		
ASPHALT PAVEMENT		
CONCRETE		

GENERAL PROJECT NOTES

1. ALL WORKMANSHIP, METHODS AND MATERIALS FOR THIS PROJECT SHALL CONFORM TO THE MOST CURRENT EDITION OF THE STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION AS PRODUCED BY WSDOT AND THE WASHINGTON STATE CHAPTER OF THE APWA; CITY OF MONROE; AND ALL AMENDMENTS TO THE STANDARDS SPECIFICATIONS AND SPECIAL PROVISIONS PROVIDED BY THESE PLANS OR OTHER CONTRACT DOCUMENTS FOR THE PROJECT
2. EXISTING UTILITIES ARE SHOWN IN THESE PLANS PER THE LATEST AVAILABLE INFORMATION. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL UTILITIES AND RELATED SURFACE FEATURES WITHIN THE PROJECT AREA AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES WITH THE PLAN INFORMATION PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL, AT MINIMUM, CONTACT THE UNDERGROUND UTILITIES LOCATE CENTER (1-800-424-5555) TO HAVE UTILITIES VERIFIED ON THE GROUND PRIOR TO CONSTRUCTION.
3. THE TEMPORARY EROSION AND SEDIMENTATION CONTROL (TESC) MEASURES SHOWN IN THESE PLANS SHALL BE CONSIDERED A MINIMUM. THE CONTRACTOR SHALL PROVIDE ANY REASONABLE ADDITIONAL MEASURES AS MAY BE REQUIRED TO FACILITATE ACTUAL SITE RUNOFF CONDITIONS AT THE TIME OF CONSTRUCTION. ALL NECESSARY TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE IN-PLACE PRIOR TO ANY DEMOLITION OR CONSTRUCTION ACTIVITIES.
4. ALL NEW PAVEMENT, SIDEWALKS, AND CURB AND GUTTER INSTALLED BY THIS PROJECT SHALL BEAR ON SUITABLE, COMPACT FOUNDATION SOILS IN ACCORDANCE WITH THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND PROJECT CONTRACT DOCUMENTS. SIMILAR EXISTING FACILITIES TO REMAIN, WHICH ARE DISTURBED OR DAMAGED DURING CONSTRUCTION, SHALL BE REPLACED IN-KIND TO THE SAME STANDARDS OF NEW FACILITIES.
5. ALL ONSITE PAVEMENT MARKINGS SHALL CONFORM TO THE WSDOT STANDARD PLANS AND SPECIFICATIONS AS AMENDED OR SUPPLEMENTED BY THE PLANS, DETAILS, AND SPECIFICATIONS AS AMENDED OR SUPPLEMENTED BY THE PLANS, DETAILS, AND SPECIFICATIONS PROVIDED IN THE CONTRACT DOCUMENTS.
6. ALL EXISTING ON-SITE WELLS AND SEPTIC TANKS AND ASSOCIATED DRAIN FIELDS SHALL BE PROPERLY ABANDONED BY A LICENSED CONTRACTOR CERTIFIED TO PERFORM SUCH WORK. THE CONTRACTOR SHALL PROVIDE WRITTEN VERIFICATION OF ABANDONMENT TO THE OWNER, WASHINGTON STATE DEPARTMENT OF ECOLOGY, AND SNOHOMISH COUNTY HEALTH DEPARTMENT.
7. THE MATERIALS AND METHODS OF INSTALLATION FOR ALL WATER AND SANITARY SEWER FACILITIES SHALL ALSO BE IN ACCORDANCE WITH THE LATEST SNOHOMISH COUNTY AND CITY OF MONROE STANDARDS, GENERAL REQUIREMENTS AND DETAILS FOR WATER MAIN CONSTRUCTION, AND GENERAL REQUIREMENTS AND DETAILS FOR SEWER MAIN CONSTRUCTION.
8. AT LEAST TWO COPIES OF THESE PLANS SHALL BE ON THE JOB SITE WHEN CONSTRICTION IS IN PROGRESS. THE CONTRACTOR SHALL ALSO HAVE COPIES OF THE APPLICABLE REGULATORY AGENCY STANDARDS AVAILABLE AT THE JOB SITE DURING THE RELATED CONSTRUCTION OPERATIONS. ALL APPLICABLE PERMITS SHALL BE OBTAINED PRIOR TO ANY CONSTRICTION ACTIVITY. ONE COMPLETE SET OF PROJECT PLANS WITH RECORDS OF AS-BUILT INFORMATION SHALL BE PROVIDED TO THE PROJECT ENGINEER AT THE END OF THE PROJECT.
9. THE CONTRACTOR SHALL COORDINATE ACTIVITIES OF ALL UTILITY PURVEYORS IMPACTED BY WORK FOR THIS PROJECT AND SHALL CONTACT THEM PRIOR TO CONSTRUCTION TO SCHEDULE WORK FOR PROVISIONS FOR AND BE RESPONSIBLE TO SUPPORT, MAINTAIN, OR OTHERWISE PROTECT AND KEEP IN SERVICE ALL EXISTING UTILITIES WHETHER SHOWN OR NOT SHOWN ON THESE PLANS DURING CONSTRUCTION.
10. UTILITIES, OR INTERFERING PORTIONS OF UTILITIES, THAT ARE ABANDONED IN PLACE SHALL BE REMOVED BY THE CONTRACTOR TO THE EXTENT NECESSARY TO COMPLETE THE PROPOSED WORK. THE CONTRACTOR SHALL PLUG THE REMAINING EXPOSED ENDS OF ABANDONED UTILITIES. CUTTING AND PLUGGING OF LINES TO BE ABANDONED SHALL BE CONSIDERED INCIDENTAL TO OTHER WORK PERFORMED.
11. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT ALL PROVISIONS OF THE SOILS REPORT FOR THE SITE BE OBSERVED AND COMPLIED WITH DURING ALL PHASES OF SITE PREPARATION, GRADING OPERATIONS, FOUNDATION, SLAB AND PAVING CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER IMMEDIATELY OF ANY PROVISION OF THE SOIL REPORT WHICH CONFLICT WITH INFORMATION SHOWN ELSEWHERE ON THESE DRAWINGS, OR WHICH REQUIRES FURTHER CLARIFICATION.
12. THE CONTRACTOR OR OWNER SHALL OBTAIN THE SERVICES OF A QUALIFIED SOILS ENGINEER AND/OR TESTING AGENCY TO PERFORM SUBGRADE/BACKFILL DENSITY TESTS OR TO DIRECT THE REMOVAL AND REPLACEMENT OF ANY UNSUITABLE MATERIALS DURING CONSTRUCTION. A REPRESENTATIVE OF THE SOILS ENGINEER AND/OR TESTING AGENCY SHALL BE AVAILABLE TO OBSERVE AND TO VERIFY FIELD CONDITIONS AS WORK PROCEEDS. THE SOILS ENGINEER SHALL SUBMIT FIELD REPORTS AS REQUIRED TO CERTIFY THE METHODS AND MATERIALS ARE IN ACCORDANCE WITH PROJECT SPECIFICATIONS. THE CONTRACTOR SHALL COORDINATE THE APPROPRIATE SOILS INSPECTIONS AND TESTING.
13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE TRAFFIC CONTROL DURING CONSTRUCTION ADJACENT TO OR WITHIN ALL PUBLIC ROADWAYS. TRAFFIC CONTROL MEASURES SHALL BE IN PLACE PRIOR TO ANY CONSTRUCTION ACTIVITY. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL PRIVATE PROPERTY DRIVEWAYS DURING CONSTRUCTION.
14. ALL WORK PERTAINING TO THIS PROJECT SHALL BE SUBJECT TO INSPECTION BY CITY OF MONROE INSPECTORS IN THE ENGINEERING, BUILDING AND PLANNING DIVISIONS OR THEIR DESIGNATED REPRESENTATIVES. PRIOR TO ANY WORK ON THE SITE THE CONTRACTOR SHALL OBTAIN A RIGHT-OF-WAY DISTURBANCE (ROWD) PERMIT AND CONTACT THE ENGINEERING INSPECTION GROUP AT 360-863-4514 TO REQUEST AN ON-SITE PRECONSTRUCTION CONFERENCE. THE MEETING WILL NOT BE SCHEDULED PRIOR TO THE ISSUANCE OF THE ROWD PERMIT. NO SITE GRADING OR INSTALLATION OF TESC FACILITIES SHALL BE INSTALLED BEYOND THOSE EFFORTS REQUIRED FOR THE DEMOLITION OF THE EXISTING ON-SITE BUILDINGS UNTIL THE PRECONSTRUCTION CONFERENCE IS COMPLETED. SEPARATE DEMOLITION PERMITS FROM THE BUILDING DIVISION ARE REQUIRED FOR THAT DEMOLITION WORK.

CITY OF MONROE STANDARD PLAN NOTES

GENERAL

A. CONTROLLED DENSITY FILL (CDF) SHALL BE PLACED AT ALL UTILITY CROSSINGS WITHIN THE PUBLIC RIGHT-OF-WAY IN ACCORDANCE WITH COM CONSTRUCTION STANDARD 3-9.3.

TESC

A. ALL TESC MEASURES MUST COMPLY WITH THE MONROE STANDARDS AND SPECIFICATIONS AND THE DEPARTMENT OF ECOLOGY STORMWATER MANUAL FOR WESTERN WASHINGTON - 2014 EDITION.

B. THE TESC SYSTEM SHALL BE INSTALLED AND THEN SHALL BE INSPECTED BY THE PUBLIC WORKS INSPECTOR PRIOR TO ALL OTHER CONSTRUCTION.

C. AS CONSTRUCTION PROGRESSES AND SEASONAL CONDITIONS DICTATE, THE EROSION CONTROL FACILITIES SHALL BE MAINTAINED AND/OR ALTERED AS REQUIRED BY THE CITY ENGINEER TO ENSURE CONTINUING EROSION/SEDIMENTATION CONTROL.

D. THE PUBLIC RIGHT-OF-WAY SHALL BE KEPT CLEAN. TRACKING OF MUD AND DEBRIS FROM THE SITE WILL NOT BE ALLOWED. FAILURE TO COMPLY WITH THIS CONDITION WILL RESULT IN A STOP WORK ORDER PER MONROE MUNICIPAL CODE CHAPTER 12.32, CLEAN CONDITION OF PUBLIC RIGHT-OF-WAY.

SANITARY SEWER

A. ALL WORK AND MATERIALS SHALL CONFORM TO THE CITY OF MONROE STANDARDS AND SPECIFICATIONS.

B. NO PART OF THE SANITARY SEWER SYSTEM SHALL BE COVERED, CONCEALED OR PUT INTO USE UNTIL IT HAS BEEN TESTED, INSPECTED, AND APPROVED BY THE CITY INSPECTOR.

C. APPROXIMATE LOCATIONS OF EXISTING UTILITIES HAVE BEEN OBTAINED FROM AVAILABLE RECORDS AND ARE SHOWN FOR CONVENIENCE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF LOCATIONS AND TO AVOID DAMAGE TO ANY ADDITIONAL UTILITIES NOT SHOWN. IF CONFLICTS WITH EXISTING UTILITIES ARISE DURING CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE PUBLIC WORKS INSPECTOR AND ANY CHANGES REQUIRED SHALL BE APPROVED BY THE CITY ENGINEER PRIOR TO COMMENCEMENT OF RELATED CONSTRUCTION ON THE PROJECT.

D. ALL SEWER MAIN EXTENSIONS WITHIN THE PUBLIC RIGHT-OF-WAY OR IN EASEMENTS MUST BE STAKED BY SURVEY FOR LINE AND GRADE PRIOR TO STARTING CONSTRUCTION.

STORM DRAINAGE

A. ALL WORK AND MATERIALS SHALL CONFORM TO THE CITY OF MONROE STANDARDS.

B. STORM WATER RETENTION/DETENTION FACILITIES, STORM PIPE, AND CATCH BASINS SHALL BE FLUSHED AND CLEANED PRIOR TO CITY ACCEPTANCE.

C. ALL STORM DRAIN WORK MUST BE STAKED BY SURVEY FOR LINE AND GRADE PRIOR TO STARTING CONSTRUCTION.

D. STORM STUBS SHALL BE MARKED WITH A 2"x4" BOARD AND LABELED "STORM" AND EXTENDED 15 FEET INTO PROPERTY. LOCATOR WIRE TO EXTEND TO TOP OF MARKER BOARD.

E. THE CITY ENGINEER MAY REQUIRE TESTING AND TV INSPECTION OF STORM DRAIN LINES.

WATER

A. FOR ALL DESIGN, CONSTRUCTION AND MATERIALS SPECIFICATIONS REFER TO THE CITY OF MONROE PUBLIC WORKS DESIGN AND CONSTRUCTION STANDARDS.

B. THE WATER MAIN SHALL BE INSTALLED ONLY AFTER THE ROADWAY SUBGRADE IS BACKFILLED, GRADED AND COMPACTED IN CUT AND FILL AREAS. THE ROAD CENTERLINE SHALL BE STAKED ALONG WITH THE PROPERTY CORNERS.

C. IF THE INITIAL TAP OR EXTENSION REQUIRES SHUTTING DOWN AN EXISTING WATER MAIN, THE CITY MAY REQUIRE TWO WEEKS NOTIFICATION IN ORDER TO PLACE A PUBLIC NOTICE IN THE LOCAL PAPER. NO TAPS WILL BE ALLOWED ON FRIDAY, OR WEEKENDS. THE MONROE UTILITIES DEPARTMENT SHALL OPERATE ALL WATER VALVES IN RIGHT-OF-WAY.

D. ALL FITTINGS AND MATERIALS REMOVED FROM EXISTING MAINS SHALL BE RETURNED TO THE UTILITIES DEPARTMENT.

E. THE CONTRACTOR SHALL NOTIFY VESTED OWNERS OF EXISTING EASEMENTS IN WRITING 10 DAYS PRIOR TO STARTING WORK. A LETTER OF SATISFACTION OF RESTORATION OF EXISTING EASEMENT MUST BE SIGNED BY THE PROPERTY OWNER PRIOR TO CITY ACCEPTANCE.

F. ALL ON-SITE FIRE PROTECTION IMPROVEMENT MUST BE APPROVED BY THE MONROE FIRE DEPARTMENT. LOCATION OF THE FIRE DEPARTMENT CONNECTION MUST BE APPROVED BY THE MONROE FIRE DEPARTMENT PRIOR TO INSTALLATION.

G. NO CONNECTION TO EXISTING MAIN LINES WILL BE ALLOWED, EXCEPT BY MEANS OF AN APPROVED BACKFLOW PREVENTION DEVICE, PRIOR TO SATISFACTORY FLUSHING, TESTING, DISINFECTION, AND RECEIPT OF SATISFACTORY BACTERIOLOGICAL TESTS.

ABBREVIATIONS

AC	ASPHALT CONCRETE PAVEMENT	LF	LINEAL FEET
AP	ANGLE POINT	LT	LEFT
ATB	ASPHALT TREATED BASE	LUI	LAND USE INSPECTOR
AVE	AVENUE	MAX.	MAXIMUM
BCR	BEGIN CURB RETURN	MDRT	MAJOR DEVELOPMENT REVIEW TEAM
BOC	BACK OF CURB	MH	MANHOLE
BOW	BOTTOM OF WALL	MIN.	MINIMUM
CASP	CRITICAL AREA SITE PLAN	MJ	MECHANICAL JOINT
℄	CENTERLINE	N	NORTH
CB	CATCH BASIN	NIC	NOT IN CONTRACT
CDF	CONTROLLED DENSITY FILL	O.C.	ON CENTER
CMP	CORRUGATED METAL PIPE	PC	POINT OF CURVATURE
COM	CITY OF MONROE	PE	PLAIN END
CONC.	CONCRETE	PI	POINT OF INTERSECTION
CONN.	CONNECTION	PL	PLACE
CONT.	CONTINUOUS	PT	POINT OF TANGENCY
CPP	CORRUGATED POLYETHYLENE PIPE (W/SMOOTH INTERIOR WALLS)	PVI	POINT OF VERTICAL INTERSECTION
		PUE	PUBLIC UTILITY EASEMENT
CSBC	CRUSHED SURFACING BASE COURSE	REQ'D.	REQUIRED
CSTC	CRUSHED SURFACING TOP COURSE	ROW	RIGHT-OF-WAY
DIA.	DIAMETER	RT	RIGHT
DI	DUCTILE IRON	RWA	ROOSEVELT WATER ASSOCIATION
DW	DRIVEWAY	S	SOUTH
E	EAST	SD	STORM DRAIN
ECR	END CURB RETURN	SP	SPACE
ELEV.	ELEVATION	SS	SANITARY SEWER
EOP	EDGE OF PAVEMENT	SSD	STOPPING SIGHT DISTANCE
ESC	EROSION AND SEDIMENT CONTROL	STA	STATION
ESD	ENTERING SIGHT DISTANCE	TESC	TEMPORARY EROSION AND SEDIMENT CONTROL
ESMT.	EASEMENT	TOC	TOP OF CURB
EVA	EMERGENCY VEHICLE ACCESS	TYP.	TYPICAL
EXIST.	EXISTING	TBW	TOP BACK OF WALK
FL	FLOW LINE	TOW	TOP OF WALL
FL	FLANGE	UNO	UNLESS NOTED OTHERWISE
FOC	FACE OF CURB	VERT.	VERTICAL
HORIZ	HORIZONTAL	WSDOT	WASHINGTON DEPT. OF TRANSPORTATION
IE	INVERT ELEVATION	W/	WITH
INT	INTERSECTION	W	WEST
LCPE	LINED CORRUGATED POLYETHYLENE PIPE	WS	WATER SERVICE

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5/5/2022 9:59 AM PETER EVANS

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CITY OF MONROE

These plans have been reviewed for compliance with the City of Monroe Public Works Design and Construction Standards and required conditions regarding water, sanitary sewer, storm water management, and streets only. Prior to beginning construction additional approvals may be required from other city departments or state or federal agencies.

☒ Approved ☐ Approved as corrected

The granting of this approval does not presume to give authority to violate or cancel the provisions of any law, conditions or regulation regarding this development activity or the performance of construction. Subject to field inspection and correction. No changes authorized unless approved by the City Engineer.

CITY OF MONROE ENGINEERING

By _____ Date 05/12/2022

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NO.	DATE	REVISION	BY	CK.
1	5/4/22	CITY PERMIT SUBMITTAL	PCE	MJH

MATTHEW J. HOPKINS — STATE OF WASHINGTON — 22818 — REGISTERED PROFESSIONAL ENGINEER — 5/5/2022

GARIBALDI PRD
ENGINEERING PERMIT PACKAGE
STANDARD NOTES AND ABBREVIATIONS
CITY OF MONROE — SNOHOMISH COUNTY, WA

CLIENT
Garibaldi Lake, LLC
1010 MARKET STREET
KIRKALND, WA 98033
PHONE: (425)876-9390

C|P|H CONSULTANTS
Site Planning • Civil Engineering
Landscape Architecture • Land Use Consulting
11321-B NE 120th Street
Kirkland, WA 98034 • (425) 285-2390
101 South Wenatchee Avenue, Suite C3
Wenatchee, WA 98801 • (509) 293-7731
www.cphconsultants.com

PROJECT NO.
0054-18-028

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C0.01

SHEET 2 OF 85

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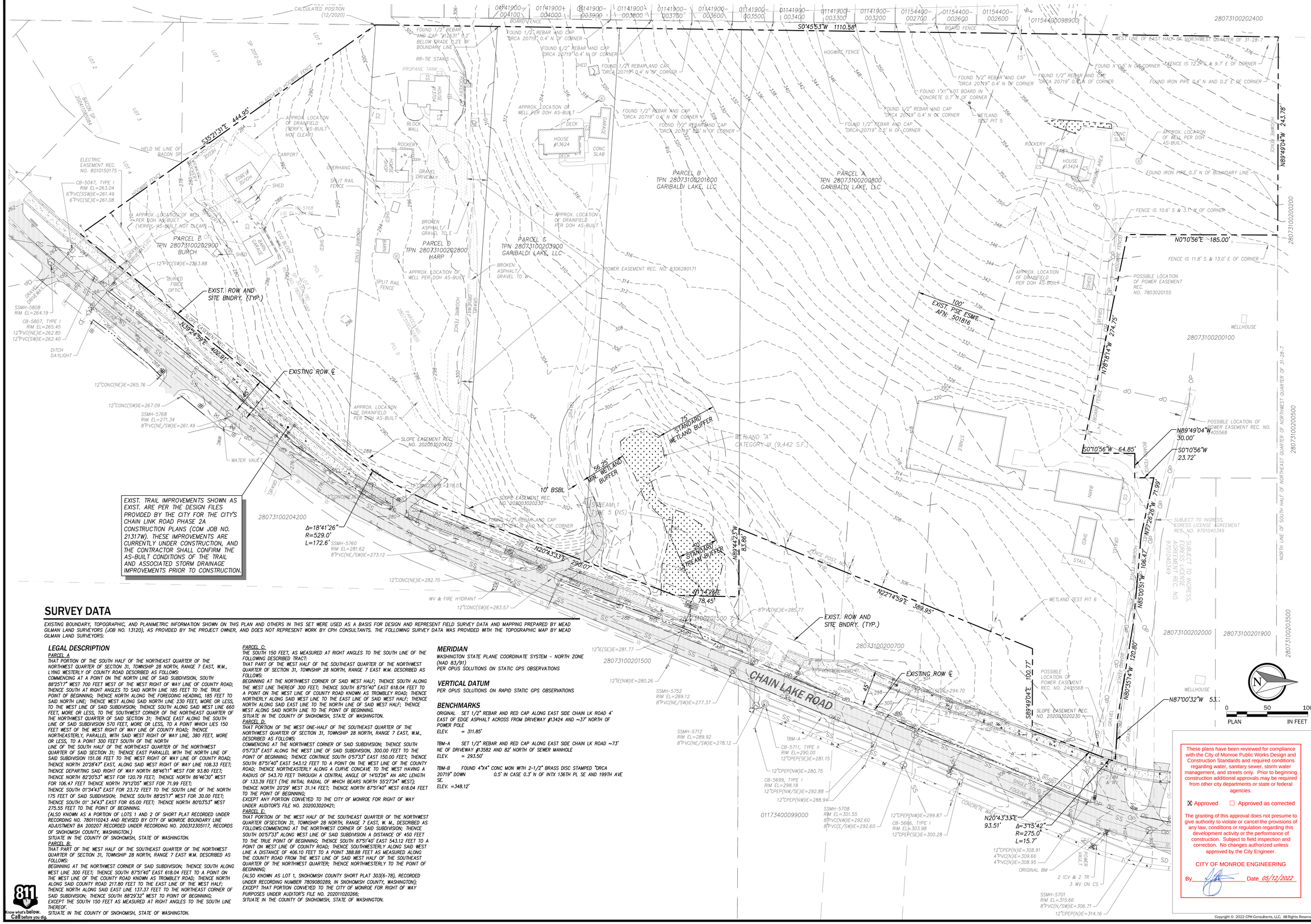
PTN. OF NW 1/4 OF SEC 31, TWP 28 N, R7E W.M.


S0°45'53"W 1110.58'
N89°49'04"W 243.78'
S35°21'31"E 444.95'
N39°24'56"E 409.91'
N20°43'33"E 290.07'
N0°10'56"E 185.00'
N78°18'14"W 274.75'
N20°43'33"E 93.51'
Δ=18°41'26"
R=529.0'
L=172.6'
Δ=315°42"
R=275.0'
L=15.7'
N89°49'04"W 30.00'
S0°10'56"W 64.85'
S0°10'56"W 23.72'
N87°26'26"W 71.99'
N87°26'26"W 106.47'
N65°00'51"W 120.80'
N89°14'23"W 83.66'
S89°49'04"E 100.77'
N87°00'32"W 53.
N22°14'59"E 389.95'
S0°14'28"E 78.45'
100' EXIST. PSE ESMT. AFN: 501818
EXIST. ROW AND SITE BNDRY. (TYP.)
EXISTING ROW ℄
CHAIN LAKE ROAD
PARCEL A TPN 28073100200800 GARIBALDI LAKE, LLC
PARCEL B TPN 28073100201800 GARIBALDI LAKE, LLC
PARCEL C TPN 28073100203900 GARIBALDI LAKE, LLC
PARCEL D TPN 28073100202800 HARP
PARCEL E TPN 28073100202900 BURCH
HOUSE #13624
HOUSE #13424
BARN
SHED
GARAGE
CONC SLAB
DECK
ROCKERY
GRAVEL DRIVEWAY
BLOCK WALL
CARPORT
OVERHANG
SPLIT RAIL FENCE
HOGWIRE FENCE
BOARD FENCE
PROPANE TANK
RR-TIE STAIRS
WELLHOUSE
STABLE
PARKING AREA
CONC SLAB
APPROX. LOCATION OF WELL PER DOH AS-BUILT
APPROX. LOCATION OF DRAINFIELD PER DOH AS-BUILT
POSSIBLE LOCATION OF POWER EASEMENT REC. NO. 7803020155
POSSIBLE LOCATION OF POWER EASEMENT REC. NO. 8405568
POWER EASEMENT REC. NO. 8306280171
SLOPE EASEMENT REC. NO. 202003020422
SLOPE EASEMENT REC. NO. 202003020230
SUBJECT TO INGRESS, EGRESS LICENSE AGREEMENT REC. NO. 9701040349
SUBJECT TO INGRESS, EGRESS LICENSE AGREEMENT REC. NO. 9701040349
EXISTING ROW ℄
75' STANDARD WETLAND BUFFER
50' STANDARD STREAM BUFFER
56.25' MIN. WETLAND BUFFER
10' BSBL
WETLAND "A" CATEGORY III (9,442 S.F.)
STREAM 1 TYPE 5 (NS)
WETLAND TEST PIT 5
WETLAND TEST PIT 6
FOUND 1/2" REBAR AND CAP "ORCA 20719" 0.4' N OF CORNER
FOUND 1/2" REBAR AND CAP "ORCA 20719" 0.5' N OF CORNER
FOUND 1/2" REBAR AND CAP "ORCA 20719" 0.6' N OF CORNER
FOUND 1/2" REBAR AND CAP "ORCA 20719" 0.7' N OF CORNER
FOUND 1/2" REBAR AND CAP "ORCA 20719" 0.9' N OF CORNER
FOUND 1/2" REBAR AND CAP "ORCA 20719" 1.0' N OF CORNER
FOUND 1/2" REBAR AND CAP "ORCA 20719" 1.6' N OF CORNER
FOUND 1/2" REBAR AND CAP "ORCA 20719" 0.4

OTOP541828
CSIT541828
TBLOCK
CNOT541828
OTRL541828

PTN. OF NW 1/4 OF SEC 31, TWP 28 N, R7E W.M.



TYPICAL BUILDING SETBACKS

CONSTRUCTION NOTES

1. NDCBU MAILBOX STRUCTURE PER COM STD. DET. 314C, NO. AND SIZE OF BOXES PER PLAN
2. SURVEY MONUMENT PER COM STD. DET. 317

LEGEND

(X) CURB RETURN, SEE DET. ON SHT. C3.105-C3.106

NOTES:

1. THE APPLICANT/DEVELOPER RESERVES THE RIGHT TO PHASE THE IMPLEMENTATION OF THIS PROJECT. IT IS UNDERSTOOD THAT SUCH PHASING WILL REQUIRE PRIOR REVIEW AND APPROVAL BY THE CITY OF MONROE TO ENSURE THAT ANY SPECIFIC CRITERIA OR APPLICABLE CONDITIONS OF APPROVAL RELATED TO THE PRD SUDIVISION REMAIN SATISFIED PRIOR TO THE FINAL PLAT THAT INCLUDES THE FIRST PHASE OF DEVELOPMENT.

TRACT SCHEDULE

TRACT	AREA(SF)	USE	OWNERSHIP*
987	3,917	PRIVATE ACCESS	PRIVATE
988	7,233	PRIVATE ACCESS	PRIVATE
989	4,269	LANDSCAPE	PRIVATE
990	25,562	PARK/REC./STORM	PRIVATE
991	4,530	PRIVATE ACCESS	PRIVATE
993	31,333	PARK/REC.	PRIVATE
994	4,191	PRIVATE ACCESS	PRIVATE
995	9,572	PARK/REC.	PRIVATE
996	25,471	PARK/REC./STORM	PRIVATE
997	7,811	LANDSCAPE	PRIVATE
998	1,935	LANDSCAPE	PRIVATE
999	81,159	NGPE	PRIVATE

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* TRACTS DESIGNATED AS PRIVATE SHALL BE OWNED AND MAINTAINED BY THE COMMUNITY HOME OWNERS ASSOCIATION OR SPECIFIC LOT OWNERS AS DESIGNATED ON THE FINAL PLAT. THE CITY OF MONROE SHALL ACCEPT OWNERSHIP AND MAINTENANCE RESPONSIBILITIES OF THE TRACTS IDENTIFIED AS PUBLIC. A PUBLIC STORM DRAINAGE EASEMENT WILL BE PROVIDED OVER ALL OR PORTIONS OF ANY TRACTS CONTAINING PUBLIC STORM DRAINAGE FACILITIES TO ALLOW FOR CITY OWNERSHIP AND MAINTENANCE OF THE STORM WATER FACILITIES CONTAINED WITHIN.

SURVEY DATA

EXISTING BOUNDARY, TOPOGRAPHIC, AND PLANIMETRIC INFORMATION SHOWN ON THIS PLAN AND OTHERS IN THIS SET WERE USED AS A BASIS FOR DESIGN AND REPRESENT FIELD SURVEY DATA AND MAPPING PREPARED BY MEAD GILMAN LAND SURVEYORS (JOB NO. 13120), AS PROVIDED BY THE PROJECT OWNER, AND DOES NOT REPRESENT WORK BY CPH CONSULTANT (SEE COVER SHEET FOR LEGAL DESCRIPTION).

RIGHT-OF-WAY ALIGNMENT DATA

LINE TABLE			LINE TABLE		
LINE #	LENGTH	DIRECTION	LINE #	LENGTH	DIRECTION
L1	93.15'	N59°31'14"W	L10	43.26'	N11°07'50"W
L2	32.44'	N88°24'30"W	L11	219.31'	S89°14'07"E
L3	133.61'	S39°25'15"W	L12	130.26'	N20°10'29"E
L4	54.09'	N35°14'12"W	L13	5.24'	N25°38'17"E
L5	160.25'	N10°38'08"W	L14	59.64'	S89°49'04"E
L6	660.35'	N0°42'36"E	L15	176.96'	N69°49'31"W
L7	194.01'	N0°10'56"E	L16	95.00'	N70°42'40"E
L8	140.01'	N10°38'08"W	L17	229.89'	S89°49'04"E
L9	219.45'	N0°42'36"E			

CURVE TABLE			
CURVE #	Δ	RADIUS	LENGTH
C1	N73°57'52"W	165.00'	83.19'
C2	S14°23'33"W	100.00'	87.37'
C3	N87°54'28"W	50.00'	91.93'
C4	N22°56'10"W	165.00'	70.85'
C5	N4°57'46"W	165.00'	32.67'
C6	N4°57'46"W	165.00'	32.67'
C7	N51°12'37"W	51.00'	10.54'
C8	N55°28'11"E	86.00'	105.95'
C9	N22°54'23"E	474.00'	45.20'
C10	N57°54'37"E	100.00'	112.65'

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PLAN IN FEET

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MATTHEW J. HOREN — STATE OF WASHINGTON — 22400 — REGISTERED PROFESSIONAL ENGINEER
5/5/2022

GARIBALDI PRD

ENGINEERING PERMIT PACKAGE

HORIZONTAL CONTROL PLAN

CITY OF MONROE — SNOHOMISH COUNTY, WA

CLIENT
Garibaldi Lake, LLC
1010 MARKET STREET
KIRKALND, WA 98033
PHONE: (425)876-9390

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☐ Approved ☒ Approved as corrected

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CITY OF MONROE ENGINEERING
By _____ Date 05/12/2022

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11321-B NE 120th Street
Kirkland, WA 98034 • (425) 285-2390
101 South Wenatchee Avenue, Suite C3
Wenatchee, WA 98801 • (509) 293-7731
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PROJECT NO.
0054-18-028

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SHEET 4 OF 85

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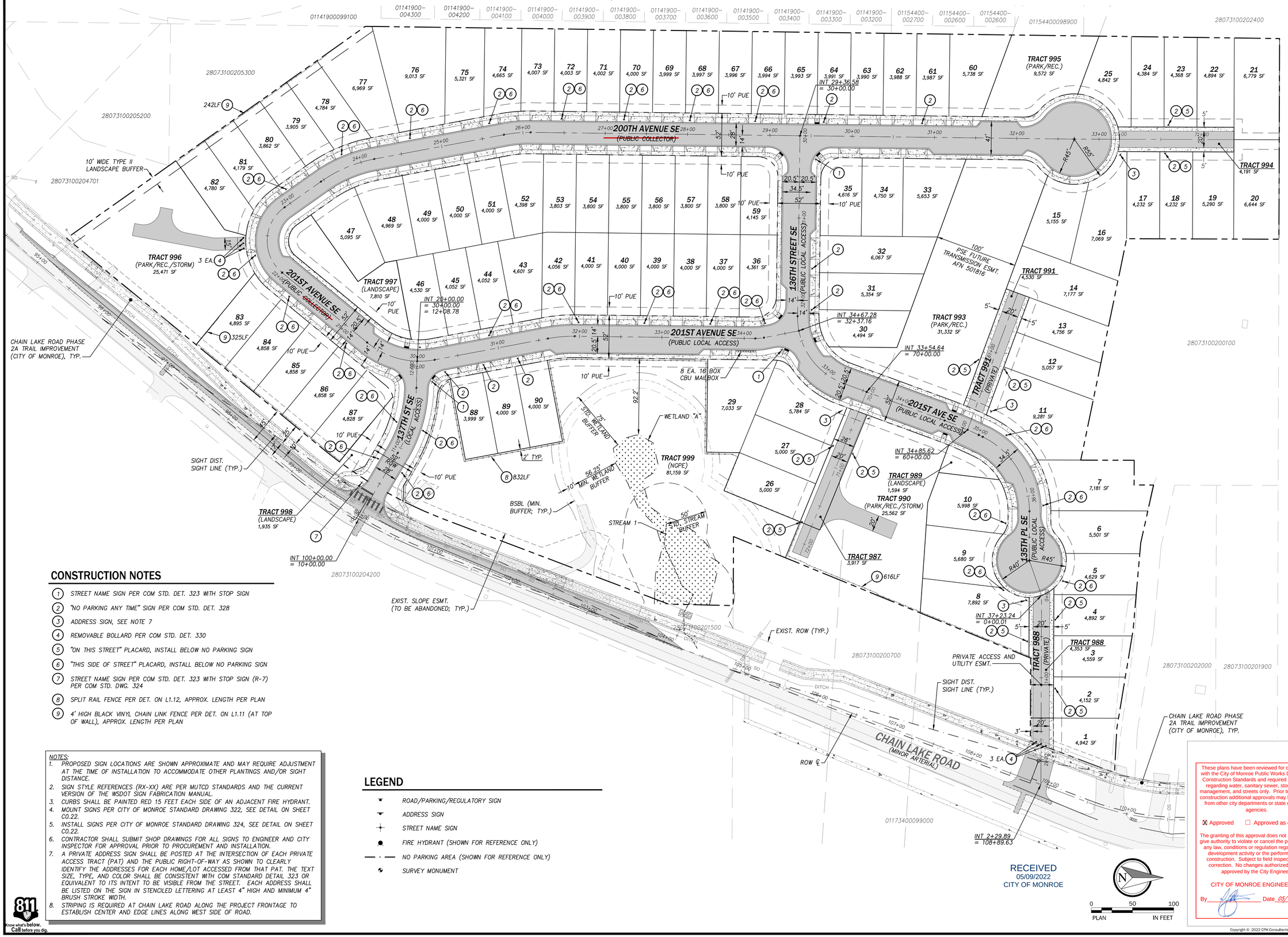
PTN. OF NW 1/4 OF SEC 31, TWP 28 N, R7E W.M.



CONSTRUCTION NOTES

1. STREET NAME SIGN PER COM STD. DET. 323 WITH STOP SIGN
2. "NO PARKING ANY TIME" SIGN PER COM STD. DET. 328
3. ADDRESS SIGN, SEE NOTE 7
4. REMOVABLE BOLLARD PER COM STD. DET. 330
5. "ON THIS STREET" PLACARD, INSTALL BELOW NO PARKING SIGN
6. "THIS SIDE OF STREET" PLACARD, INSTALL BELOW NO PARKING SIGN
7. STREET NAME SIGN PER COM STD. DET. 323 WITH STOP SIGN (R-7) PER COM STD. DWG. 324
8. SPLIT RAIL FENCE PER DET. ON L1.12, APPROX. LENGTH PER PLAN
9. 4' HIGH BLACK VINYL CHAIN LINK FENCE PER DET. ON L1.11 (AT TOP OF WALL), APPROX. LENGTH PER PLAN

NOTES:
1. PROPOSED SIGN LOCATIONS ARE SHOWN APPROXIMATE AND MAY REQUIRE ADJUSTMENT AT THE TIME OF INSTALLATION TO ACCOMMODATE OTHER PLANTINGS AND/OR SIGHT DISTANCE.
2. SIGN STYLE REFERENCES (RX-XX) ARE PER MUTCD STANDARDS AND THE CURRENT VERSION OF THE WSDOT SIGN FABRICATION MANUAL.
3. CURBS SHALL BE PAINTED RED 15 FEET EACH SIDE OF AN ADJACENT FIRE HYDRANT.
4. MOUNT SIGNS PER CITY OF MONROE STANDARD DRAWING 322, SEE DETAIL ON SHEET C0.22.
5. INSTALL SIGNS PER CITY OF MONROE STANDARD DRAWING 324, SEE DETAIL ON SHEET C0.22.
6. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ALL SIGNS TO ENGINEER AND CITY INSPECTOR FOR APPROVAL PRIOR TO PROCUREMENT AND INSTALLATION.
7. A PRIVATE ADDRESS SIGN SHALL BE POSTED AT THE INTERSECTION OF EACH PRIVATE ACCESS TRACT (PAT) AND THE PUBLIC RIGHT-OF-WAY AS SHOWN TO CLEARLY IDENTIFY THE ADDRESSES FOR EACH HOME/LOT ACCESSED FROM THAT PAT. THE TEXT SIZE, TYPE, AND COLOR SHALL BE CONSISTENT WITH COM STANDARD DETAIL 323 OR EQUIVALENT TO ITS INTENT TO BE VISIBLE FROM THE STREET. EACH ADDRESS SHALL BE LISTED ON THE SIGN IN STENCILED LETTERING AT LEAST 4" HIGH AND MINIMUM 4" BRUSH STROKE WIDTH.
8. STRIPING IS REQUIRED AT CHAIN LAKE ROAD ALONG THE PROJECT FRONTAGE TO ESTABLISH CENTER AND EDGE LINES ALONG WEST SIDE OF ROAD.

LEGEND

- ROAD/PARKING/REGULATORY SIGN
- ADDRESS SIGN
- STREET NAME SIGN
- FIRE HYDRANT (SHOWN FOR REFERENCE ONLY)
- NO PARKING AREA (SHOWN FOR REFERENCE ONLY)
- SURVEY MONUMENT

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PLAN IN FEET

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CITY OF MONROE ENGINEERING

By _____ Date 05/12/2022

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MATTHEW J. HOPKINS — STATE OF WASHINGTON — 21611 — REGISTERED PROFESSIONAL ENGINEER — 5/5/2022

GARIBALDI PRD

ENGINEERING PERMIT PACKAGE

CHANNELIZATION PLAN

CITY OF MONROE — SNOHOMISH COUNTY, WA

CLIENT

Garibaldi Lake, LLC
1010 MARKET STREET
KIRKALND, WA 98033
PHONE: (425)876-9390

C|P|H CONSULTANTS
Site Planning • Civil Engineering
Landscape Architecture • Land Use Consulting
11321-B NE 120th Street
Kirkland, WA 98034 • (425) 285-2390
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PROJECT NO.
0054-18-028

DRAWING
C0.21

SHEET 5 OF 85

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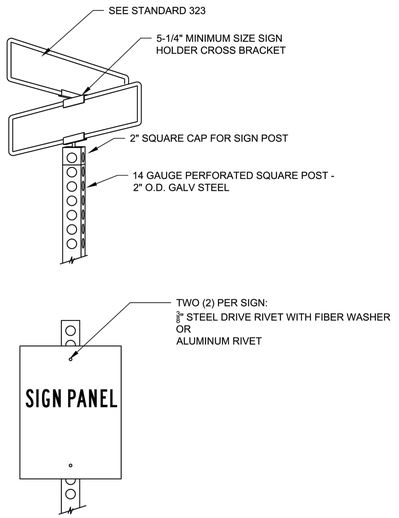
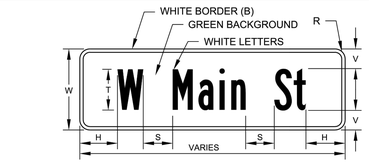
5/5/2022 11:13 AM PETER EVANS



DESCRIPTION: STREET SIGN MOUNTING DETAIL
DESIGNATION: 322
SCALE: NOT TO SCALE
REVISED: NOV 10, 2021



SEE NOTE 5	W	T	V	H	S	B	R
>25 POSTED MPH	12"	6"	3"	4.5" MIN	4.5"	0.5"	1.5"
≤ 25 POSTED MPH*	8"	4"	2"	3" MIN	3"	0.375"	1.0"

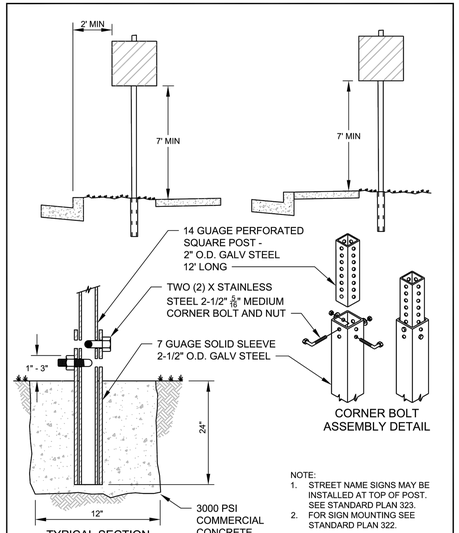
*SEE NOTE 5

179th Ave SE

Local Rd SE

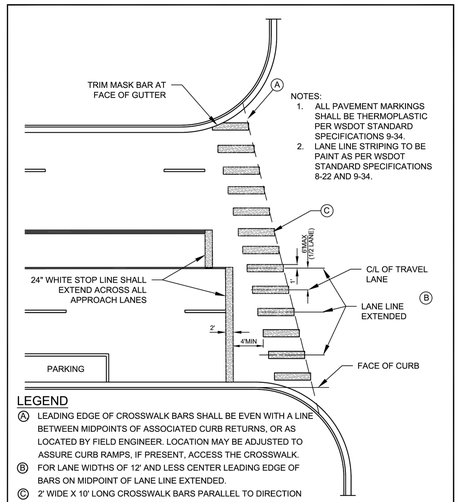
NOTES:
1. TEXT SHALL BE AS SHOWN WITH STANDARD HIGHWAY SERIES B LETTERS AND NUMBERS.
2. MATERIAL SHALL BE ANODIZED ALUMINUM SHEET STOCK. STOCK THICKNESS SHALL BE 0.08" FOR SIGNS SHORTER THAN 36" LONG. SIGNS 36" OR LONGER STOCK THICKNESS SHALL BE 0.125".
3. BACK SIDE OF SIGN TO BE THE SAME AS THE FRONT.
4. SIGNS SHALL BE TYPE 4 HIGH INTENSITY PRISMATIC FOR RETRORELECTIVITY.
5. WHERE TWO DIFFERENT CLASSIFICATIONS OF ROADWAY INTERSECT THE LARGER SIGN FONT SHALL BE USED ON ALL SIGNS.
6. THE NOMINAL LOOP HEIGHT OF THE LOWER CASE LETTERS SHALL BE 3/4 OF THE HEIGHT OF THE INITIAL UPPER CASE LETTER.

DESCRIPTION: STREET SIGN
DESIGNATION: 323
SCALE: NOT TO SCALE
REVISED: NOV 10, 2021



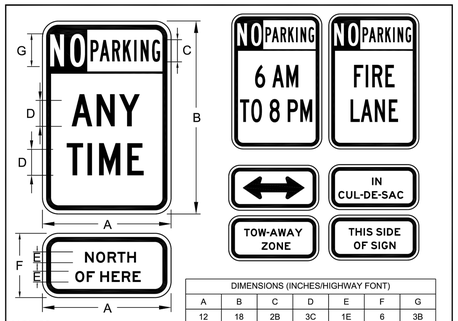
NOTE:
1. STREET NAME SIGNS MAY BE INSTALLED AT TOP OF POST. SEE STANDARD PLAN 323.
2. FOR SIGN MOUNTING SEE STANDARD PLAN 322.

DESCRIPTION: SIGN INSTALLATION
DESIGNATION: 324
SCALE: NOT TO SCALE
REVISED: NOV 10, 2021



LEGEND
- (A) LEADING EDGE OF CROSSWALK BARS SHALL BE EVEN WITH A LINE BETWEEN MIDPOINTS OF ASSOCIATED CURB RETURNS, OR AS LOCATED BY FIELD ENGINEER. LOCATION MAY BE ADJUSTED TO ASSURE CURB RAMPS, IF PRESENT, ACCESS THE CROSSWALK.
- (B) FOR LANE WIDTHS OF 12' AND LESS CENTER LEADING EDGE OF BARS ON MIDPOINT OF LANE LINE EXTENDED.
- (C) 2' WIDE X 10' LONG CROSSWALK BARS PARALLEL TO DIRECTION OF VEHICLE TRAVEL WHEN DETERMINED BY CITY ENGINEER.

DESCRIPTION: STOP BAR AND CROSSWALK
DESIGNATION: 325
SCALE: NOT TO SCALE
REVISED: NOV 10, 2021



DIMENSIONS (INCHES/HIGHWAY FONT)						
A	B	C	D	E	F	G
12	18	2B	3C	1E	6	3B

NOTES
1. NO PARKING SIGNS SHALL CONFORM WITH MUTCD PARKING, STANDING, AND STOPPING REGULATORY SIGNS (R7 AND R8 SERIES).
2. BACKGROUND SHALL BE WHITE. TEXT AND SYMBOLS SHALL BE RED.
3. TEXT SHALL BE PER WSDOT SIGN FABRICATION MANUAL M55-05.
4. SEE STANDARD DETAILS 322 AND 324 FOR SIGN MOUNTING DETAILS AND SIGN POST INSTALLATION.
5. SEE STANDARD DETAIL 323 FOR SIGN MATERIAL SPECIFICATIONS.
6. SIGN SHALL HAVE A 1/2" MARGIN AND A 1/2" BORDER.
7. SIGNS SHALL BE MOUNTED AT 90° TO THE CURB LINE.
8. IF SIGN CONTAINS ARROWS THE SIGN SHALL BE PLACED AT AN ANGLE BETWEEN 30° AND 45° WITH THE TRAFFIC FLOW.
9. SIGNS MOUNTED AT 90° TO THE CURB LINE SHALL ONLY BE USED AT THE TRANSITION POINT BETWEEN PARKING ZONES, USE TWO SIGNS MOUNTED BACK TO BACK, AND 'THIS SIDE OF SIGN' (R7-202P) SHALL BE USED ON BOTH SIDES OF THE SIGN.

DESCRIPTION: NO PARKING SIGNS
DESIGNATION: 328
SCALE: NOT TO SCALE
REVISED: NOV 10, 2021

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MATTHEW J. HOPKINS — STATE OF WASHINGTON — 22818 — REGISTERED PROFESSIONAL ENGINEER — 5/5/2022

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CHANNELIZATION DETAILS

CITY OF MONROE — SNOHOMISH COUNTY, WA

CLIENT

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PROJECT NO.
0054-18-028

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SHEET 6 OF 85

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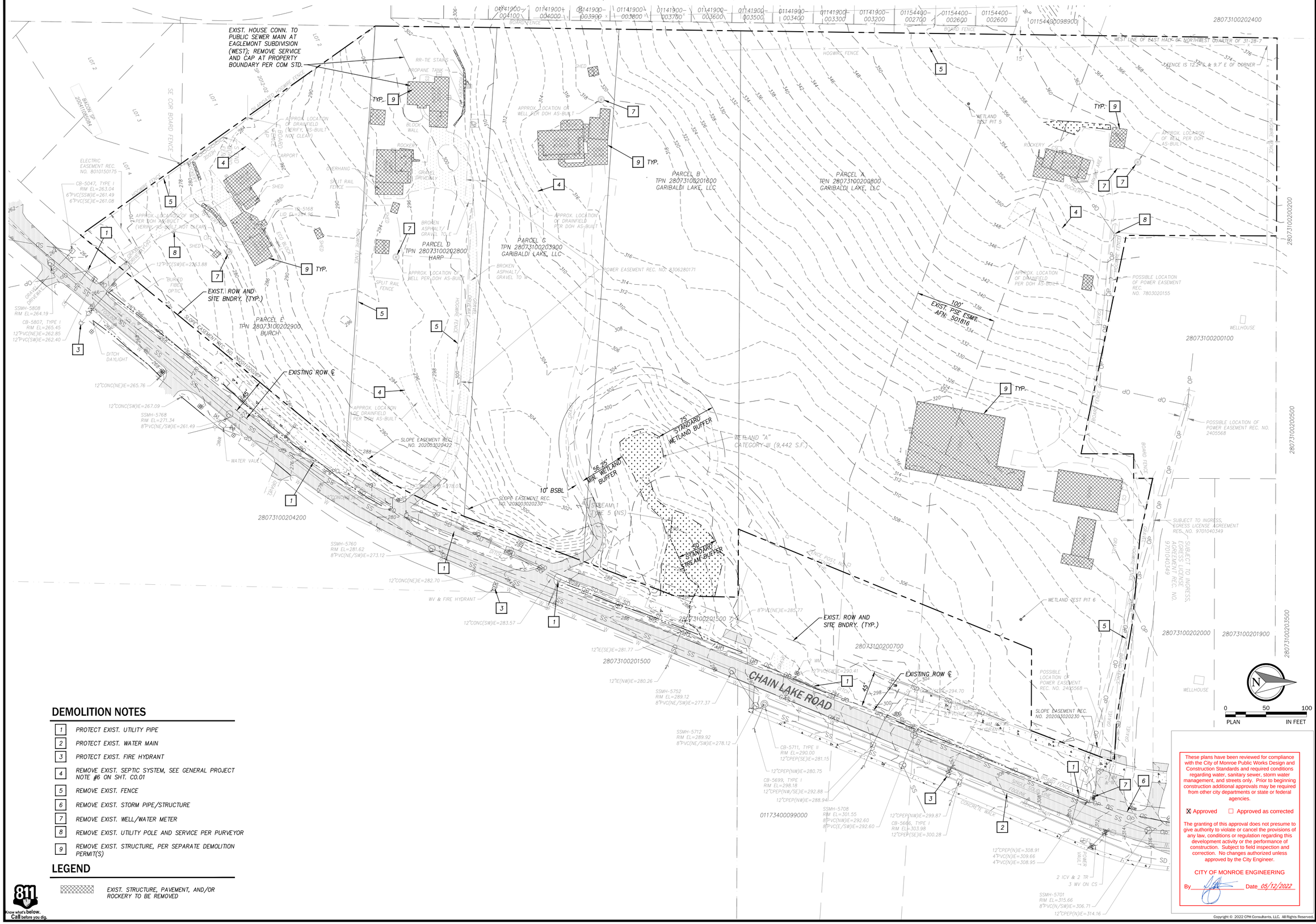
5/5/2022 10:00 AM PETER EVANS

OTOP541828
TBLOCK
CNOT541828

PTN. OF NW 1/4 OF SEC 31, TWP 28 N, R7E W.M.



DEMOLITION NOTES

1. PROTECT EXIST. UTILITY PIPE
2. PROTECT EXIST. WATER MAIN
3. PROTECT EXIST. FIRE HYDRANT
4. REMOVE EXIST. SEPTIC SYSTEM, SEE GENERAL PROJECT NOTE #6 ON SHT. C0.01
5. REMOVE EXIST. FENCE
6. REMOVE EXIST. STORM PIPE/STRUCTURE
7. REMOVE EXIST. WELL/WATER METER
8. REMOVE EXIST. UTILITY POLE AND SERVICE PER PURVEYOR
9. REMOVE EXIST. STRUCTURE, PER SEPARATE DEMOLITION PERMIT(S)

LEGEND

EXIST. STRUCTURE, PAVEMENT, AND/OR ROCKERY TO BE REMOVED

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DEMOLITION PLAN

SNOHOMISH COUNTY, WA
CITY OF MONROE

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KIRKALND, WA 98033
PHONE: (425)876-9390

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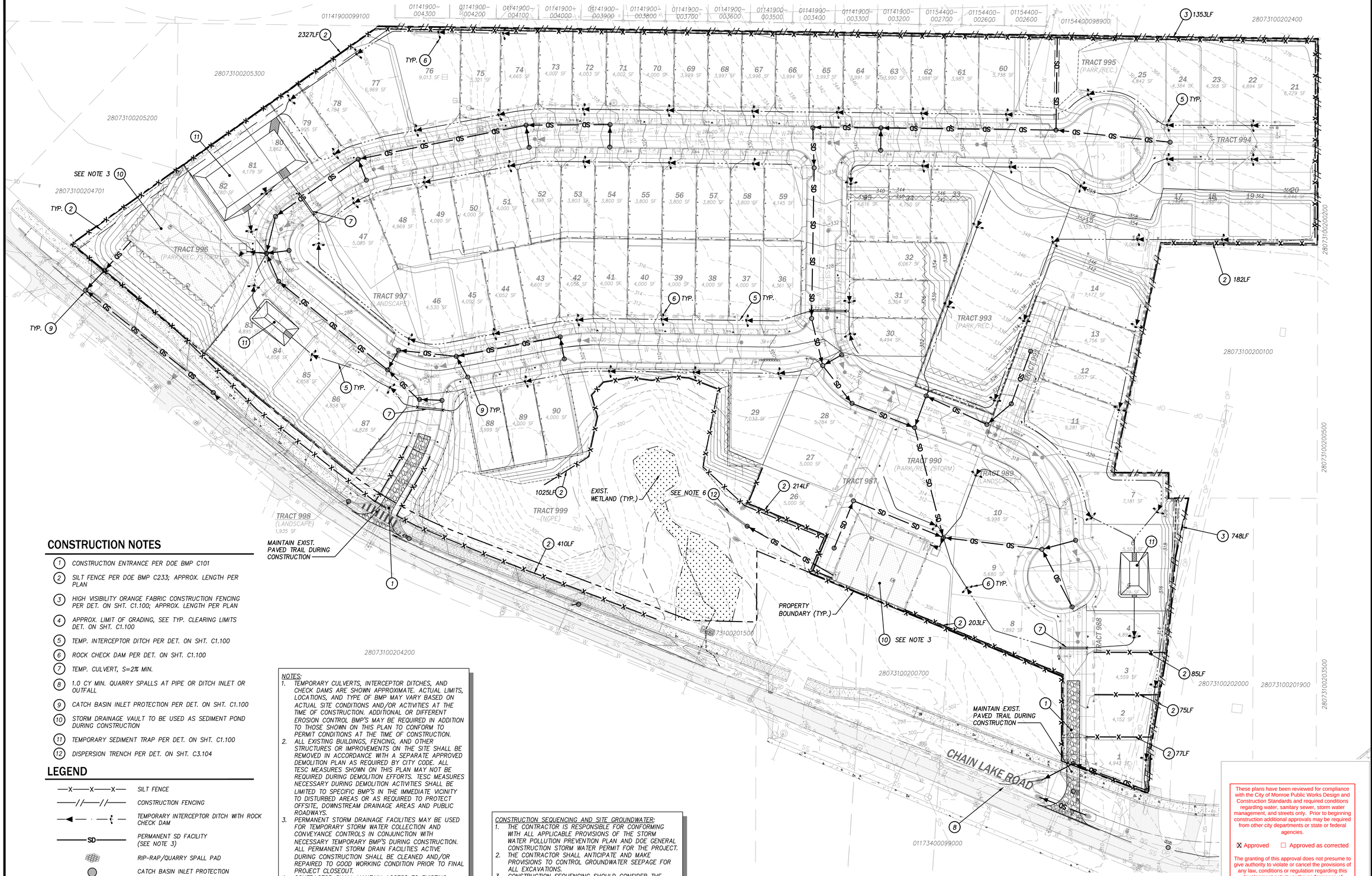
CGRD541828
CSIT541828
CUSD541828
CUWS541828
TBLOCK
CESC541828
OTRL541828
CNOT541828

PTN. OF NW 1/4 OF SEC 31, TWP 28 N, R7E W.M.



CONSTRUCTION NOTES

1. CONSTRUCTION ENTRANCE PER DOE BMP C101
2. SILT FENCE PER DOE BMP C233; APPROX. LENGTH PER PLAN
3. HIGH VISIBILITY ORANGE FABRIC CONSTRUCTION FENCING PER DET. ON SHT. C1.100; APPROX. LENGTH PER PLAN
4. APPROX. LIMIT OF GRADING, SEE TYP. CLEARING LIMITS DET. ON SHT. C1.100
5. TEMP. INTERCEPTOR DITCH PER DET. ON SHT. C1.100
6. ROCK CHECK DAM PER DET. ON SHT. C1.100
7. TEMP. CULVERT, S=2% MIN.
8. 1.0 CY MIN. QUARRY SPALLS AT PIPE OR DITCH INLET OR OUTFALL
9. CATCH BASIN INLET PROTECTION PER DET. ON SHT. C1.100
10. STORM DRAINAGE VAULT TO BE USED AS SEDIMENT POND DURING CONSTRUCTION
11. TEMPORARY SEDIMENT TRAP PER DET. ON SHT. C1.100
12. DISPERSION TRENCH PER DET. ON SHT. C3.104

LEGEND

- SILT FENCE
- CONSTRUCTION FENCING
- TEMPORARY INTERCEPTOR DITCH WITH ROCK CHECK DAM
- SD — PERMANENT SD FACILITY (SEE NOTE 3)
- RIP-RAP/QUARRY SPALL PAD
- CATCH BASIN INLET PROTECTION
- TEMPORARY CULVERT
- TYPE 1 CATCH BASIN
- TYPE 2 CATCH BASIN
- STORM DRAINAGE PROTECTION INSERT
- CONSTRUCTION ENTRANCE

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

NOTES:
1. TEMPORARY CULVERTS, INTERCEPTOR DITCHES, AND CHECK DAMS ARE SHOWN APPROXIMATE. ACTUAL LIMITS, LOCATIONS, AND TYPE OF BMP MAY VARY BASED ON ACTUAL SITE CONDITIONS AND/OR ACTIVITIES AT THE TIME OF CONSTRUCTION. ADDITIONAL OR DIFFERENT EROSION CONTROL BMP'S MAY BE REQUIRED IN ADDITION TO THOSE SHOWN ON THIS PLAN TO CONFORM TO PERMIT CONDITIONS AT THE TIME OF CONSTRUCTION.
2. ALL EXISTING BUILDINGS, FENCING, AND OTHER STRUCTURES OR IMPROVEMENTS ON THE SITE SHALL BE REMOVED IN ACCORDANCE WITH A SEPARATE APPROVED DEMOLITION PLAN AS REQUIRED BY CITY CODE. ALL TESC MEASURES SHOWN ON THIS PLAN MAY NOT BE REQUIRED DURING DEMOLITION EFFORTS. TESC MEASURES NECESSARY DURING DEMOLITION ACTIVITIES SHALL BE LIMITED TO SPECIFIC BMP'S IN THE IMMEDIATE VICINITY TO DISTURBED AREAS OR AS REQUIRED TO PROTECT OFFSITE, DOWNSTREAM DRAINAGE AREAS AND PUBLIC ROADWAYS.
3. PERMANENT STORM DRAINAGE FACILITIES MAY BE USED FOR TEMPORARY STORM WATER COLLECTION AND CONVEYANCE CONTROLS IN CONJUNCTION WITH NECESSARY TEMPORARY BMP'S DURING CONSTRUCTION. ALL PERMANENT STORM DRAIN FACILITIES ACTIVE DURING CONSTRUCTION SHALL BE CLEANED AND/OR REPAIRED TO GOOD WORKING CONDITION PRIOR TO FINAL PROJECT CLOSEOUT.
4. CONTRACTOR SHALL MANTAIN ACCESS TO EXISTING DRIVEWAYS ALONG CHAIN LAKE ROAD AT ALL TIMES DURING CONSTRUCTION.
5. SEE STORM DRAINAGE VAULT CONSTRUCTION DETAILS ON DRAWINGS C3.20 AND C3.21.
6. CATCH BASINS THAT OUTLET FROM THE DETENTION VAULT SHALL REMAIN PLUGGED DURING CONSTRUCTION TO MITIGATE UNCONTROLLED SEDIMENT DISCHARGE UNTIL THE VAULT IS FULLY OPERATIONAL.

CONSTRUCTION SEQUENCING AND SITE GROUNDWATER:
1. THE CONTRACTOR IS RESPONSIBLE FOR CONFORMING WITH ALL APPLICABLE PROVISIONS OF THE STORM WATER POLLUTION PREVENTION PLAN AND DOE GENERAL CONSTRUCTION STORM WATER PERMIT FOR THE PROJECT.
2. THE CONTRACTOR SHALL ANTICIPATE AND MAKE PROVISIONS TO CONTROL GROUNDWATER SEEPAGE FOR ALL EXCAVATIONS.
3. CONSTRUCTION SEQUENCING SHOULD CONSIDER THE INSTALLATION OF THE INTERCEPTOR TRENCH ALONG THE NORTH SITE BOUNDARY TO FACILITATE THE CONTROL OF EXPECTED GROUNDWATER SEEPAGE.
4. THE CONTRACTOR SHALL IDENTIFY SPECIFIC METHODS AND CONTINGENCY MEASURES TO TREAT STORM WATER RUNOFF TO MAINTAIN STORM WATER DISCHARGE STANDARDS DURING CONSTRUCTION. THAT PLAN SHALL BE PROVIDED TO THE ENGINEER AND CITY INSPECTOR AT THE PRE-CONSTRUCTION MEETING FOR THE PROJECT.

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MATTHEW J. HOUGH — STATE OF WASHINGTON — 22818 — REGISTERED PROFESSIONAL ENGINEER — 5/5/2022

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TESC PLAN

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PROJECT NO.
0054-18-028

DRAWING
C1.01

SHEET 8 OF 85

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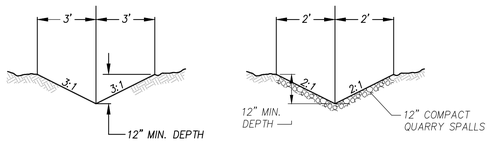


EARTH OR GRASS LINED

ROCK LINED

NOTES:

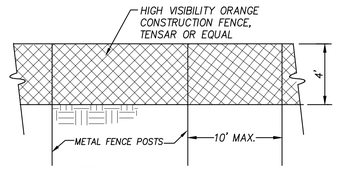
1. EARTH OR GRASS LINED DITCHES SHALL HAVE SLOPES OF 6% OR LESS AND A MAXIMUM FLOW VELOCITY OF 5FPS.
2. ROCK CHECK DAMS SHALL BE USED IN EARTH OR GRASS LINED DITCHES FOR SLOPES GREATER THAN 3%.
3. ROCK LINED DITCHES SHALL BE USED WHEN SLOPES EXCEED 6% OR FOR FLOW VELOCITY GREATER THAN 5FPS.

MAINTENANCE STANDARDS:

1. ANY SEDIMENT DEPOSITION OF MORE THAN 0.5 FEET SHALL BE REMOVED SO THAT THE CHANNEL IS RESTORED TO ITS DESIGN CAPACITY.
2. IF THE CHANNEL CAPACITY IS INSUFFICIENT FOR THE DESIGN STORM, IT MUST BE DETERMINED WHETHER THE PROBLEM IS LOCAL (E.G., A CONSTRICTION OR BEND) OR THE CHANNEL IS UNDERDESIGNED. IF THE PROBLEM IS LOCAL, THE CHANNEL CAPACITY MUST BE INCREASED THROUGH CONSTRUCTION OF A BERM(S) OR BY EXCAVATION. IF THE PROBLEM IS UNDERDESIGN, THE DESIGN ENGINEER SHALL BE NOTIFIED AND THE CHANNEL REDESIGNED TO A MORE CONSERVATIVE STANDARD TO BE APPROVED BY CITY OF MONROE.
3. THE CHANNEL SHALL BE EXAMINED FOR SIGNS OF SCOURING AND EROSION OF THE BED AND BANKS. IF SCOURING OR EROSION HAS OCCURRED, AFFECTED AREAS SHALL BE PROTECTED BY RIP-RAP OR AN EROSION CONTROL BLANKET OR NET.

TEMPORARY INTERCEPTOR DITCH

NOT TO SCALE

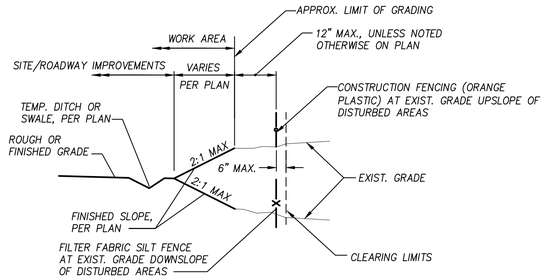


NOTE:

1. SEE ESC AND CLEARING PLANS AND TYPICAL CLEARING LIMITS DETAIL FOR FENCE LOCATION

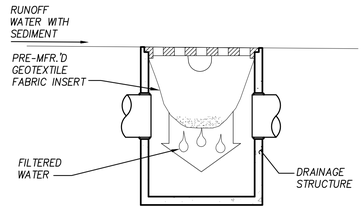
CONSTRUCTION FENCING

NOT TO SCALE



TYPICAL CLEARING LIMITS

NOT TO SCALE



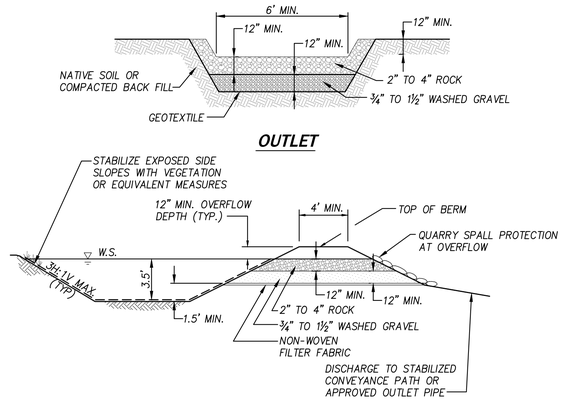
TYPICAL INSTALLATION

MAINTENANCE STANDARDS

1. ANY ACCUMULATED SEDIMENT ON OR AROUND INLET PROTECTION SHALL BE REMOVED IMMEDIATELY. SEDIMENT SHALL NOT BE REMOVED WITH WATER AND ALL SEDIMENT MUST BE DISPOSED OF AS FILL ON SITE OR HAULED OFF SITE.
2. ANY SEDIMENT IN THE CATCH BASIN INSERT SHALL BE REMOVED WHEN THE SEDIMENT HAS FILLED ONE THIRD OF THE AVAILABLE STORAGE. THE FILTER MEDIA FOR THE INSERT SHALL BE CLEANED OR REPLACE AT LEAST MONTHLY.
3. REGULAR MAINTENANCE IS CRITICAL FOR ALL FORMS OF CATCH BASIN/INLET PROTECTION. UNLIKE MANY FORMS OF PROTECTION THAT FAIL GRADUALLY, CATCH BASIN PROTECTION WILL FAIL SUDDENLY AND COMPLETELY IF NOT MAINTAINED.

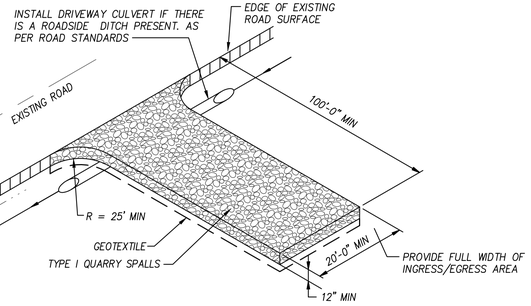
CATCH BASIN PROTECTION

NOT TO SCALE



TEMPORARY SEDIMENT TRAP

NOT TO SCALE



CONSTRUCTION ENTRANCE NOTES:

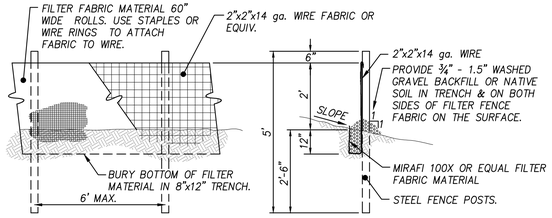
1. MATERIAL SHALL BE 4" TO 6" QUARRY SPALLS AND MAY BE TOP-DRESSED WITH 1" TO 3" ROCK. (STANDARD SPECIFICATIONS).
2. THE ROCK PAD SHALL BE AT LEAST 12 INCHES THICK AND 100 FEET LONG. WIDTH SHALL BE THE FULL WIDTH OF THE VEHICLE INGRESS AND EGRESS AREA. SMALLER PADS MAY BE APPROVED FOR SINGLE-FAMILY RESIDENTIAL AND SMALL COMMERCIAL SITES.
3. ADDITIONAL ROCK SHALL BE ADDED PERIODICALLY TO MAINTAIN PROPER FUNCTION OF THE PAD. IF THE PAD DOES NOT ADEQUATELY REMOVE THE MUD FROM THE VEHICLE WHEELS, THE WHEELS SHALL BE HOSED OFF BEFORE THE VEHICLE ENTERS A PAVED STREET. THE WASHING SHALL BE DONE ON AN AREA COVERED WITH CRUSHED ROCK AND WASH WATER SHALL DRAIN TO A SEDIMENT RETENTION FACILITY OR THROUGH SILT FENCE.
4. DRIVEWAYS SHALL BE PAVED TO THE EDGE OF ROW PRIOR TO INSTALLATION OF THE CONSTRUCTION ENTRANCE TO AVOID DAMAGING OF THE ROADWAY. IT IS RECOMMENDED THAT THE ENTRANCE BE CROWNED SO THAT RUNOFF DRAINS OFF THE PAD.

MAINTENANCE STANDARDS:

1. QUARRY SPALLS (OR HOG FUEL) SHALL BE ADDED IF THE PAD IS NO LONGER IN ACCORDANCE WITH THE SPECIFICATIONS.
2. IF THE ENTRANCE IS NOT PREVENTING SEDIMENT FROM BEING TRACKED ONTO PAVEMENT, THEN ALTERNATIVE MEASURES TO KEEP THE STREETS FREE OF SEDIMENT SHALL BE USED. THIS MAY INCLUDE STREET SWEEPING, AN INCREASE IN THE DIMENSIONS OF THE ENTRANCE, OR THE INSTALLATION OF A WHEEL WASH. IF WASHING IS USED, IT SHALL BE DONE ON AN AREA COVERED WITH CRUSHED ROCK, AND WASH WATER SHALL DRAIN TO A SEDIMENT TRAP OR POND.
3. ANY SEDIMENT THAT IS TRACKED ONTO PAVEMENT SHALL BE REMOVED IMMEDIATELY BY SWEEPING. THE SEDIMENT COLLECTED BY SWEEPING SHALL BE REMOVED OR STABILIZED ON-SITE. THE PAVEMENT SHALL NOT BE CLEANED BY WASHING DOWN THE STREET, EXCEPT WHEN SWEEPING IS INEFFECTIVE AND THERE IS A THREAT TO PUBLIC SAFETY. IF IT IS NECESSARY TO WASH THE STREETS, THE CONSTRUCTION OF A SMALL SUMP SHALL BE CONSIDERED. THE SEDIMENT WOULD THEN BE WASHED INTO THE SUMP.
4. ANY ROCK SPALLS THAT ARE LOOSENED FROM THE PAD AND END UP ON THE ROADWAY SHALL BE REMOVED IMMEDIATELY.
5. IF VEHICLES ARE ENTERING OR EXITING THE SITE AT POINTS OTHER THAN THE CONSTRUCTION ENTRANCE(S), FENCING SHALL BE INSTALLED TO CONTROL TRAFFIC.

STABILIZED CONSTRUCTION ENTRANCE

NOT TO SCALE



STANDARD NOTES:

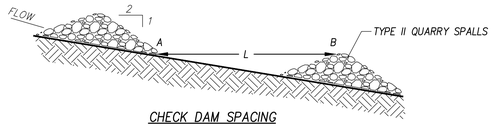
A. THE FILTER FABRIC SHALL BE PURCHASED IN A CONTINUOUS ROLL CUT TO THE LENGTH OF THE BARRIER TO AVOID USE OF JOINTS. WHEN JOINTS ARE NECESSARY, FILTER CLOTH SHALL BE SPLICED TOGETHER ONLY AT A SUPPORT POST, WITH A MINIMUM 6-INCH OVERLAP, AND BOTH ENDS SECURELY FASTENED TO THE POST.
B. THE FILTER FABRIC FENCE SHALL BE INSTALLED TO FOLLOW THE CONTOURS (WHERE FEASIBLE). THE FENCE POSTS SHALL BE SPACED A MAXIMUM OF 6 FEET APART AND DRIVEN SECURELY INTO THE GROUND (MINIMUM OF 30 INCHES).
C. A TRENCH SHALL BE EXCAVATED, ROUGHLY 8 INCHES WIDE AND 12 INCHES DEEP, UPSLOPE AND ADJACENT TO THE WOOD POST TO ALLOW THE FILTER FABRIC TO BE BURIED.
D. WHEN STANDARD STRENGTH FILTER FABRIC IS USED, A WIRE MESH SUPPORT FENCE SHALL BE FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS USING HEAVY-DUTY WIRE STAPLES AT LEAST 1 INCH LONG, TIE WIRES OR HOG RINGS. THE WIRE SHALL EXTEND INTO THE TRENCH A MINIMUM OF 4 INCHES AND SHALL NOT EXTEND MORE THAN 36 INCHES ABOVE THE ORIGINAL GROUND SURFACE.
E. THE STANDARD STRENGTH FILTER FABRIC SHALL BE STAPLED OR WIRED TO THE FENCE, AND 20 INCHES OF THE FABRIC SHALL BE EXTENDED INTO THE TRENCH. THE FABRIC SHALL NOT EXTEND MORE THAN 36 INCHES ABOVE THE ORIGINAL GROUND SURFACE. FILTER FABRIC SHALL NOT BE STAPLED TO EXISTING TREES.
F. WHEN EXTRA-STRENGTH FILTER FABRIC AND CLOSER POST SPACING ARE USED, THE WIRE MESH SUPPORT FENCE MAY BE ELIMINATED. IN SUCH A CASE, THE FILTER FABRIC IS STAPLED OR WIRED DIRECTLY TO THE POSTS WITH ALL OTHER PROVISIONS OF STANDARD NOTE E. APPLYING.
G. THE TRENCH SHALL BE BACKFILLED WITH ¾-INCH MINIMUM WASHED GRAVEL.
H. FILTER FABRIC FENCES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFUL PURPOSE, BUT NOT BEFORE THE UPSLOPE AREA HAS BEEN PERMANENTLY STABILIZED.
I. FILTER FABRIC FENCES SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.

MAINTENANCE STANDARDS:

1. ANY DAMAGE SHALL BE REPAIRED IMMEDIATELY.
2. IF CONCENTRATED FLOWS ARE EVIDENT UPHILL OF THE FENCE, THEY MUST BE INTERCEPTED AND CONVEYED TO A SEDIMENT TRAP OR POND.
3. IT IS IMPORTANT TO CHECK THE UPHILL SIDE OF THE FENCE FOR SIGNS OF THE FENCE CLOGGING AND ACTING AS A BARRIER TO FLOW AND THEN CAUSING CHANNELIZATION OF FLOWS PARALLEL TO THE FENCE. IF THIS OCCURS, REPLACE THE FENCE OR REMOVE THE TRAPPED SEDIMENT.
4. SEDIMENT MUST BE REMOVED WHEN THE SEDIMENT IS 6 INCHES HIGH.
5. IF THE FILTER FABRIC (GEOTEXTILE) HAS DETERIORATED DUE TO ULTRAVIOLET BREAKDOWN, IT SHALL BE REPLACED.

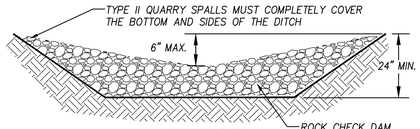
TYPICAL SILT FENCE

NOT TO SCALE



CHECK DAM SPACING

L=THE DISTANCE SUCH THAT POINTS A AND B ARE OF EQUAL ELEVATION



CROSS SECTION

ROCK CHECK DAM

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CITY OF MONROE ENGINEERING

By _____ Date 05/12/2022

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2	5/4/22	CITY PERMIT SUBMITTAL	PCE	MJH

MATTHEW J. HOPKINS — STATE OF WASHINGTON — 22818 — REGISTERED PROFESSIONAL ENGINEER — 5/5/2022

GARIBALDI PRD

ENGINEERING PERMIT PACKAGE

TESC DETAILS

CITY OF MONROE — SNOHOMISH COUNTY, WA

CLIENT

Garibaldi Lake, LLC
1010 MARKET STREET
KIRKALND, WA 98033
PHONE: (425)876-9390

C|P|H CONSULTANTS
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PROJECT NO.. 0054-18-028

DRAWING C1.100

SHEET 9 OF 85

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OTOP541828
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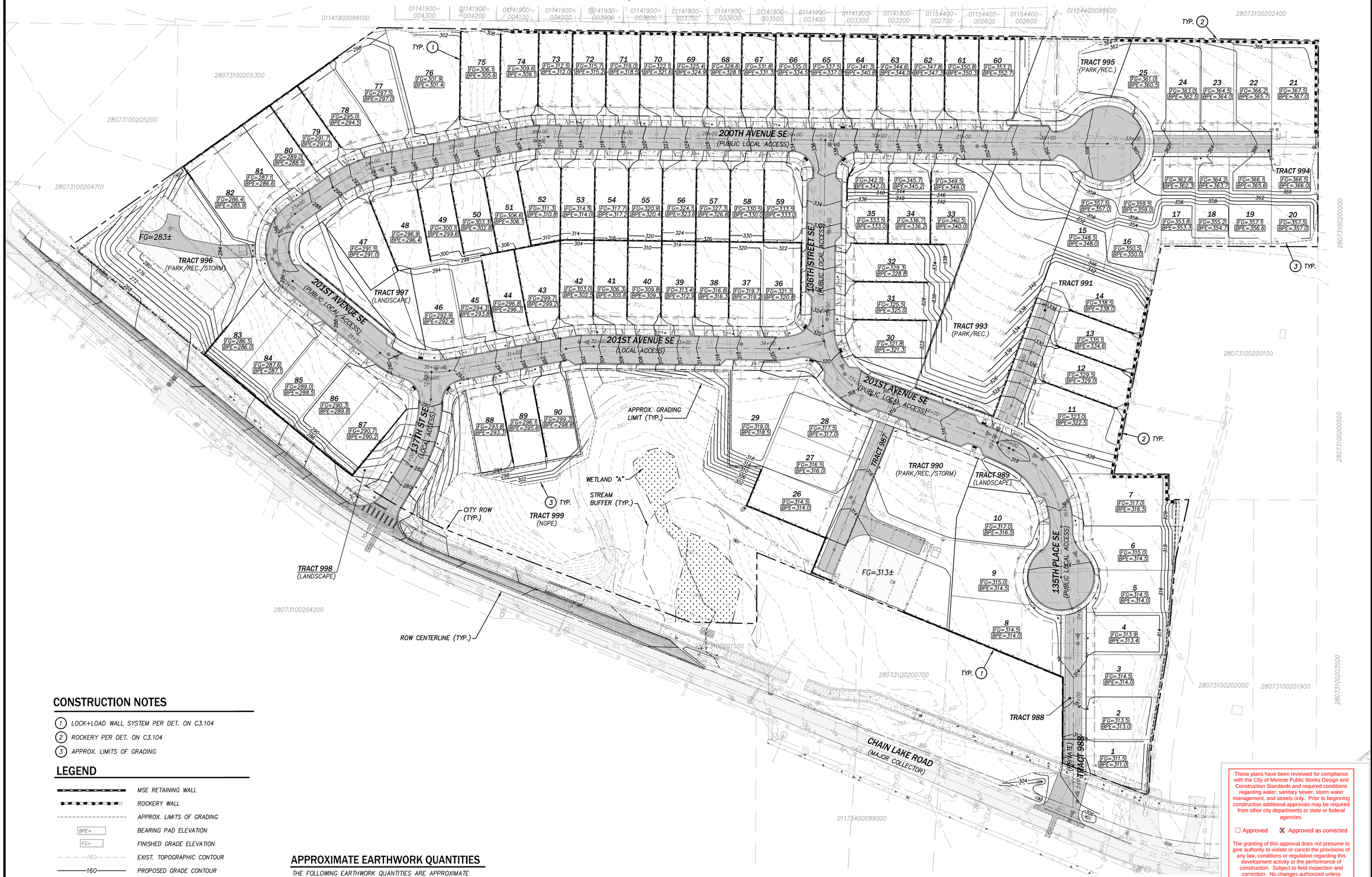
CUSD541828
CUWS541828
TBLOCK
OTRL541828
CNOT541828

PTN. OF NW 1/4 OF SEC 31, TWP 28 N, R7E W.M.



CONSTRUCTION NOTES

1. LOCK+LOAD WALL SYSTEM PER DET. ON C3.104
2. ROCKERY PER DET. ON C3.104
3. APPROX. LIMITS OF GRADING

LEGEND

- MSE RETAINING WALL
- ROCKERY WALL
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- FG= FINISHED GRADE ELEVATION
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- 160 PROPOSED GRADE CONTOUR
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- SD STORM DRAINAGE PIPE
- STORM DRAINAGE DETENTION VAULT
- TOP 246 / TOE 242 (4) FINISHED GRADE AT TOP/TOE OF WALL

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APPROXIMATE EARTHWORK QUANTITIES

THE FOLLOWING EARTHWORK QUANTITIES ARE APPROXIMATE BASED ON FINISHED DESIGN GRADES AND ARE PROVIDED TO ILLUSTRATE THE GENERAL EARTHWORK EFFORTS FOR THE PROJECT INCLUDING VOLUMES FOR PAVEMENT SECTIONS AND STORM VAULTS:

12" STRIP:	27,024 CY
CUT:	39,385 CY
FILL:	36,228 CY
NET (CUT):	3,157 CY

NOTE: ALL RETAINING WALLS WITH TOTAL HEIGHT GREATER THAN 4 FEET AS MEASURED FROM BOTTOM OF LOWEST BLOCK FOR MSE WALLS OR ~~TOP~~ BOTTOM OF FOOTING FOR CAST-IN-LACE CONCRETE REQUIRE SEPARATE BUILIDNG PERMIT ISSUED BY THE CITY OF MONROE BUILDING DIVISION.

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0 50 100
PLAN IN FEET

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1	5/4/22	CITY PERMIT SUBMITTAL	PCE	MJH

MATTHEW JOSEPH HOUSER — STATE OF WASHINGTON — 22400 — REGISTERED PROFESSIONAL ENGINEER — 5/5/2022

GARIBALDI PRD

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OVERALL SITE GRADING PLAN

SNOHOMISH COUNTY, WA
CITY OF MONROE

CLIENT

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1010 MARKET STREET
KIRKALND, WA 98033
PHONE: (425)876-9390

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CITY OF MONROE ENGINEERING

By _____ Date 05/12/2022

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Landscape Architecture • Land Use Consulting
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SHEET 10 OF 85

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TBLOCK
OTOP541828
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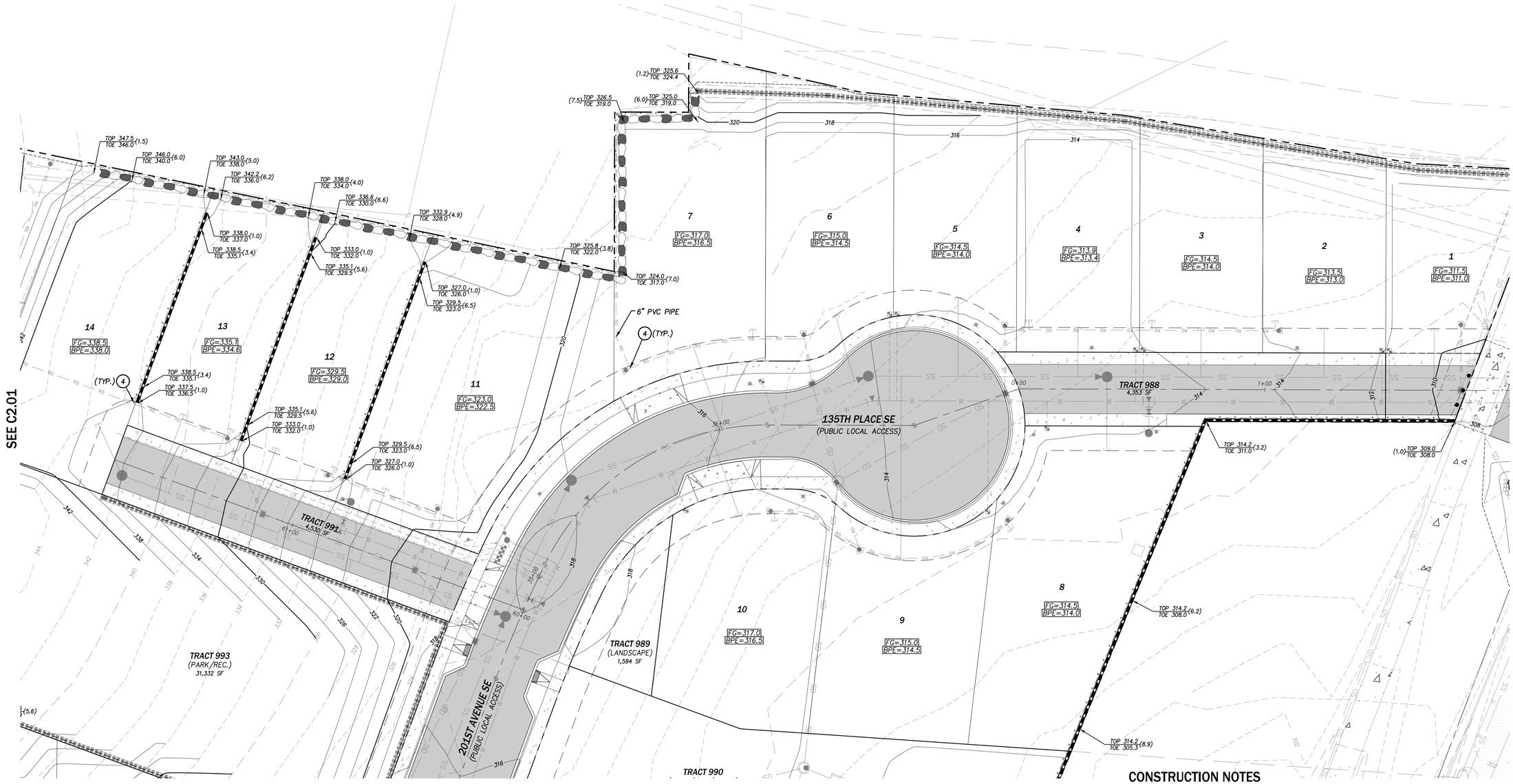
CUSD541828
CUWS541828
CNOT541828
KEYMAP

PTN. OF NW 1/4 OF SEC 31, TWP 28 N, R7E W.M.



CONSTRUCTION NOTES

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2. WALL DRAIN DAYLIGHT OUTFALL TO PIPE OUTLET PROTECTION PER DET. ON SHT. C3.101
3. CONN. WALL DRAIN TO GRAVEL INTERCEPTOR TRENCH
4. CONN. WALL DRAIN TO ROOF DRAIN LINE

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PERMIT'S
22-ROCK-0001
22-RTWL-0001

CITY OF MONROE
DEPARTMENT OF BUILDING SAFETY

DATE 06/09/2022 BY

NO CHANGES AUTHORIZED UNLESS APPROVED BY THE BUILDING OFFICIAL

REVIEWED FOR CODE COMPLIANCE

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KEYMAP

0 20 40
PLAN IN FEET

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MATTHEW J. HOPKINS — STATE OF WASHINGTON — 21800 — REGISTERED PROFESSIONAL ENGINEER — 5/5/2022

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WALL PLAN

CITY OF MONROE — SNOHOMISH COUNTY, WA

CLIENT

Garibaldi Lake, LLC
1010 MARKET STREET
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0054-18-028

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C2.01

SHEET 11 OF 85

TBLOCK
OTOP541828
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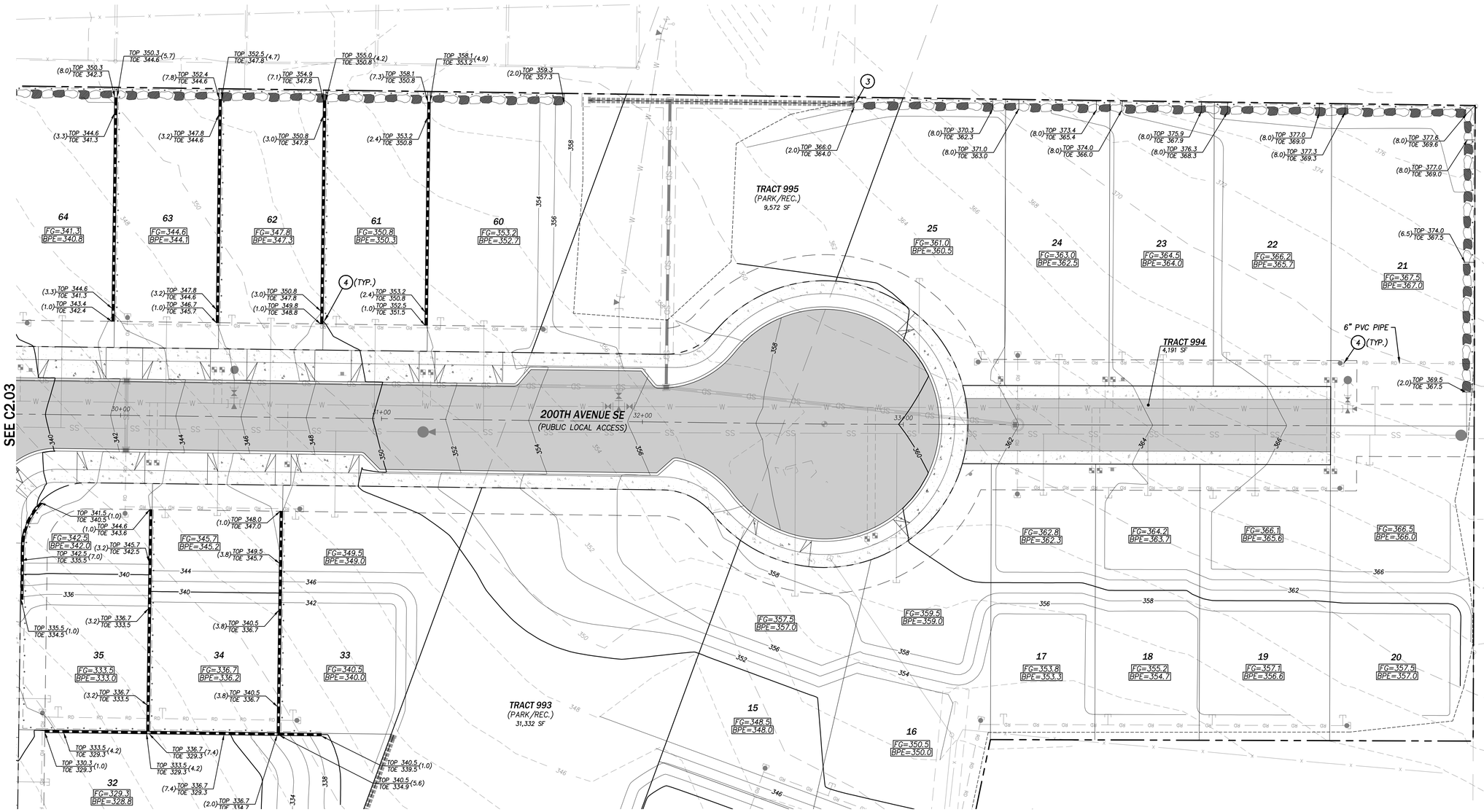
CSIT541828
CUSD541828
CUWS541828
CNOT541828
KEYMAP

PTN. OF NW 1/4 OF SEC 31, TWP 28 N, R7E W.M.



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CONSTRUCTION NOTES

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PERMIT'S
22-ROCK-0001
22-RTWL-0001

CITY OF MONROE
DEPARTMENT OF BUILDING SAFETY

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KEYMAP

N
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PLAN IN FEET

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MATTHEW J. HOPKINS — STATE OF WASHINGTON — 22818 — REGISTERED PROFESSIONAL ENGINEER
5/5/2022

GARIBALDI PRD

ENGINEERING PERMIT PACKAGE

WALL PLAN

CITY OF MONROE — SNOHOMISH COUNTY, WA

CLIENT
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PROJECT NO.
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SHEET 12 OF 85

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KEYMAP

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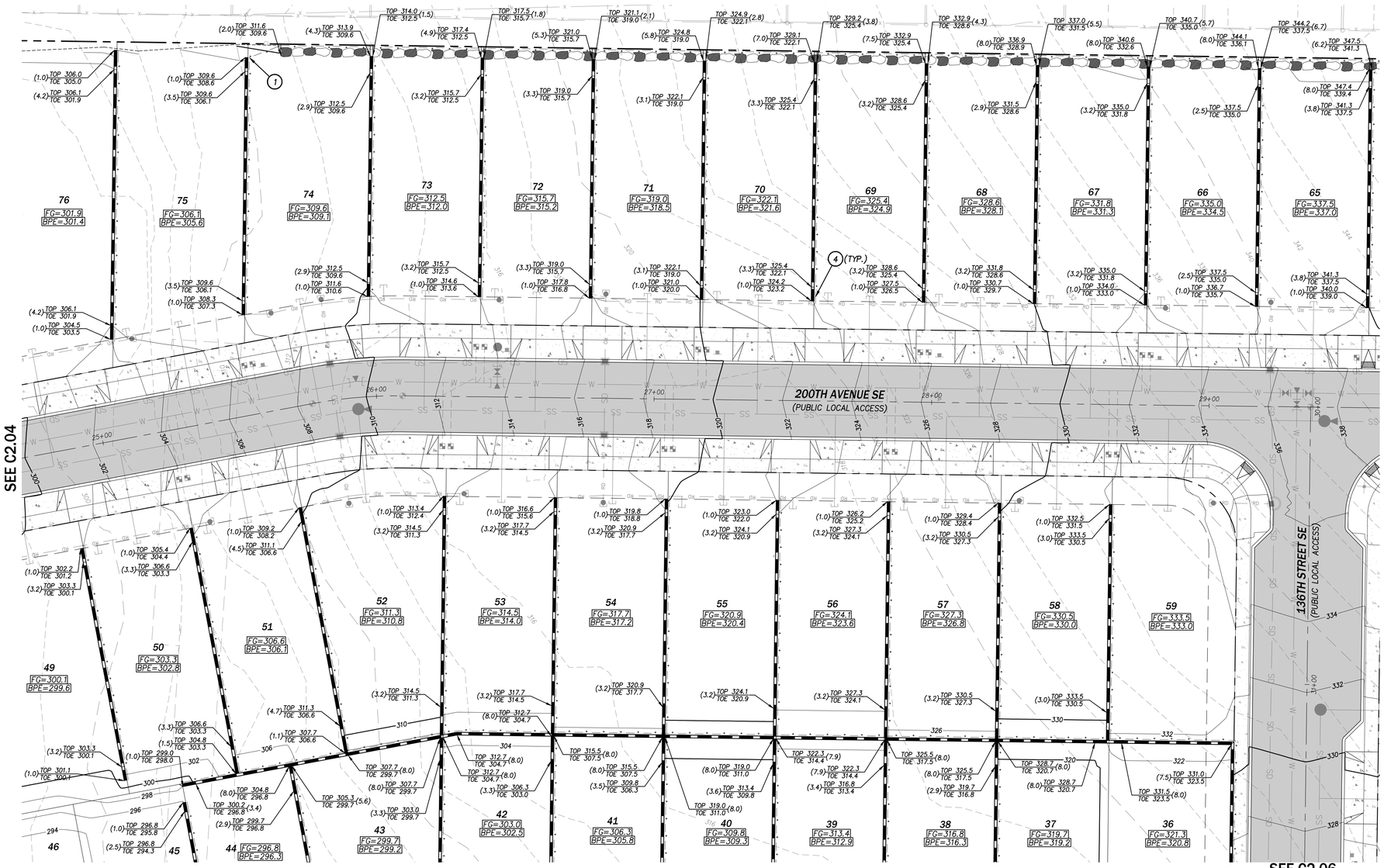

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PERMIT'S
22-ROCK-0001
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CITY OF MONROE
DEPARTMENT OF BUILDING SAFETY

DATE 06/09/2022 BY

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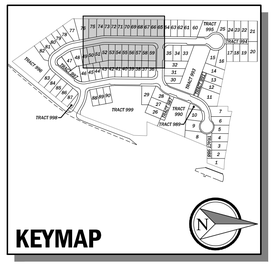

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MATTHEW J. HOPKINS — STATE OF WASHINGTON — 22810 — REGISTERED PROFESSIONAL ENGINEER
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CITY OF MONROE — SNOHOMISH COUNTY, WA

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PROJECT NO.
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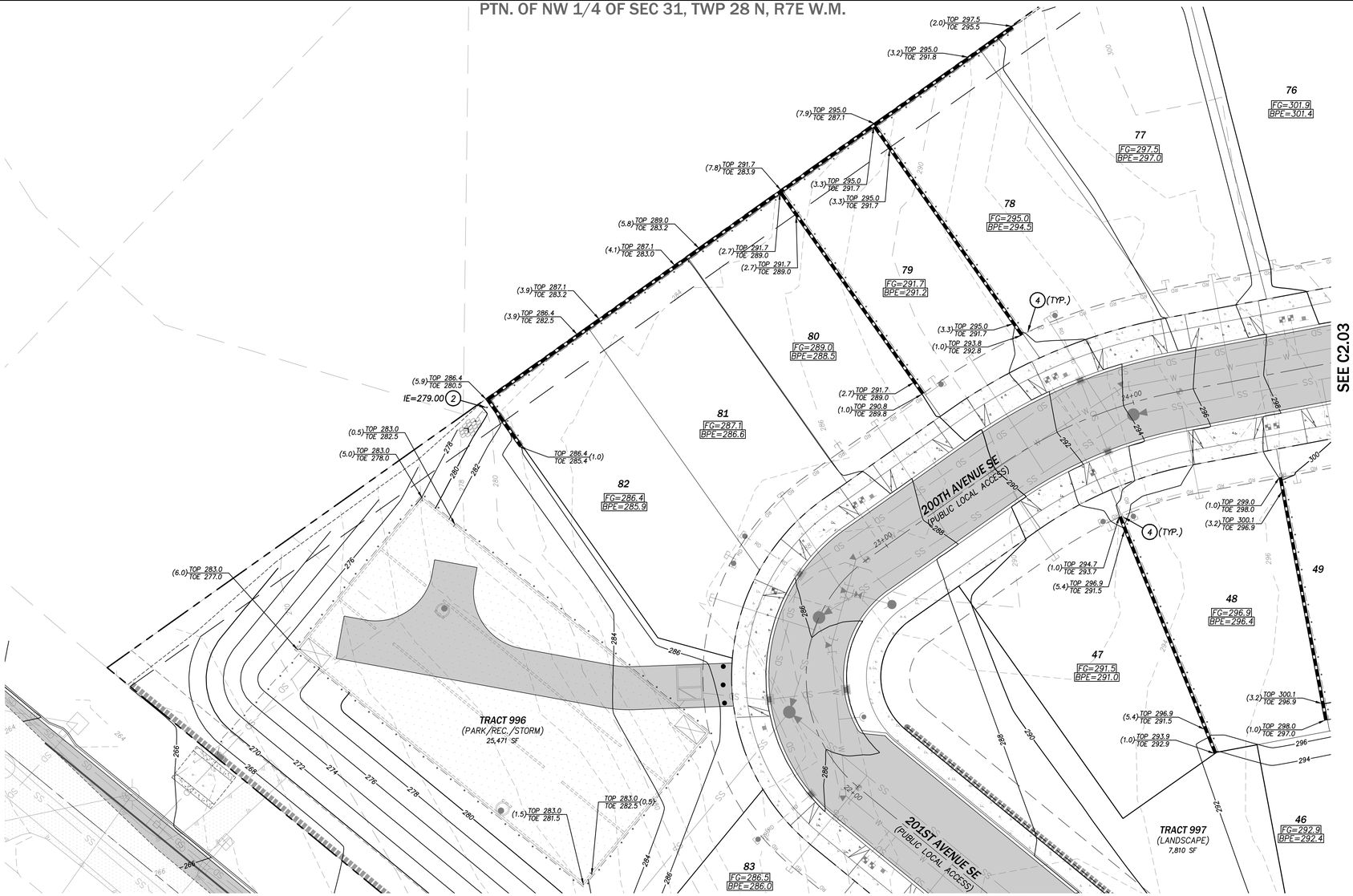

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22-RTWL-0001

CITY OF MONROE
DEPARTMENT OF BUILDING SAFETY

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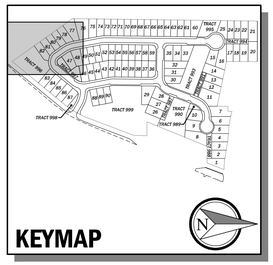
KEYMAP

0 20 40
PLAN IN FEET

NOTE: ALL 4" MSE WALL DRAINS TO BE TIGHT LINED DIRECTLY INTO THE ROOF DRAIN LINE AT THE PROPERTY LINE THAT DISCHARGES TO THE PRIVATE STORM DRAIN SYSTEM UNLESS CALLED OUT OTHERWISE

NOTE: THE RETAINING WALLS SHOWN ON THIS PLAN WILL BE INSTALLED AT THE TIME OF SITE DEVELOPMENT AND OVERALL EARTHWORK AND STORM DRAINAGE EFFORTS FOR THE PROJECT.

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CITY OF MONROE ENGINEERING

By _____ Date 05/12/2022

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NO.	DATE	REVISION	BY	CK.
1	5/4/22	CITY PERMIT SUBMITTAL	PCE	MJH

MATTHEW J. HOUGH
STATE OF WASHINGTON
REGISTERED PROFESSIONAL ENGINEER
5/5/2022

GARIBALDI PRD

ENGINEERING PERMIT PACKAGE

WALL PLAN

CITY OF MONROE

SNOHOMISH COUNTY, WA

CLIENT

Garibaldi Lake, LLC
1010 MARKET STREET
KIRKALND, WA 98033
PHONE: (425)876-9390

C|P|H CONSULTANTS
Site Planning • Civil Engineering
Landscape Architecture • Land Use Consulting
11321-B NE 120th Street
Kirkland, WA 98034 • (425) 285-2390
101 South Wenatchee Avenue, Suite C3
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PROJECT NO. 0054-18-028

DRAWING C2.04

SHEET 14 OF 85

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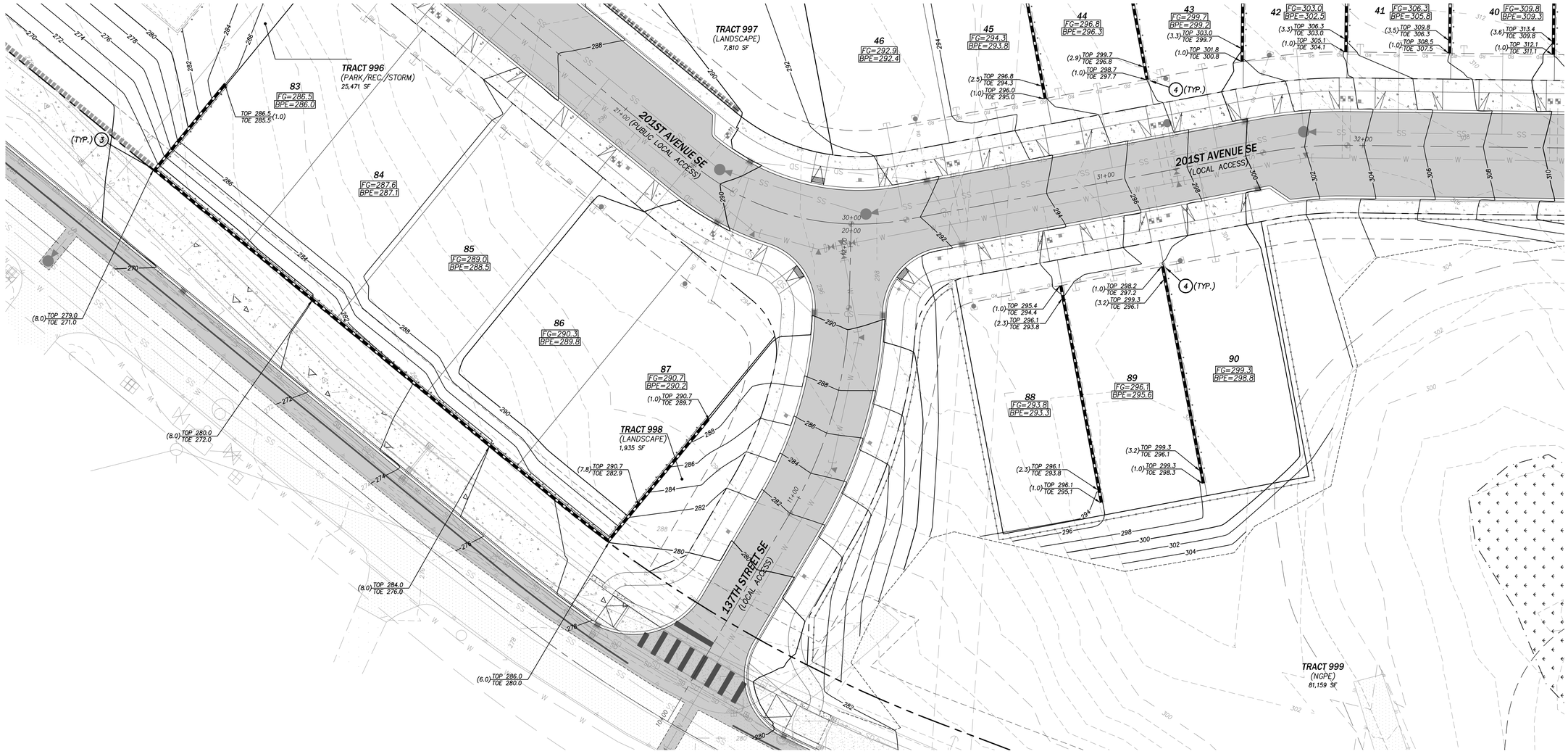
OTOP541828
CGRD541828
CNOT541828
CSIT541828
CUSD541828
CUWS541828
TBLOCK
KEYMAP
OTRL541828

PTN. OF NW 1/4 OF SEC 31, TWP 28 N, R7E W.M.

SEE C2.04

SEE C2.03

SEE C2.06



CONSTRUCTION NOTES

1. CONN. WALL DRAIN TO LOT DRAIN SYSTEM
2. WALL DRAIN DAYLIGHT OUTFALL TO PIPE OUTLET PROTECTION PER DET. ON SHT. C3.101
3. CONN. WALL DRAIN TO GRAVEL INTERCEPTOR TRENCH
4. CONN. WALL DRAIN TO ROOF DRAIN LINE

LEGEND

- MSE RETAINING WALL
- ROCKERY WALL
- WALL DRAIN
- APPROX. LIMITS OF GRADING
- FG=500.0 BPE=500.00 — BEARING PAD ELEVATION
- 160 — EXIST. TOPOGRAPHIC CONTOUR
- 160 — PROPOSED GRADE CONTOUR
- TYPE 1 STORM DRAINAGE CATCH BASIN
- TYPE 2 STORM DRAINAGE CATCH BASIN
- SD — STORM DRAINAGE PIPE
- RD — RD — ROOF DRAIN
- STORM DRAINAGE DETENTION VAULT
- TOP 246 TOE 242 (4) — FINISHED GRADE AT TOP/TOE OF WALL

PERMIT'S
22-ROCK-0001
22-RTWL-0001

CITY OF MONROE
DEPARTMENT OF BUILDING SAFETY

DATE 06/09/2022 BY

NO CHANGES AUTHORIZED UNLESS APPROVED BY THE BUILDING OFFICIAL

REVIEWED FOR CODE COMPLIANCE

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KEYMAP

0 20 40
PLAN IN FEET

NOTE: ALL 4" MSE WALL DRAINS TO BE TIGHT LINED DIRECTLY INTO THE ROOF DRAIN LINE AT THE PROPERTY LINE THAT DISCHARGES TO THE PRIVATE STORM DRAIN SYSTEM UNLESS CALLED OUT OTHERWISE

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By _____ Date 05/12/2022

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MATTHEW J. HOUSER — STATE OF WASHINGTON — 22400 — REGISTERED PROFESSIONAL ENGINEER
5/5/2022

GARIBALDI PRD

ENGINEERING PERMIT PACKAGE

WALL PLAN

CITY OF MONROE — SNOHOMISH COUNTY, WA

CLIENT

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1010 MARKET STREET
KIRKALND, WA 98033
PHONE: (425)876-9390

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PROJECT NO.
0054-18-028

DRAWING
C2.05

SHEET 15 OF 85

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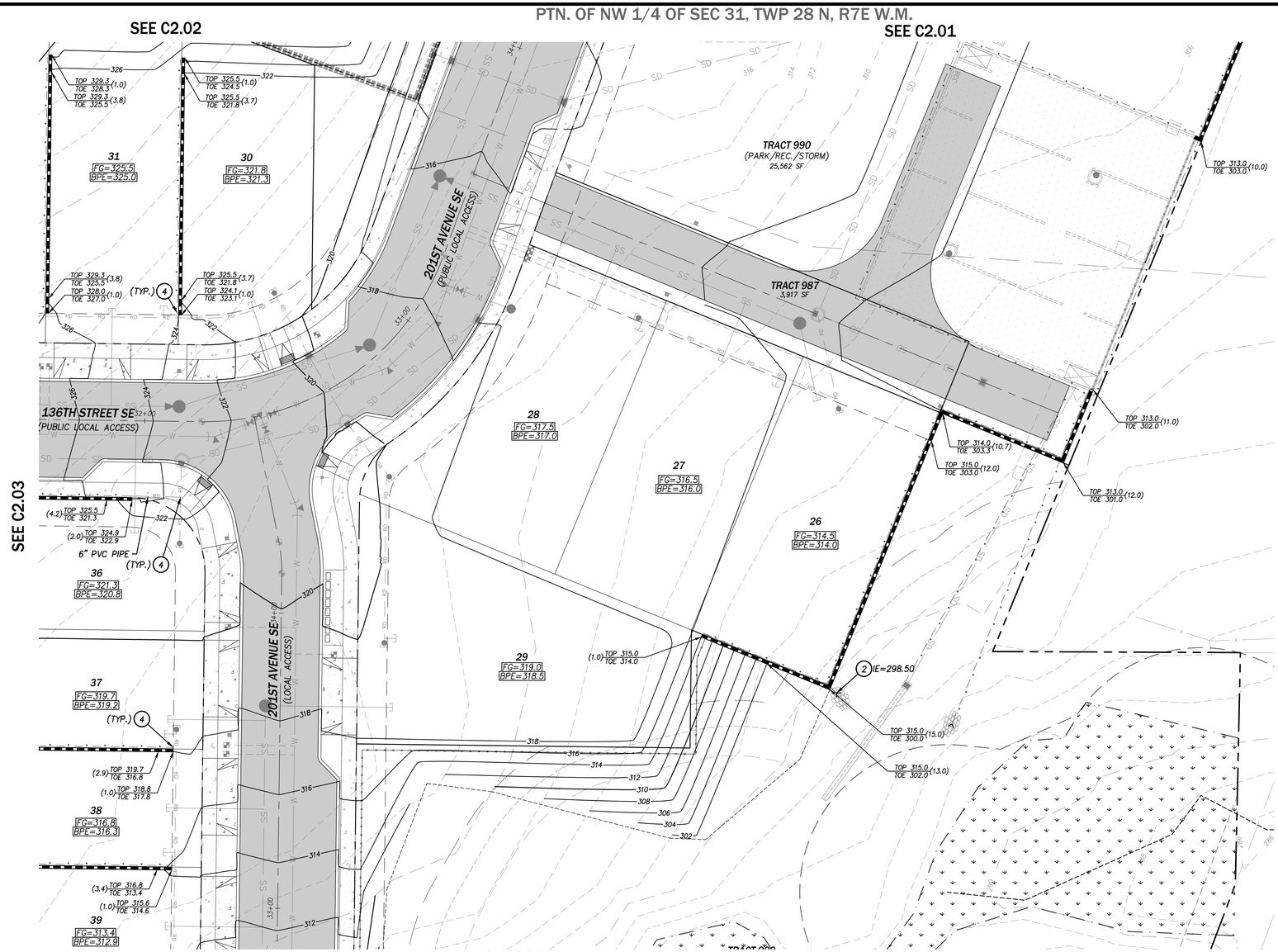
OTOP541828
CGRD541828
CNOT541828
CSIT541828
CUSD541828
CUWS541828
TBLOCK
KEYMAP

PTN. OF NW 1/4 OF SEC 31, TWP 28 N, R7E W.M.



CONSTRUCTION NOTES

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2. WALL DRAIN DAYLIGHT OUTFALL TO PIPE OUTLET PROTECTION PER DET. ON SHT. C3.101
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22-RTWL-0001

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DEPARTMENT OF BUILDING SAFETY
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KEYMAP

N
0 20 40
PLAN IN FEET

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STATE OF WASHINGTON MATTHEW J. HOUSER 18028 REGISTERED PROFESSIONAL ENGINEER 5/5/2022

GARIBALDI PRD

ENGINEERING PERMIT PACKAGE

WALL PLAN

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DRAWING
C2.06

SHEET 16 OF 85

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CGRD541828
CSIT541828
CUSD541828
CUWS541828
TBLOCK
CBSN541828
OTRL541828

PTN. OF NW 1/4 OF SEC 31, TWP 28 N, R7E W.M.

200TH AVENUE SE (PUBLIC LOCAL ACCESS)
201ST AVENUE SE (PUBLIC LOCAL ACCESS)
201ST AVENUE SE (LOCAL ACCESS)
201ST AVENUE SE (PUBLIC LOCAL ACCESS)
136TH STREET SE (PUBLIC LOCAL ACCESS)
135TH PLACE SE (PUBLIC LOCAL ACCESS)
137TH ST SE (LOCAL ACCESS)
CHAIN LAKE ROAD (MAJOR COLLECTOR)

TRACT 994
TRACT 995 (PARK/REC.) 5' PRIVATE SD ESMT.
TRACT 996 (PARK/REC./STORM)
TRACT 997 (LANDSCAPE)
TRACT 998 (LANDSCAPE)
TRACT 999 (NGPE)
TRACT 993 (PARK/REC.)
TRACT 991
TRACT 989 (LANDSCAPE)
TRACT 990 (PARK/REC./STORM)
TRACT 988

CONN. WALL DRAIN TO GRAVEL TRENCH
CONN. WALL DRAIN TO GRAVEL TRENCH
WATER QUALITY VAULT
STORM DETENTION VAULT SEE DETAILS ON SHT C3.20
GRAVEL INTERCEPTOR TRENCH
GRAVEL TRENCH
GRAVEL TRENCH
TYP. GRAVEL DISPERSION TRENCH SEE SHT. C3.21
EXIST. WETLAND (TYP.)
TRENCH TO COLLECT OFFSITE RUNOFF AND DIRECT TO STREET
5' PRIVATE SD ESMT.
STORM DETENTION VAULT SEE DETAILS ON SHT C3.21
WATER QUALITY VAULT

CB1 TYPE 1
EXIST. CB-5807 TYPE 1
CB5 TYPE 1
CB10 TYPE 1
CB15 TYPE 2–48"
CB100 TYPE 1–L
CB105 TYPE 1–L
CB110 TYPE 1
CB115 TYPE 1
CB120 TYPE 1
CB125 TYPE 1
CB200 TYPE 1
CB205 TYPE 1
CB206 TYPE 1
CB207 TYPE 1
CB210, TYPE 1 STA 20+47.50 13.25' RT
CB215, TYPE 1 STA 30+31.92 13.25' LT
CB216 TYPE 1
CB220, TYPE 1 STA 31+56.77, 13.25' LT
CB225 TYPE 1
CB300 TYPE 1–L THRU CURB
CB301 TYPE 1 THRU CURB
CB302 TYPE 1
CB303 TYPE 1
CB304 TYPE 1
CB305 TYPE 1–L
CB310 TYPE 2–48"
CB311 TYPE 1
CB315 TYPE 2–48"
CB320 TYPE 2–48"
CB325 TYPE 1
CB330 TYPE 1
CB331 TYPE 1
CB335 TYPE 1
CB340 TYPE 2–48"
CB400 TYPE 2–48"
CB401 TYPE 2–48"
CB402 TYPE 1
CB405 TYPE 2–48"
CB406 TYPE 1
CB410 TYPE 1
CB500, TYPE 1 STA 72+01.27, 104.84' RT RIM=297.25 IE(12"NE)=294.00
CB101, TYPE 1 THRU CURB STA 22+37.52 13.54' RT
CB111, TYPE 1 STA 23+85.47 13.25' RT
CB25 TYPE 1
CB30 TYPE 1

119LF 12" SD S=5.80%
45LF 18" SD S=3.87%
22LF 18" SD S=1.80%
47LF 12" SD S=8.41%
32LF 12" SD S=0.71%
36LF 12" SD S=4.82%
27LF 12" SD S=3.13%
50LF 12" SD S=1.79%
26LF 12" SD S=0.53%
28LF 12" SD S=1.15%
26LF 12" SD S=0.53%
202LF 12" SD S=7.88%
26LF 12" SD S=0.60%
99LF 12" SD S=8.73%
26LF 12" SD S=0.60%
27LF 12" SD S=0.57%
28LF 12" SD S=5.24%
69LF 12" SD S=2.84%
125LF 12" SD S=6.34%
27LF 12" SD S=0.53%
80LF 12" SD S=4.73%
26LF 12" SD S=0.75%
207LF 12" SD S=7.09%
110LF 6" SD S=6.05%
135LF 12" SD S=2.69%
48LF 12" SD S=7.09%
178LF 12" SD S=7.59%
57LF 18" SD S=2.98%
26LF 12" SD S=0.78%
40LF 12" SD S=1.16%
79LF 12" SD S=2.26%
66LF 12" SD S=10.29%
38LF 12" SD S=3.20%
56LF 18" SD S=3.72%
79LF 18" SD S=1.20%
134LF 18" SD S=2.64%
60LF 12" SD S=0.60%
115LF 12" SD S=0.98%
117LF 12" SD S=2.57%
117LF 18" SD S=0.98%
12LF 24" SD S=0.52%
77LF 12" SD S=0.60%
41LF 12" SD S=1.95%
41LF 12" SD S=4.82%
93LF 12" SD S=5.40%
58LF 12" SD S=1.72%

28073100205300
28073100205200
28073100204701
28073100204200
28073100201500
28073100200700
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28073100202400
28073100202000
28073100201900
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28073100200350
01141900099100
01154400098900
01173400099000

LEGEND

- MSE WALL, LOCK+LOAD WALL OR EQ. (SEE C2.01 FOR ELEV.)
- WALL DRAIN
- SAWCUT
- 420 PROPOSED 2 FT CONTOUR
- EXISTING CONTOUR
- GRAVEL INTERCEPTOR TRENCH PER DET. ON C3.102
- SD STORM DRAIN PIPE
- SD EXIST. STORM DRAIN PIPE
- RD ROOF DRAIN
- SD CATCH BASIN
- CLEANOUT
- ASPHALT PAVEMENT
- CONCRETE PAVEMENT

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NOTES:
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3. ALL CATCH BASIN STRUCTURES SHALL BE PER COM STD. PLANS 402, 403, AND 404 RESPECTIVELY AND PROVIDED WITH FRAME AND VANED GRATE PER COM STD. DET. 405 AND 406.
4. SEE CITY STD. STORM DRAINAGE NOTES ON SHEET C0.01.
5. ETHAFOAM/RIGID INSULATION SHALL BE INSTALLED BETWEEN PIPES WHERE CLEARANCE IS 12-INCHES OR LESS.

RECEIVED
05/09/2022
CITY OF MONROE

0 50 100
PLAN IN FEET

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MATTHEW J. HOUSER — STATE OF WASHINGTON — 22810 — REGISTERED PROFESSIONAL ENGINEER — 5/5/2022

GARIBALDI PRD
ENGINEERING PERMIT PACKAGE
OVERALL STORM DRAINAGE IMPROVEMENTS
CITY OF MONROE SNOHOMISH COUNTY, WA

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PROJECT NO.
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DRAWING
C3.00

SHEET 17 OF 85

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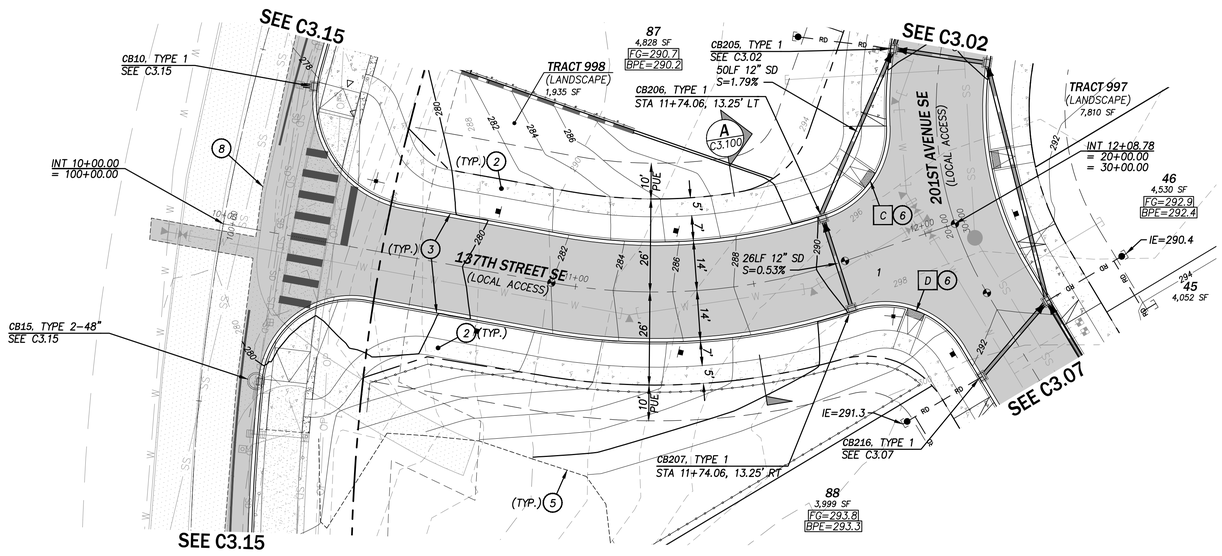
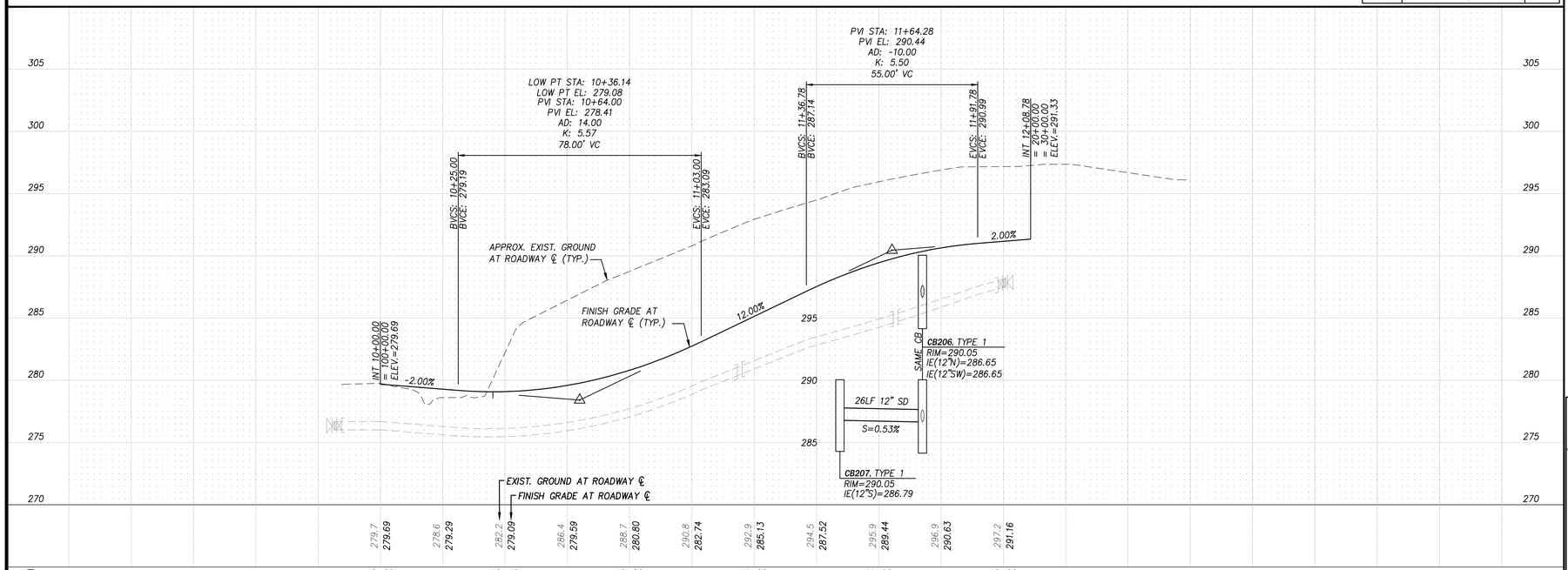


DRIVEWAY TABLE

LOT	STATION, OFFSET	WIDTH
46	STA 30+26.81, 14.00' LT	18'
86,87	STA 20+50.63, 14.00' LT	45'



CONSTRUCTION NOTES

1. CEMENT CONC. DRIVEWAY TYPE 2 PER COM STD. DET. 311, REFER TO DRIVEWAY TABLE THIS SHT. FOR LOCATION AND WIDTH
2. CEMENT CONC. SIDEWALK PER COM STD. DET. 309, WIDTH PER PLAN
3. CEMENT CONC. CURB AND GUTTER PER COM STD. DET. 305
4. 6" PVC (UNO) ROOF COLLECTION PIPE, SEE DET. ON SHT. C3.102, APPROX. LENGTH PER PLAN
5. APPROX. LIMIT OF GRADING
6. COMBINATION CURB RAMP PER WSDOT STD. PLAN F-40.14-03, SEE DET. ON SHT. C3.105 & C3.106
7. MATCH EXIST. IMPROVEMENTS
8. SAWCUT REMOVE AND REPLACE EXIST. AC PVMT.
9. 4" PVC PERFORATED WALL DRAIN
10. WATER QUALITY TREATMENT VAULT PER DET. ON SHT. C3.22
11. NYLOPLAST INLINE DRAIN WITH STANDARD GRATE, O.A.E
12. CEMENT CONC. ROLLED CURB 2 PER WSDOT STD. PLAN F-10.18-02

LEGEND

- BPE= — BEARING PAD ELEVATION
- FG= — FINISHED GRADE ELEVATION
- MSE WALL, LOCK+LOAD WALL OR EQ. (SEE C2.00 FOR ELEV.)
- TOP 246 / TOE 242 (4) — FINISHED GRADE AT TOP/TOE OF WALL
- WALL DRAIN
- SAWCUT
- 420 — PROPOSED 2 FT CONTOUR
- EXISTING CONTOUR
- ×520.9 — SPOT ELEV. (FINISH GRADE)
- INTERCEPTOR TRENCH PER DET. ON C3.101
- STORM DRAIN PIPE
- SD — EXIST. STORM DRAIN PIPE
- RD — BUILDING STORM
- AC PAVEMENT VALLEY, FLOWLINE
- SD CATCH BASIN
- CLEANOUT PER DET. ON SHT. C4.100
- ASPHALT PAVEMENT
- CONCRETE PAVEMENT

NOTES:
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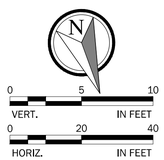

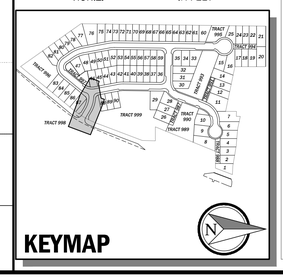

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MATTHEW J. HOPKINS — STATE OF WASHINGTON — 22818 — REGISTERED PROFESSIONAL ENGINEER — 5/5/2022

GARIBALDI PRD

ENGINEERING PERMIT PACKAGE

GRADING AND DRAINAGE PLAN AND PROFILE

CITY OF MONROE — SNOHOMISH COUNTY, WA

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Wenatchee, WA 98801 • (509) 293-7731
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PROJECT NO.
0054-18-028

DRAWING
C3.01

SHEET 18 OF 85

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

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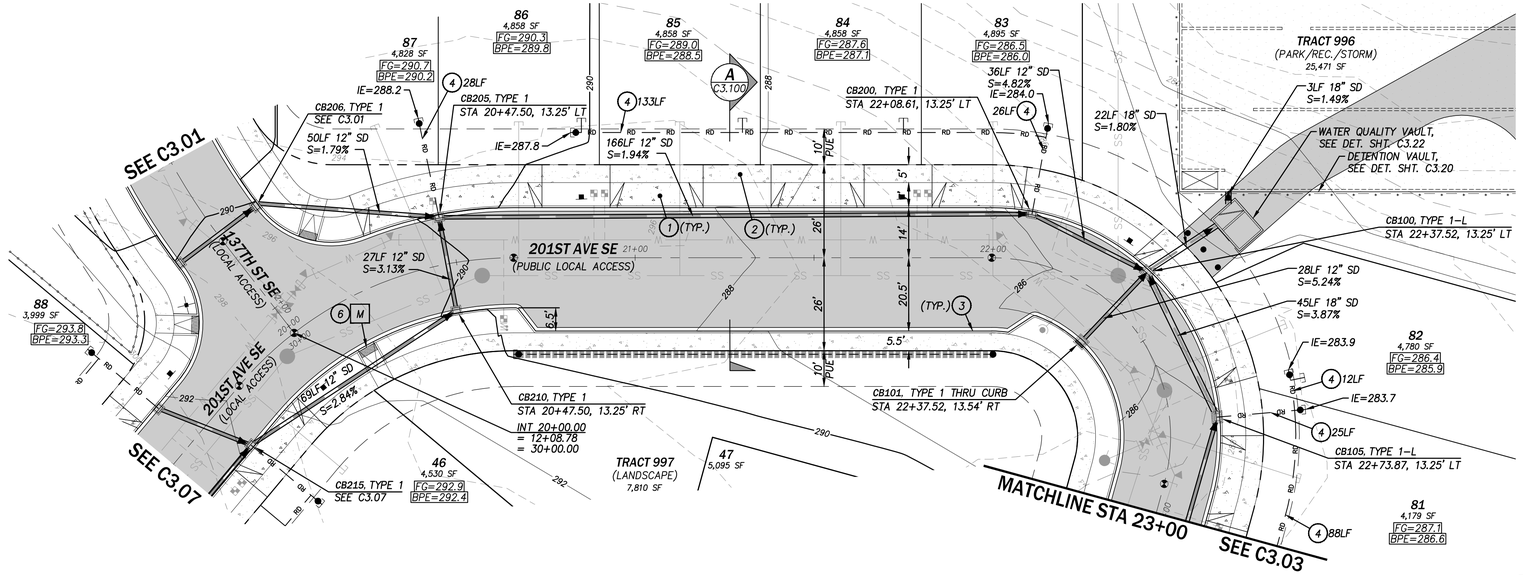
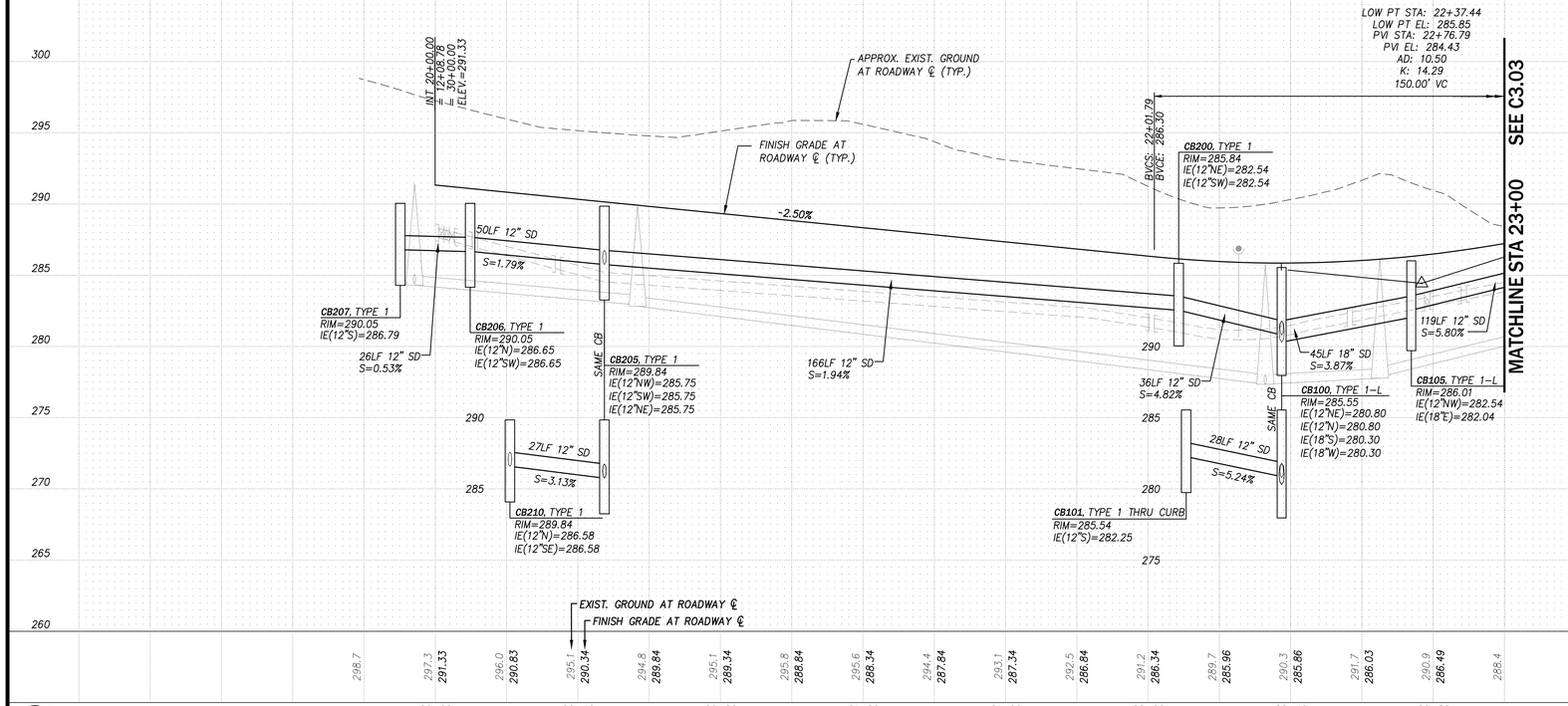
5/5/2022 10:06 AM PETER EVANS

OTOP541828
CGRD541828
CSIT541828
CUSD541828
CUWS541828
TBLOCK
OTRL541828
CNOT541828
KEYMAP

PTN. OF NW 1/4 OF SEC 31, TWP 28 N, R7E W.M.



DRIVEWAY TABLE		
LOT	STATION, OFFSET	WIDTH
46	STA 30+26.81, 14.00' LT	18'
81	STA 22+87.17, 14.00' LT	18'
82	STA 22+50.20, 14.00' LT	39'
83	STA 21+95.98, 14.00' LT	18'
84	STA 21+50.98, 14.00' LT	18'
85	STA 21+05.98, 14.00' LT	18'
86,87	STA 20+50.63, 14.00' LT	45'
88	STA 30+59.69, 14.00' RT	18'



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

CONSTRUCTION NOTES

1. CEMENT CONC. DRIVEWAY TYPE 2 PER COM STD. DET. 311, REFER TO DRIVEWAY TABLE THIS SHT. FOR LOCATION AND WIDTH
2. CEMENT CONC. SIDEWALK PER COM STD. DET. 309, WIDTH PER PLAN
3. CEMENT CONC. CURB AND GUTTER PER COM STD. DET. 305
4. 6" PVC (UNO) ROOF COLLECTION PIPE, SEE DET. ON SHT. C3.102, APPROX. LENGTH PER PLAN
5. APPROX. LIMIT OF GRADING
6. COMBINATION CURB RAMP PER WSDOT STD. PLAN F-40.14-03, SEE DET. ON SHT. C3.105 & C3.106
7. MATCH EXIST. IMPROVEMENTS
8. SAWCUT REMOVE AND REPLACE EXIST. AC PVMT.
9. 4" PVC PERFORATED WALL DRAIN
10. WATER QUALITY TREATMENT VAULT PER DET. ON SHT. C3.22
11. NYLOPLAST INLINE DRAIN WITH STANDARD GRATE, O.A.E
12. CEMENT CONC. ROLLED CURB 2 PER WSDOT STD. PLAN F-10.18-02

LEGEND

- BPE= — BEARING PAD ELEVATION
- FG= — FINISHED GRADE ELEVATION
- MSE WALL, LOCK+LOAD WALL OR EQ. (SEE C2.00 FOR ELEV.)
- TOP 246 / TOE 242 (4) — FINISHED GRADE AT TOP/TOE OF WALL
- WALL DRAIN
- SAWCUT
- 420 — PROPOSED 2 FT CONTOUR
- EXISTING CONTOUR
- ×520.9 — SPOT ELEV. (FINISH GRADE)
- INTERCEPTOR TRENCH PER DET. ON C3.101
- STORM DRAIN PIPE
- SD — EXIST. STORM DRAIN PIPE
- RD — BUILDING STORM
- AC PAVEMENT VALLEY, FLOWLINE
- SD CATCH BASIN
- CLEANOUT PER DET. ON SHT. C4.100
- ASPHALT PAVEMENT
- CONCRETE PAVEMENT

NOTES:
1. ALL DRAIN PIPES (SD) SHALL BE 12" LCPE (ADS N-12) UNLESS NOTED OTHERWISE ON PLANS OR PROJECT DETAILS.
2. ALL CATCH BASIN LOCATIONS REFERENCED TO CENTER OF STRUCTURE. GRATE PLACEMENT SHALL BE PER STRUCTURE PLACEMENT DETAIL ON SHEET C3.101.
3. ALL CATCH BASIN STRUCTURES SHALL BE PER COM STD. PLANS 402, 403, AND 404 RESPECTIVELY AND PROVIDED WITH FRAME AND VANED GRATE PER COM STD. DET. 405 AND 406.
4. SEE CITY STD. STORM DRAINAGE NOTES ON SHEET C0.01.
5. ETHAFOAM/RIGID INSULATION SHALL BE INSTALLED BETWEEN PIPES WHERE CLEARANCE IS 3-INCHES OR LESS.
6. ALL 4" MSE WALL DRAINS TO BE TIGHT LINED DIRECTLY INTO THE ROOF DRAIN LINE AT THE PROPERTY LINE THAT DISCHARGES TO THE PRIVATE STORM DRAIN SYSTEM UNLESS CALLED OUT OTHERWISE. SEE WALL PLANS FOR CONNECTION POINT CALLOUTS.

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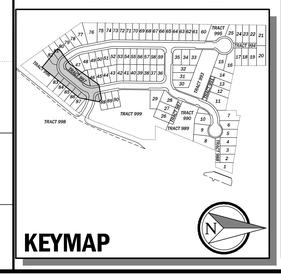

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CITY OF MONROE ENGINEERING

By _____ Date 05/12/2022

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NO.	DATE	REVISION	BY	CK.
1	5/4/22	CITY PERMIT SUBMITTAL	PCE	MJH

MATTHEW J. HOPKINS — STATE OF WASHINGTON — 22400 — REGISTERED PROFESSIONAL ENGINEER — 5/5/2022

GARIBALDI PRD

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GRADING AND DRAINAGE PLAN AND PROFILE

CITY OF MONROE — SNOHOMISH COUNTY, WA

CLIENT

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1010 MARKET STREET
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PROJECT NO.
0054-18-028

DRAWING
C3.02

SHEET 19 OF 85

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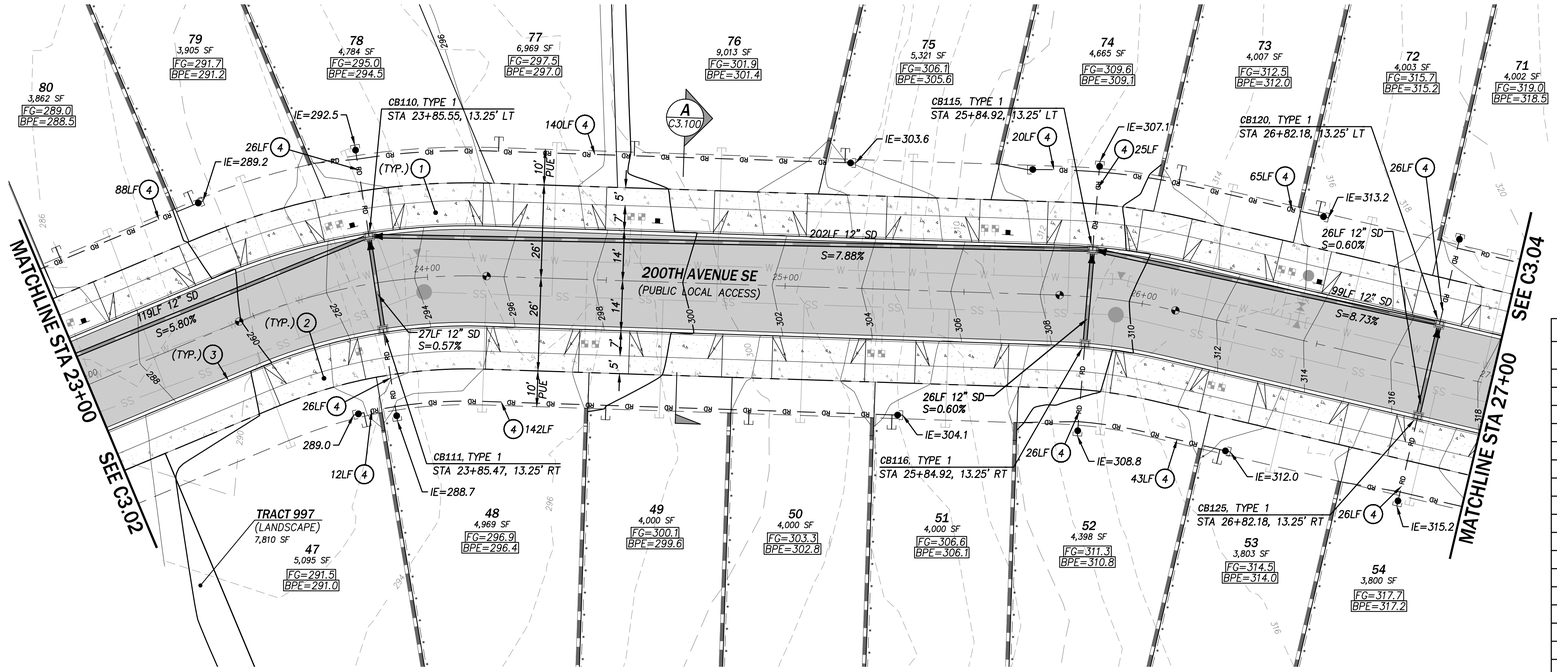
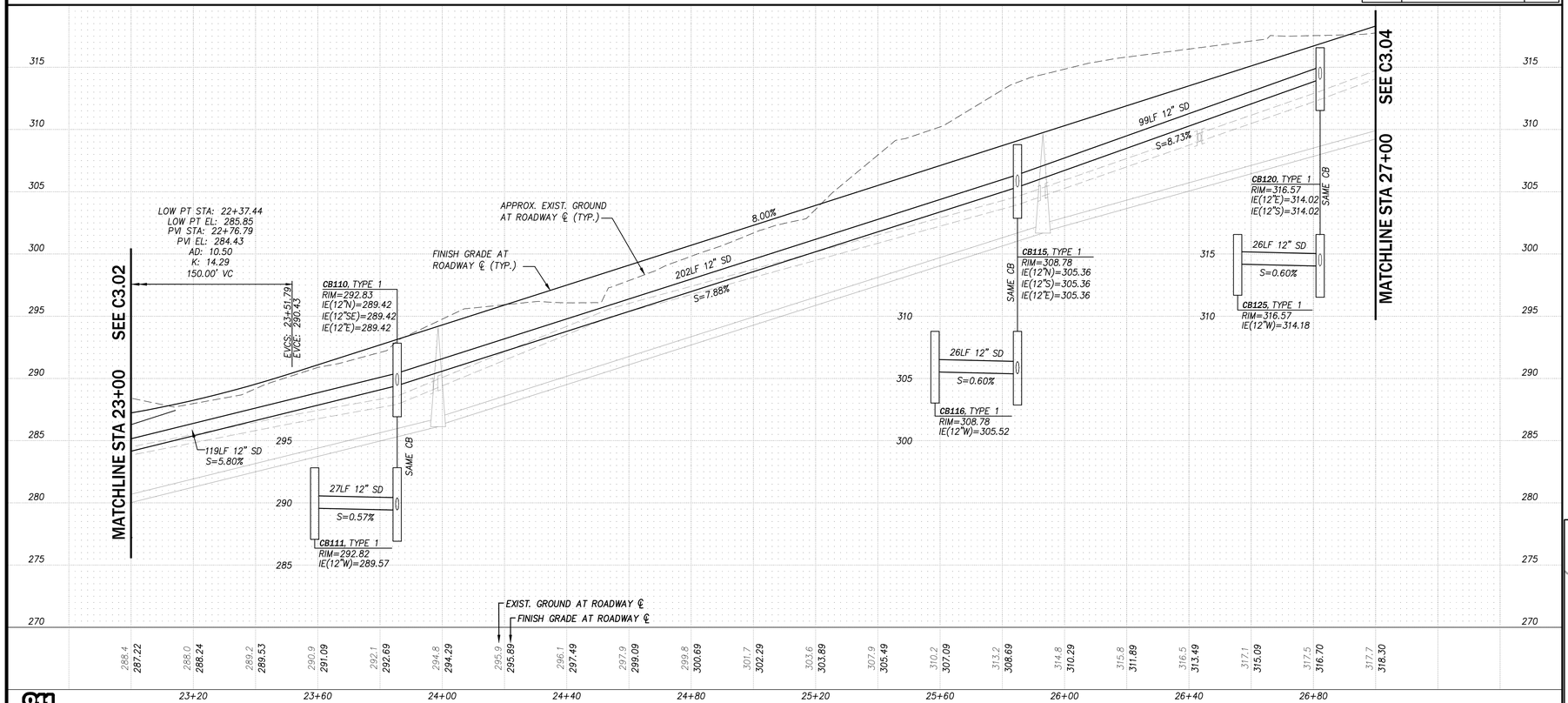


DRIVEWAY TABLE		
LOT	STATION, OFFSET	WIDTH
47	STA 23+62.44, 14.00' RT	18'
48	STA 24+30.04, 14.00' RT	18'
49	STA 24+70.04, 14.00' RT	18'
50	STA 25+10.04, 14.00' RT	18'
51	STA 25+50.04, 14.00' RT	18'
52	STA 26+09.42, 14.00' RT	18'
53	STA 26+49.47, 14.00' RT	18'
54	STA 26+89.47, 14.00' RT	18'
71	STA 27+01.18, 14.00' LT	18'
72	STA 26+61.18, 14.00' LT	18'
73	STA 26+21.22, 14.00' LT	18'
74	STA 25+84.64, 14.03' LT	18'
75	STA 25+40.69, 14.00' LT	18'
76	STA 24+92.45, 14.00' LT	18'
77	STA 24+36.29, 14.00' LT	18'
78	STA 24+03.49, 14.00' LT	18'
79	STA 23+62.81, 14.00' LT	18'
80	STA 23+25.34, 14.00' LT	18'



CONSTRUCTION NOTES

1. CEMENT CONC. DRIVEWAY TYPE 2 PER COM STD. DET. 311, REFER TO DRIVEWAY TABLE THIS SHT. FOR LOCATION AND WIDTH
2. CEMENT CONC. SIDEWALK PER COM STD. DET. 309, WIDTH PER PLAN
3. CEMENT CONC. CURB AND GUTTER PER COM STD. DET. 305
4. 6" PVC (UNO) ROOF COLLECTION PIPE, SEE DET. ON SHT. C3.102, APPROX. LENGTH PER PLAN
5. APPROX. LIMIT OF GRADING
6. COMBINATION CURB RAMP PER WSDOT STD. PLAN F-40.14-03, SEE DET. ON SHT. C3.105 & C3.106
7. MATCH EXIST. IMPROVEMENTS
8. SAWCUT REMOVE AND REPLACE EXIST. AC PVMT.
9. 4" PVC PERFORATED WALL DRAIN
10. WATER QUALITY TREATMENT VAULT PER DET. ON SHT. C3.22
11. NYLOPLAST INLINE DRAIN WITH STANDARD GRATE, O.A.E
12. CEMENT CONC. ROLLED CURB 2 PER WSDOT STD. PLAN F-10.18-02

LEGEND

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- TOP 246 / TOE 242 (4) — FINISHED GRADE AT TOP/TOE OF WALL
- WALL DRAIN
- SAWCUT
- 420 — PROPOSED 2 FT CONTOUR
- EXISTING CONTOUR
- ×520.9 — SPOT ELEV. (FINISH GRADE)
- INTERCEPTOR TRENCH PER DET. ON C3.101
- STORM DRAIN PIPE
- SD — EXIST. STORM DRAIN PIPE
- RD — BUILDING STORM
- AC PAVEMENT VALLEY, FLOWLINE
- SD CATCH BASIN
- CLEANOUT PER DET. ON SHT. C4.100
- ASPHALT PAVEMENT
- CONCRETE PAVEMENT

NOTES:
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4. SEE CITY STD. STORM DRAINAGE NOTES ON SHEET C0.01.
5. ETHAFOAM/RIGID INSULATION SHALL BE INSTALLED BETWEEN PIPES WHERE CLEARANCE IS 3-INCHES OR LESS.
6. ALL 4" MSE WALL DRAINS TO BE TIGHT LINED DIRECTLY INTO THE ROOF DRAIN LINE AT THE PROPERTY LINE THAT DISCHARGES TO THE PRIVATE STORM DRAIN SYSTEM UNLESS CALLED OUT OTHERWISE. SEE WALL PLANS FOR CONNECTION POINT CALLOUTS.

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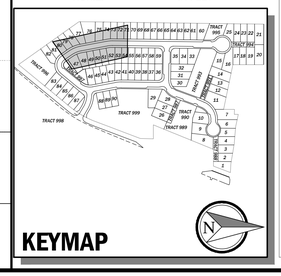

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CITY OF MONROE ENGINEERING

By _____ Date 05/12/2022

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NO.	DATE	REVISION	BY
1	5/4/22	CITY PERMIT SUBMITTAL	PCE

CK. MJH

REGISTERED PROFESSIONAL ENGINEER
MATTHEW J. HOUSER
STATE OF WASHINGTON
5/5/2022

GARIBALDI PRD

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PROJECT NO.
0054-18-028

DRAWING
C3.03

SHEET 20 OF 85

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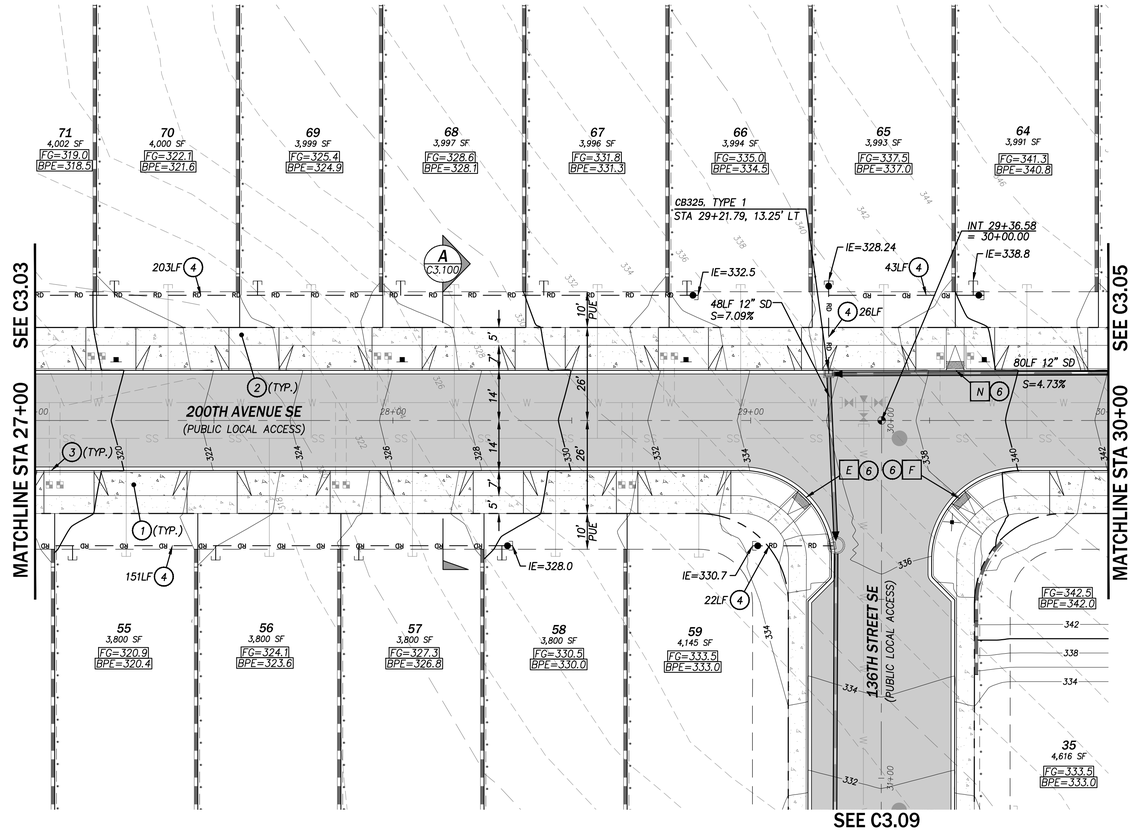
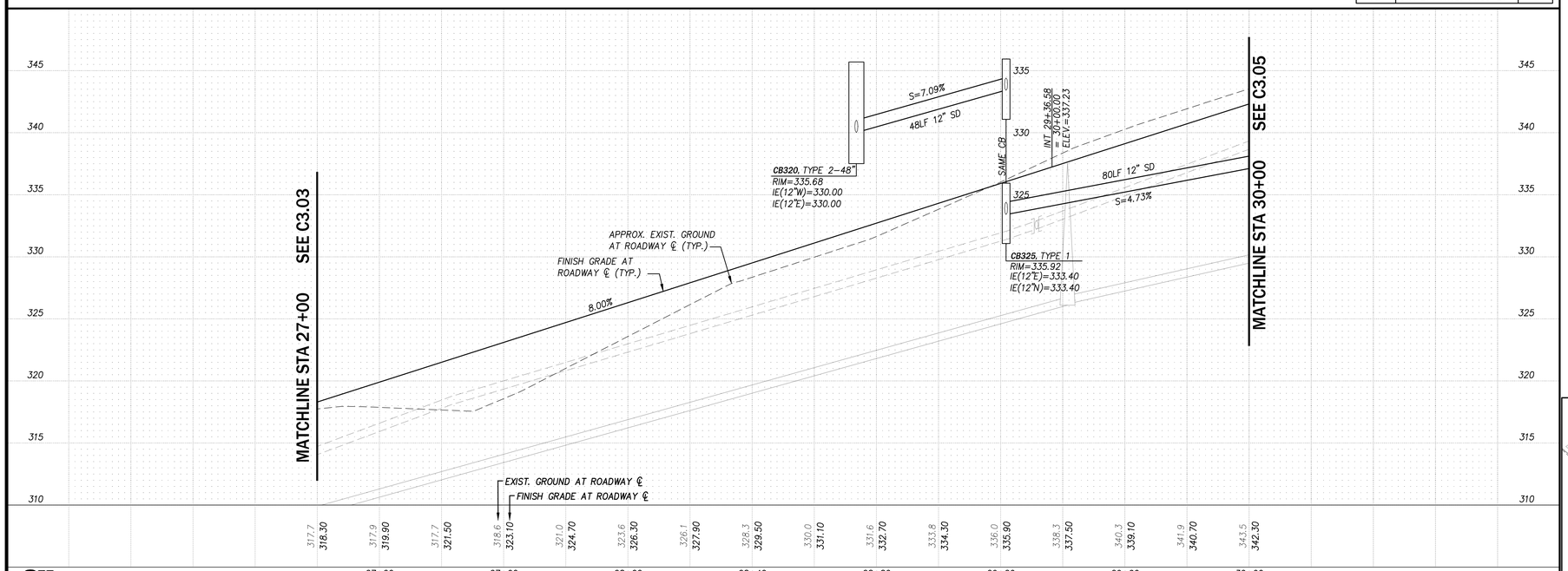
KEYMAP
TBLOCK

PTN. OF NW 1/4 OF SEC 31, TWP 28 N, R7E W.M.



SEE C3.09

DRIVEWAY TABLE		
LOT	STATION, OFFSET	WIDTH
35	STA 29+96.56, 14.00' RT	18'
55	STA 27+29.47, 14.00' RT	18'
56	STA 27+69.47, 14.00' RT	18'
57	STA 28+09.47, 14.00' RT	18'
58	STA 28+49.47, 14.00' RT	18'
59	STA 28+81.47, 14.00' RT	18'
64	STA 29+81.18, 14.00' LT	18'
65	STA 29+33.14, 14.00' LT	18'
66	STA 29+01.18, 14.00' LT	18'
67	STA 28+61.18, 14.00' LT	18'
68	STA 28+21.18, 14.00' LT	18'
69	STA 27+81.18, 14.00' LT	18'
70	STA 27+41.18, 14.00' LT	18'



CONSTRUCTION NOTES

1. CEMENT CONC. DRIVEWAY TYPE 2 PER COM STD. DET. 311, REFER TO DRIVEWAY TABLE THIS SHT. FOR LOCATION AND WIDTH
2. CEMENT CONC. SIDEWALK PER COM STD. DET. 309, WIDTH PER PLAN
3. CEMENT CONC. CURB AND GUTTER PER COM STD. DET. 305
4. 6" PVC (UNO) ROOF COLLECTION PIPE, SEE DET. ON SHT. C3.102, APPROX. LENGTH PER PLAN
5. APPROX. LIMIT OF GRADING
6. COMBINATION CURB RAMP PER WSDOT STD. PLAN F-40.14-03, SEE DET. ON SHT. C3.105 & C3.106
7. MATCH EXIST. IMPROVEMENTS
8. SAWCUT REMOVE AND REPLACE EXIST. AC PVMT.
9. 4" PVC PERFORATED WALL DRAIN
10. WATER QUALITY TREATMENT VAULT PER DET. ON SHT. C3.22
11. NYLOPLAST INLINE DRAIN WITH STANDARD GRATE, O.A.E
12. CEMENT CONC. ROLLED CURB 2 PER WSDOT STD. PLAN F-10.18-02

LEGEND

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- FG= — FINISHED GRADE ELEVATION
- MSE WALL, LOCK+LOAD WALL OR EQ. (SEE C2.00 FOR ELEV.)
- TOP 246 TOE 242 (4) — FINISHED GRADE AT TOP/TOE OF WALL
- WALL DRAIN
- SAWCUT
- 420 — PROPOSED 2 FT CONTOUR
- EXISTING CONTOUR
- ×520.9 — SPOT ELEV. (FINISH GRADE)
- INTERCEPTOR TRENCH PER DET. ON C3.101
- STORM DRAIN PIPE
- SD — EXIST. STORM DRAIN PIPE
- RD — BUILDING STORM
- AC PAVEMENT VALLEY, FLOWLINE
- SD CATCH BASIN
- CLEANOUT PER DET. ON SHT. C4.100
- ASPHALT PAVEMENT
- CONCRETE PAVEMENT

NOTES:
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5. ETHAFOAM/RIGID INSULATION SHALL BE INSTALLED BETWEEN PIPES WHERE CLEARANCE IS 3-INCHES OR LESS.
6. ALL 4" MSE WALL DRAINS TO BE TIGHT LINED DIRECTLY INTO THE ROOF DRAIN LINE AT THE PROPERTY LINE THAT DISCHARGES TO THE PRIVATE STORM DRAIN SYSTEM UNLESS CALLED OUT OTHERWISE. SEE WALL PLANS FOR CONNECTION POINT CALLOUTS.

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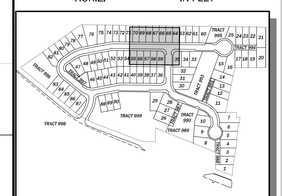

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PROJECT NO.
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SHEET 21 OF 85

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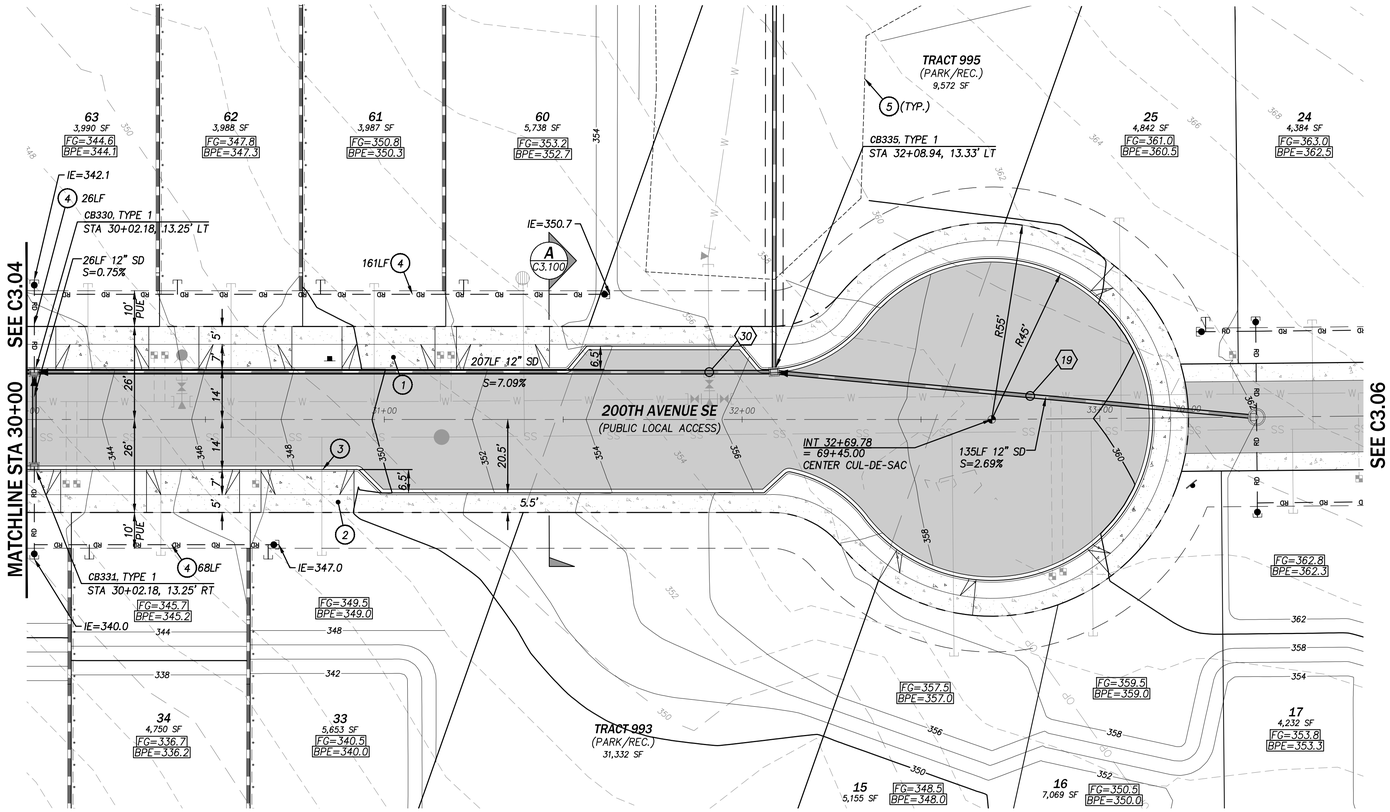
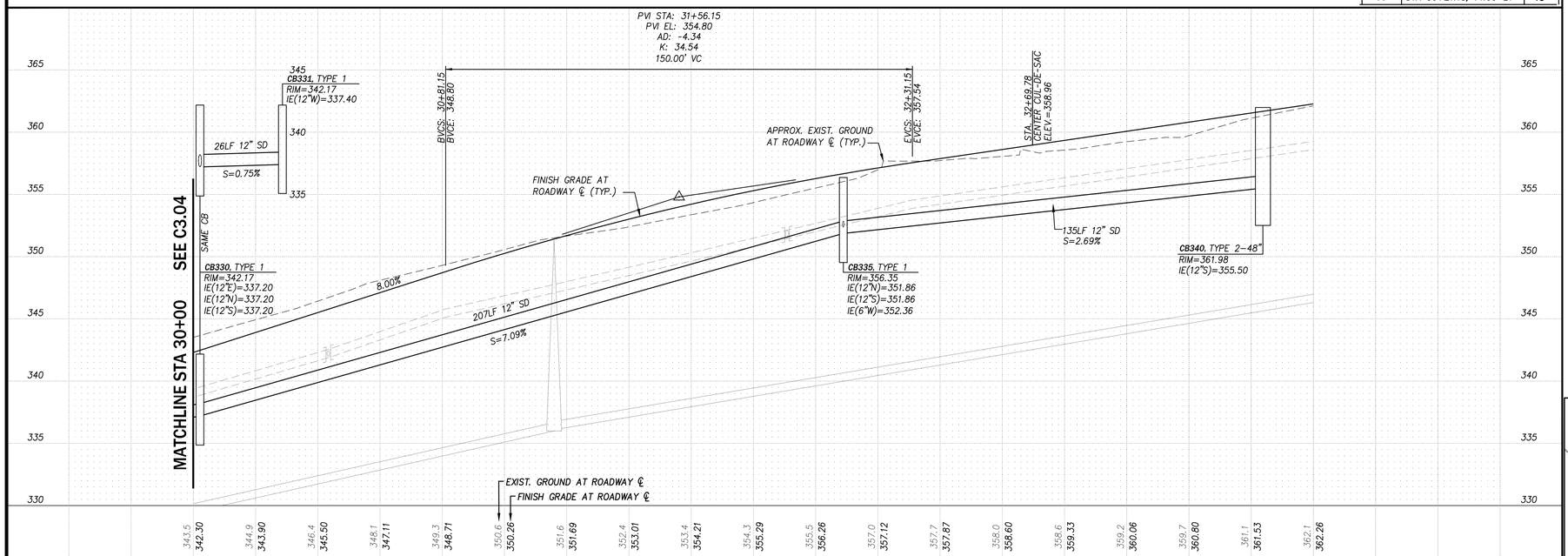


DRIVEWAY TABLE

LOT	STATION, OFFSET	WIDTH
15	STA 32+53.75, 42.05' RT	18'
16-25	STA 33+14.78, 0.00' T	84'
33	STA 30+78.56, 14.00' RT	18'
34	STA 30+46.56, 14.00' RT	18'
60	STA 31+33.18, 14.00' LT	18'
61	STA 31+01.18, 14.00' LT	18'
62	STA 30+61.18, 14.00' LT	18'
63	STA 30+21.18, 14.00' LT	18'



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2. CEMENT CONC. SIDEWALK PER COM STD. DET. 309, WIDTH PER PLAN
3. CEMENT CONC. CURB AND GUTTER PER COM STD. DET. 305
4. 6" PVC (UNO) ROOF COLLECTION PIPE, SEE DET. ON SHT. C3.102, APPROX. LENGTH PER PLAN
5. APPROX. LIMIT OF GRADING
6. COMBINATION CURB RAMP PER WSDOT STD. PLAN F-40.14-03, SEE DET. ON SHT. C3.105 & C3.106
7. MATCH EXIST. IMPROVEMENTS
8. SAWCUT REMOVE AND REPLACE EXIST. AC PVMT.
9. 4" PVC PERFORATED WALL DRAIN
10. WATER QUALITY TREATMENT VAULT PER DET. ON SHT. C3.22
11. NYLOPLAST INLINE DRAIN WITH STANDARD GRATE, O.A.E
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- EXISTING CONTOUR
- ×520.9 — SPOT ELEV. (FINISH GRADE)
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- SD — EXIST. STORM DRAIN PIPE
- RD — BUILDING STORM
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- CONCRETE PAVEMENT

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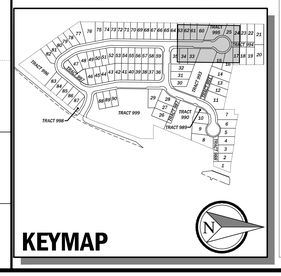

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CITY OF MONROE ENGINEERING

By _____ Date 05/12/2022

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NO.	DATE	REVISION	BY	CK.
1	5/4/22	CITY PERMIT SUBMITTAL	PCE	MJH

MATTHEW J. HOPKINS — STATE OF WASHINGTON — 22810 — REGISTERED PROFESSIONAL ENGINEER
5/5/2022

GARIBALDI PRD

ENGINEERING PERMIT PACKAGE

GRADING AND DRAINAGE PLAN AND PROFILE

CITY OF MONROE — SNOHOMISH COUNTY, WA

CLIENT
Garibaldi Lake, LLC
1010 MARKET STREET
KIRKALND, WA 98033
PHONE: (425)876-9390

C|P|H CONSULTANTS
Site Planning • Civil Engineering
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11321-B NE 120th Street
Kirkland, WA 98034 • (425) 285-2390
101 South Wenatchee Avenue, Suite C3
Wenatchee, WA 98801 • (509) 293-7731
www.cphconsultants.com

PROJECT NO.
0054-18-028

DRAWING
C3.05

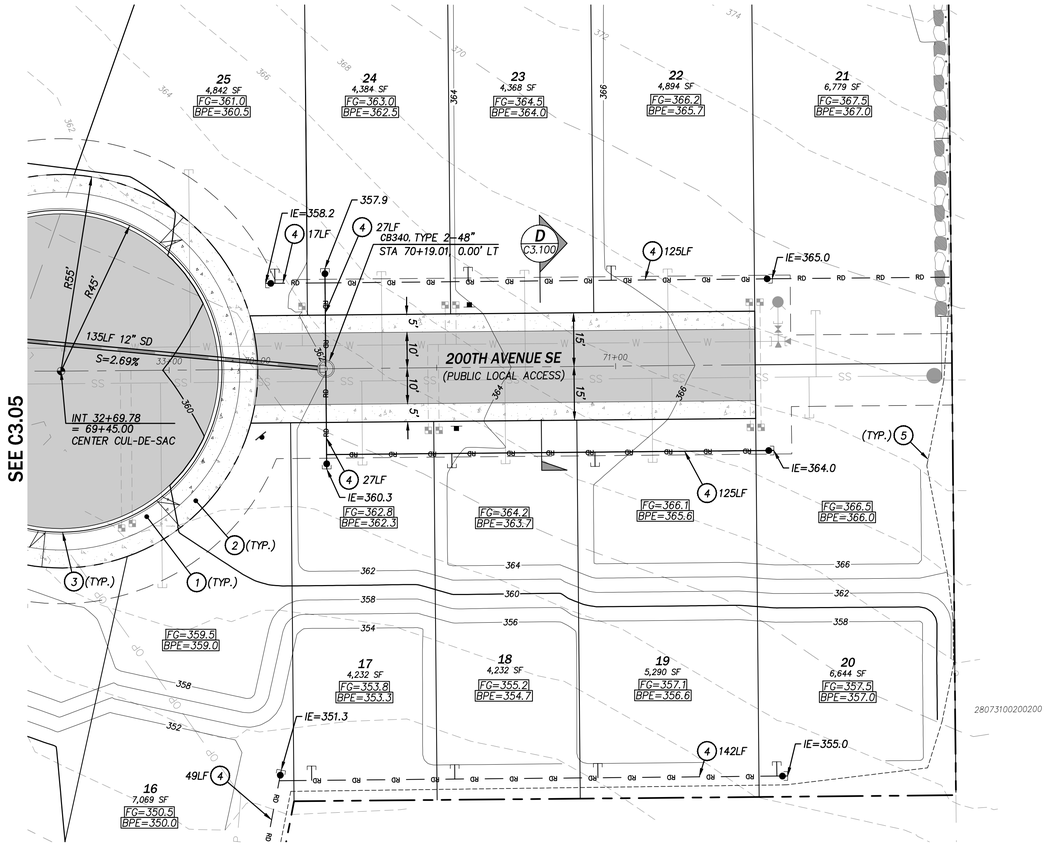
SHEET 22 OF 85

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

P:\project\0054\18028\Dwg\Sheets\Final Engineering\C3.05.dwg
5/5/2022 10:14 AM PETER EVANS

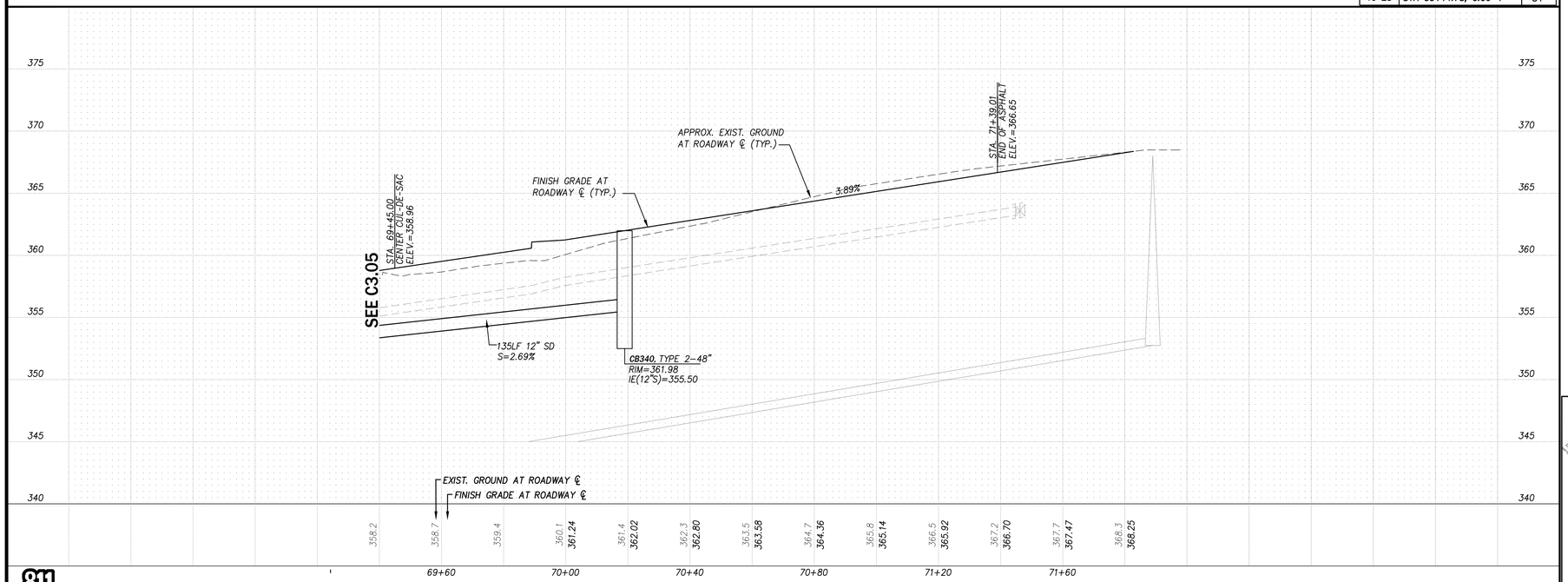
OTOP541828
CGRD541828
CSIT541828
CUSD541828
CUWS541828
TBLOCK
OTRL541828
CNOT541828
KEYMAP

PTN. OF NW 1/4 OF SEC 31, TWP 28 N, R7E W.M.



DRIVEWAY TABLE

LOT	STATION, OFFSET	WIDTH
16-25	STA 33+14.78, 0.00' T	84'



CONSTRUCTION NOTES

1. CEMENT CONC. DRIVEWAY TYPE 2 PER COM STD. DET. 311, REFER TO DRIVEWAY TABLE THIS SHT. FOR LOCATION AND WIDTH
2. CEMENT CONC. SIDEWALK PER COM STD. DET. 309, WIDTH PER PLAN
3. CEMENT CONC. CURB AND GUTTER PER COM STD. DET. 305
4. 6" PVC (UNO) ROOF COLLECTION PIPE, SEE DET. ON SHT. C3.102, APPROX. LENGTH PER PLAN
5. APPROX. LIMIT OF GRADING
6. COMBINATION CURB RAMP PER WSDOT STD. PLAN F-40.14-03, SEE DET. ON SHT. C3.105 & C3.106
7. MATCH EXIST. IMPROVEMENTS
8. SAWCUT REMOVE AND REPLACE EXIST. AC PVMT.
9. 4" PVC PERFORATED WALL DRAIN
10. WATER QUALITY TREATMENT VAULT PER DET. ON SHT. C3.22
11. NYLOPLAST INLINE DRAIN WITH STANDARD GRATE, O.A.E
12. CEMENT CONC. ROLLED CURB 2 PER WSDOT STD. PLAN F-10.18-02

LEGEND

- BPE= — BEARING PAD ELEVATION
- FG= — FINISHED GRADE ELEVATION
- MSE WALL, LOCK+LOAD WALL OR EQ. (SEE C2.00 FOR ELEV.)
- TOP 246 / TOE 242 (4) — FINISHED GRADE AT TOP/TOE OF WALL
- WALL DRAIN
- SAWCUT
- 420 — PROPOSED 2 FT CONTOUR
- EXISTING CONTOUR
- ×520.9 — SPOT ELEV. (FINISH GRADE)
- INTERCEPTOR TRENCH PER DET. ON C3.101
- STORM DRAIN PIPE
- SD — EXIST. STORM DRAIN PIPE
- RD — BUILDING STORM
- AC PAVEMENT VALLEY, FLOWLINE
- SD CATCH BASIN
- CLEANOUT PER DET. ON SHT. C4.100
- ASPHALT PAVEMENT
- CONCRETE PAVEMENT

NOTES:
1. ALL DRAIN PIPES (SD) SHALL BE 12" LCPE (ADS N-12) UNLESS NOTED OTHERWISE ON PLANS OR PROJECT DETAILS.
2. ALL CATCH BASIN LOCATIONS REFERENCED TO CENTER OF STRUCTURE. GRATE PLACEMENT SHALL BE PER STRUCTURE PLACEMENT DETAIL ON SHEET C3.101.
3. ALL CATCH BASIN STRUCTURES SHALL BE PER COM STD. PLANS 402, 403, AND 404 RESPECTIVELY AND PROVIDED WITH FRAME AND VANED GRATE PER COM STD. DET. 405 AND 406.
4. SEE CITY STD. STORM DRAINAGE NOTES ON SHEET C0.01.
5. ETHAFOAM/RIGID INSULATION SHALL BE INSTALLED BETWEEN PIPES WHERE CLEARANCE IS 3-INCHES OR LESS.
6. ALL 4" MSE WALL DRAINS TO BE TIGHT LINED DIRECTLY INTO THE ROOF DRAIN LINE AT THE PROPERTY LINE THAT DISCHARGES TO THE PRIVATE STORM DRAIN SYSTEM UNLESS CALLED OUT OTHERWISE. SEE WALL PLANS FOR CONNECTION POINT CALLOUTS.

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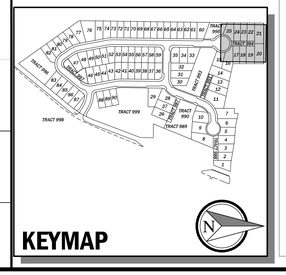

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NO.	DATE	REVISION	BY	CK.
4	5/4/22	CITY PERMIT SUBMITTAL	PCE	MJH

MATTHEW J. HOPKINS — STATE OF WASHINGTON — 22400 — REGISTERED PROFESSIONAL ENGINEER — 5/5/2022

GARIBALDI PRD

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PROJECT NO.
0054-18-028

DRAWING
C3.06

SHEET 23 OF 85

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

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5/5/2022 10:15 AM PETER EVANS

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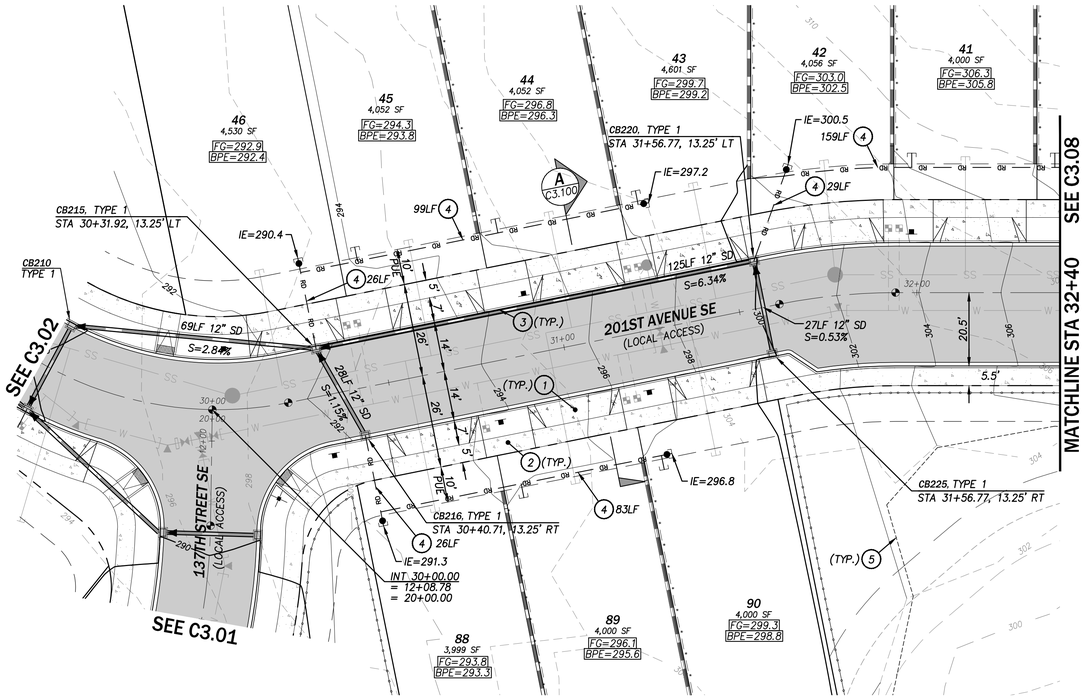
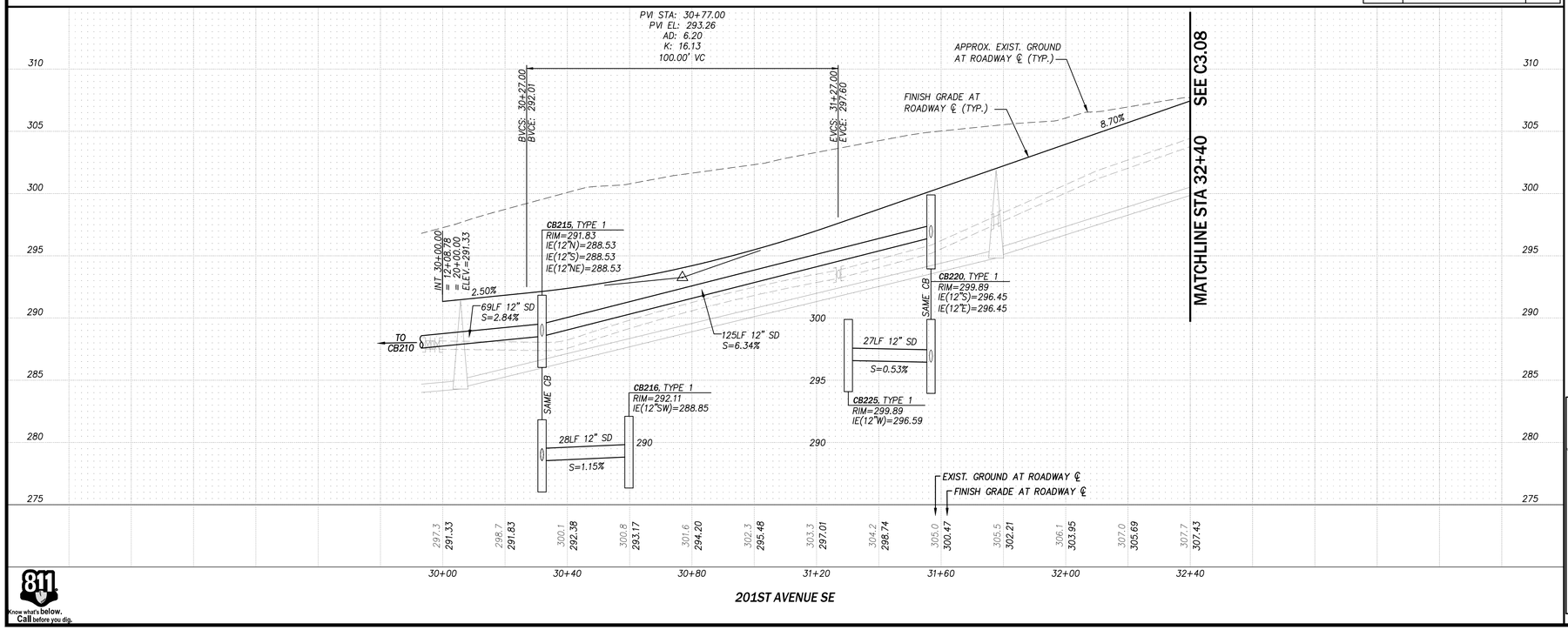
CSIT541828
CUSD541828
CUWS541828
TBLOCK
OTRL541828
CNOT541828
KEYMAP

PTN. OF NW 1/4 OF SEC 31, TWP 28 N, R7E W.M.



DRIVEWAY TABLE		
LOT	STATION, OFFSET	WIDTH
41	STA 32+17.55, 14.00' LT	18'
42	STA 31+79.49, 14.00' LT	18'
43	STA 31+42.39, 14.00' LT	18'
44	STA 31+07.13, 14.00' LT	18'
45	STA 30+67.13, 14.00' LT	18'
46	STA 30+26.81, 14.00' LT	18'
88	STA 30+59.69, 14.00' RT	18'
89	STA 30+99.69, 14.00' RT	18'
90	STA 31+39.69, 14.00' RT	18'



CONSTRUCTION NOTES

1. CEMENT CONC. DRIVEWAY TYPE 2 PER COM STD. DET. 311, REFER TO DRIVEWAY TABLE THIS SHT. FOR LOCATION AND WIDTH
2. CEMENT CONC. SIDEWALK PER COM STD. DET. 309, WIDTH PER PLAN
3. CEMENT CONC. CURB AND GUTTER PER COM STD. DET. 305
4. 6" PVC (UNO) ROOF COLLECTION PIPE, SEE DET. ON SHT. C3.102, APPROX. LENGTH PER PLAN
5. APPROX. LIMIT OF GRADING
6. COMBINATION CURB RAMP PER WSDOT STD. PLAN F-40.14-03, SEE DET. ON SHT. C3.105 & C3.106
7. MATCH EXIST. IMPROVEMENTS
8. SAWCUT REMOVE AND REPLACE EXIST. AC PVMT.
9. 4" PVC PERFORATED WALL DRAIN
10. WATER QUALITY TREATMENT VAULT PER DET. ON SHT. C3.22
11. NYLOPLAST INLINE DRAIN WITH STANDARD GRATE, O.A.E
12. CEMENT CONC. ROLLED CURB 2 PER WSDOT STD. PLAN F-10.18-02

LEGEND

- BPE= — BEARING PAD ELEVATION
- FG= — FINISHED GRADE ELEVATION
- MSE WALL, LOCK+LOAD WALL OR EQ. (SEE C2.00 FOR ELEV.)
- TOP 246 / TOE 242 (4) — FINISHED GRADE AT TOP/TOE OF WALL
- WALL DRAIN
- SAWCUT
- 420 — PROPOSED 2 FT CONTOUR
- EXISTING CONTOUR
- ×520.9 — SPOT ELEV. (FINISH GRADE)
- INTERCEPTOR TRENCH PER DET. ON C3.101
- STORM DRAIN PIPE
- SD — EXIST. STORM DRAIN PIPE
- RD — BUILDING STORM
- AC PAVEMENT VALLEY, FLOWLINE
- SD CATCH BASIN
- CLEANOUT PER DET. ON SHT. C4.100
- ASPHALT PAVEMENT
- CONCRETE PAVEMENT

NOTES:
1. ALL DRAIN PIPES (SD) SHALL BE 12" LCPE (ADS N-12) UNLESS NOTED OTHERWISE ON PLANS OR PROJECT DETAILS.
2. ALL CATCH BASIN LOCATIONS REFERENCED TO CENTER OF STRUCTURE. GRATE PLACEMENT SHALL BE PER STRUCTURE PLACEMENT DETAIL ON SHEET C3.101.
3. ALL CATCH BASIN STRUCTURES SHALL BE PER COM STD. PLANS 402, 403, AND 404 RESPECTIVELY AND PROVIDED WITH FRAME AND VANED GRATE PER COM STD. DET. 405 AND 406.
4. SEE CITY STD. STORM DRAINAGE NOTES ON SHEET C0.01.
5. ETHAFOAM/RIGID INSULATION SHALL BE INSTALLED BETWEEN PIPES WHERE CLEARANCE IS 3-INCHES OR LESS.
6. ALL 4" MSE WALL DRAINS TO BE TIGHT LINED DIRECTLY INTO THE ROOF DRAIN LINE AT THE PROPERTY LINE THAT DISCHARGES TO THE PRIVATE STORM DRAIN SYSTEM UNLESS CALLED OUT OTHERWISE. SEE WALL PLANS FOR CONNECTION POINT CALLOUTS.

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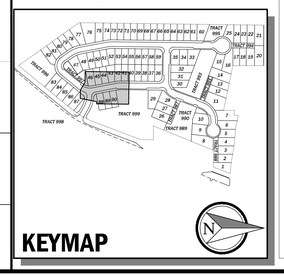

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MATTHEW J. HOPKINS — STATE OF WASHINGTON — 22818 — REGISTERED PROFESSIONAL ENGINEER — 5/5/2022

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GRADING AND DRAINAGE PLAN AND PROFILE
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PROJECT NO.
0054-18-028

DRAWING
C3.07

SHEET 24 OF 85

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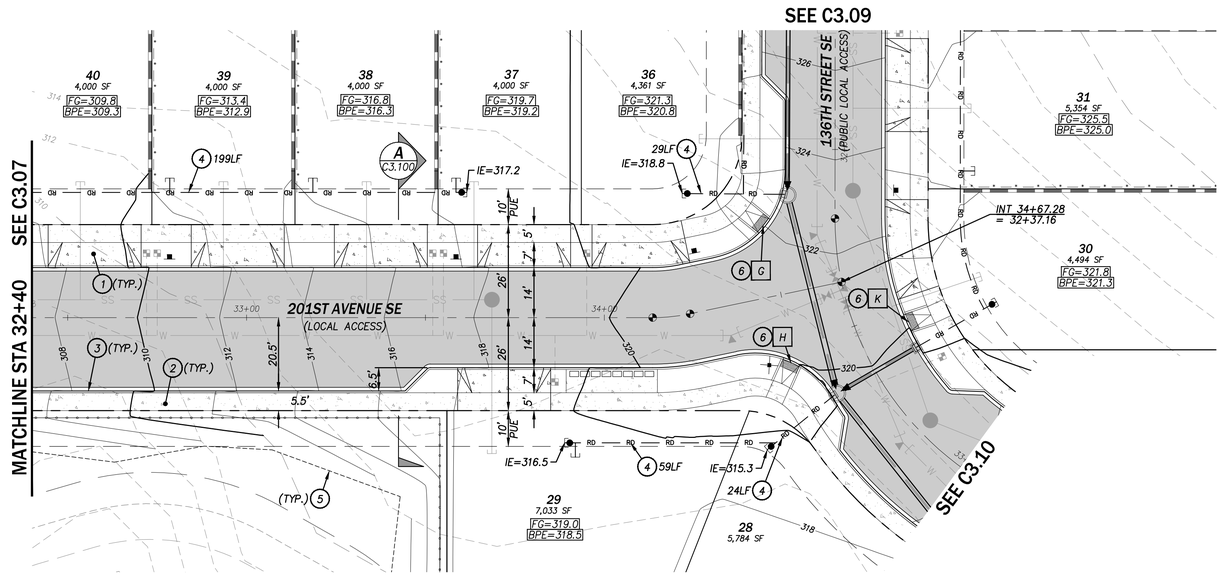
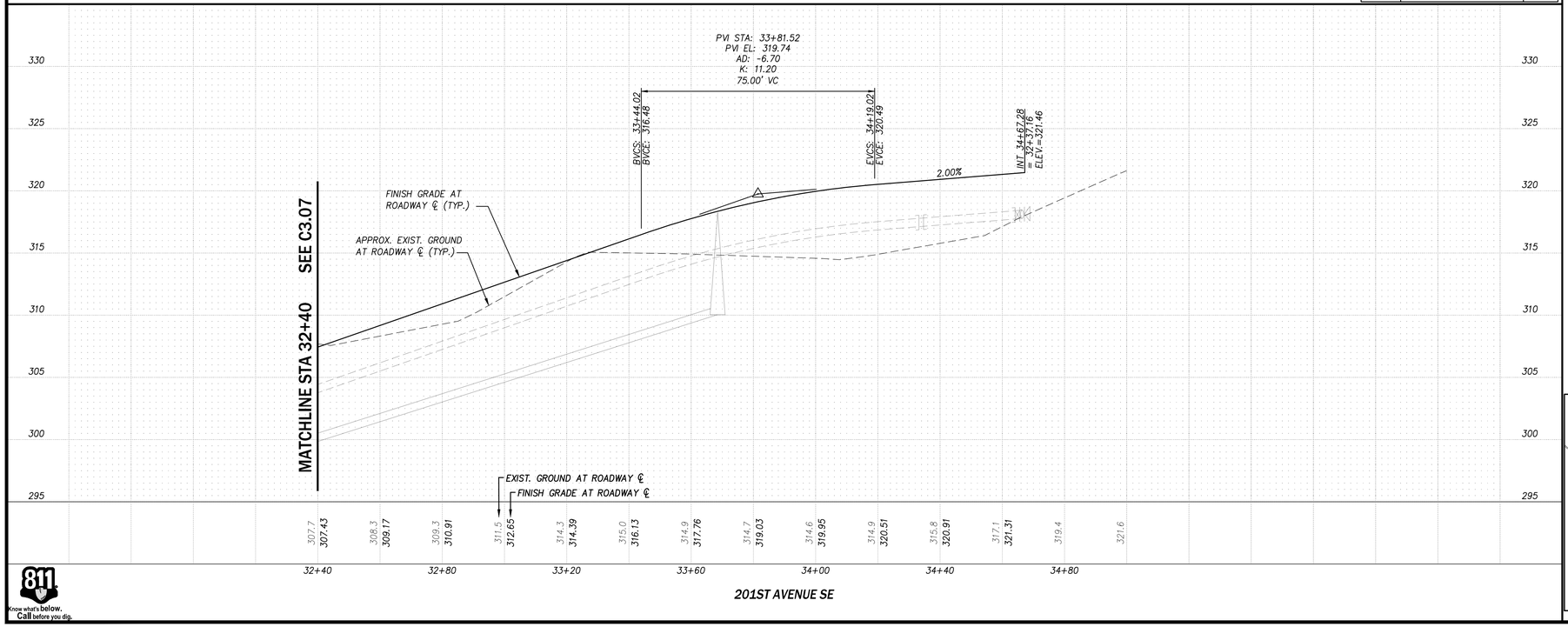
KEYMAP



DRIVEWAY TABLE		
LOT	STATION, OFFSET	WIDTH
29	STA 33+72.00, 14.00' RT	18'
30	STA 32+29.49, 14.00' LT	18'
31	STA 31+81.98, 14.00' LT	18'
36	STA 34+09.54, 14.00' LT	18'
37	STA 33+77.55, 14.00' LT	18'
38	STA 33+37.55, 14.00' LT	18'
39	STA 32+97.55, 14.00' LT	18'
40	STA 32+57.55, 14.00' LT	18'



CONSTRUCTION NOTES

1. CEMENT CONC. DRIVEWAY TYPE 2 PER COM STD. DET. 311, REFER TO DRIVEWAY TABLE THIS SHT. FOR LOCATION AND WIDTH
2. CEMENT CONC. SIDEWALK PER COM STD. DET. 309, WIDTH PER PLAN
3. CEMENT CONC. CURB AND GUTTER PER COM STD. DET. 305
4. 6" PVC (UNO) ROOF COLLECTION PIPE, SEE DET. ON SHT. C3.102, APPROX. LENGTH PER PLAN
5. APPROX. LIMIT OF GRADING
6. COMBINATION CURB RAMP PER WSDOT STD. PLAN F-40.14-03, SEE DET. ON SHT. C3.105 & C3.106
7. MATCH EXIST. IMPROVEMENTS
8. SAWCUT REMOVE AND REPLACE EXIST. AC PVMT.
9. 4" PVC PERFORATED WALL DRAIN
10. WATER QUALITY TREATMENT VAULT PER DET. ON SHT. C3.22
11. NYLOPLAST INLINE DRAIN WITH STANDARD GRATE, O.A.E
12. CEMENT CONC. ROLLED CURB 2 PER WSDOT STD. PLAN F-10.18-02

LEGEND

- BPE= — BEARING PAD ELEVATION
- FG= — FINISHED GRADE ELEVATION
- MSE WALL, LOCK+LOAD WALL OR EQ. (SEE C2.00 FOR ELEV.)
- TOP 246 / TOE 242 (4) — FINISHED GRADE AT TOP/TOE OF WALL
- WALL DRAIN
- SAWCUT
- 420 — PROPOSED 2 FT CONTOUR
- EXISTING CONTOUR
- ×520.9 — SPOT ELEV. (FINISH GRADE)
- INTERCEPTOR TRENCH PER DET. ON C3.101
- STORM DRAIN PIPE
- SD — EXIST. STORM DRAIN PIPE
- RD — BUILDING STORM
- AC PAVEMENT VALLEY, FLOWLINE
- SD CATCH BASIN
- CLEANOUT PER DET. ON SHT. C4.100
- ASPHALT PAVEMENT
- CONCRETE PAVEMENT

NOTES:
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4. SEE CITY STD. STORM DRAINAGE NOTES ON SHEET C0.01.
5. ETHAFOAM/RIGID INSULATION SHALL BE INSTALLED BETWEEN PIPES WHERE CLEARANCE IS 3-INCHES OR LESS.
6. ALL 4" MSE WALL DRAINS TO BE TIGHT LINED DIRECTLY INTO THE ROOF DRAIN LINE AT THE PROPERTY LINE THAT DISCHARGES TO THE PRIVATE STORM DRAIN SYSTEM UNLESS CALLED OUT OTHERWISE. SEE WALL PLANS FOR CONNECTION POINT CALLOUTS.

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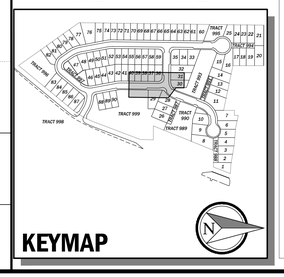

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MATTHEW J. HOPKINS — STATE OF WASHINGTON — 22400 — REGISTERED PROFESSIONAL ENGINEER
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PROJECT NO.
0054-18-028

DRAWING
C3.08

SHEET 25 OF 85

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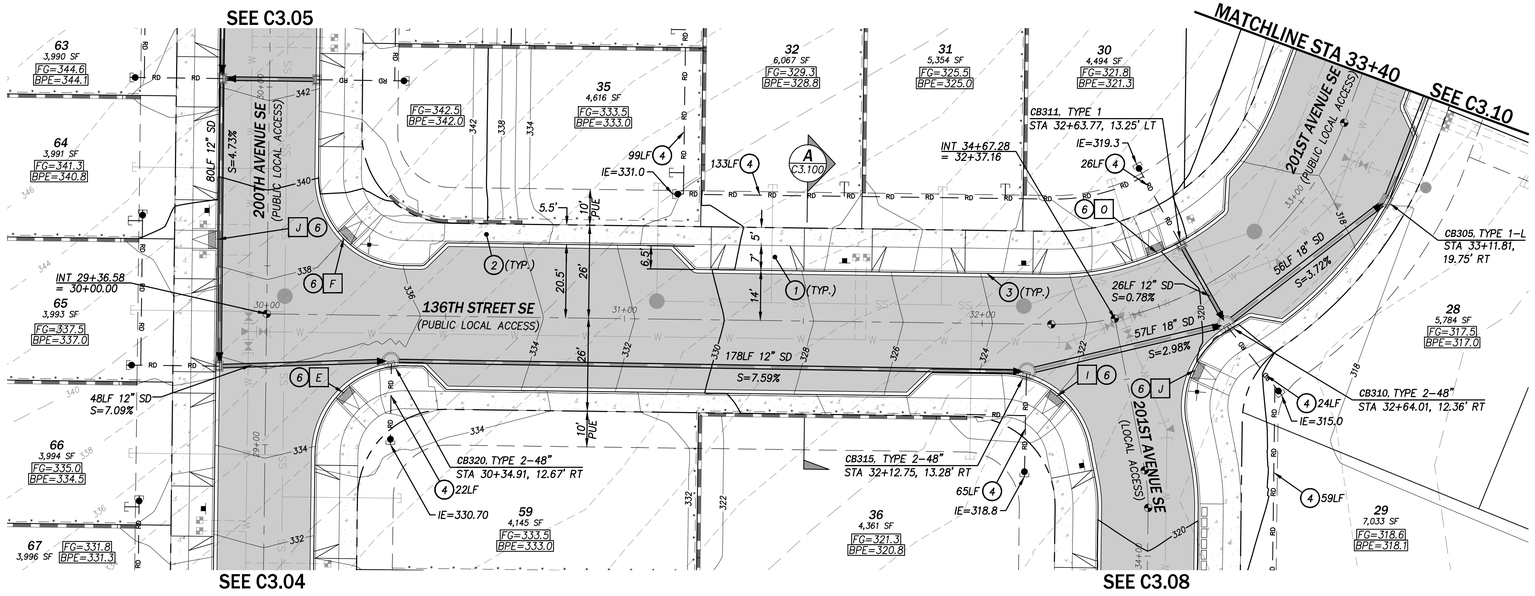
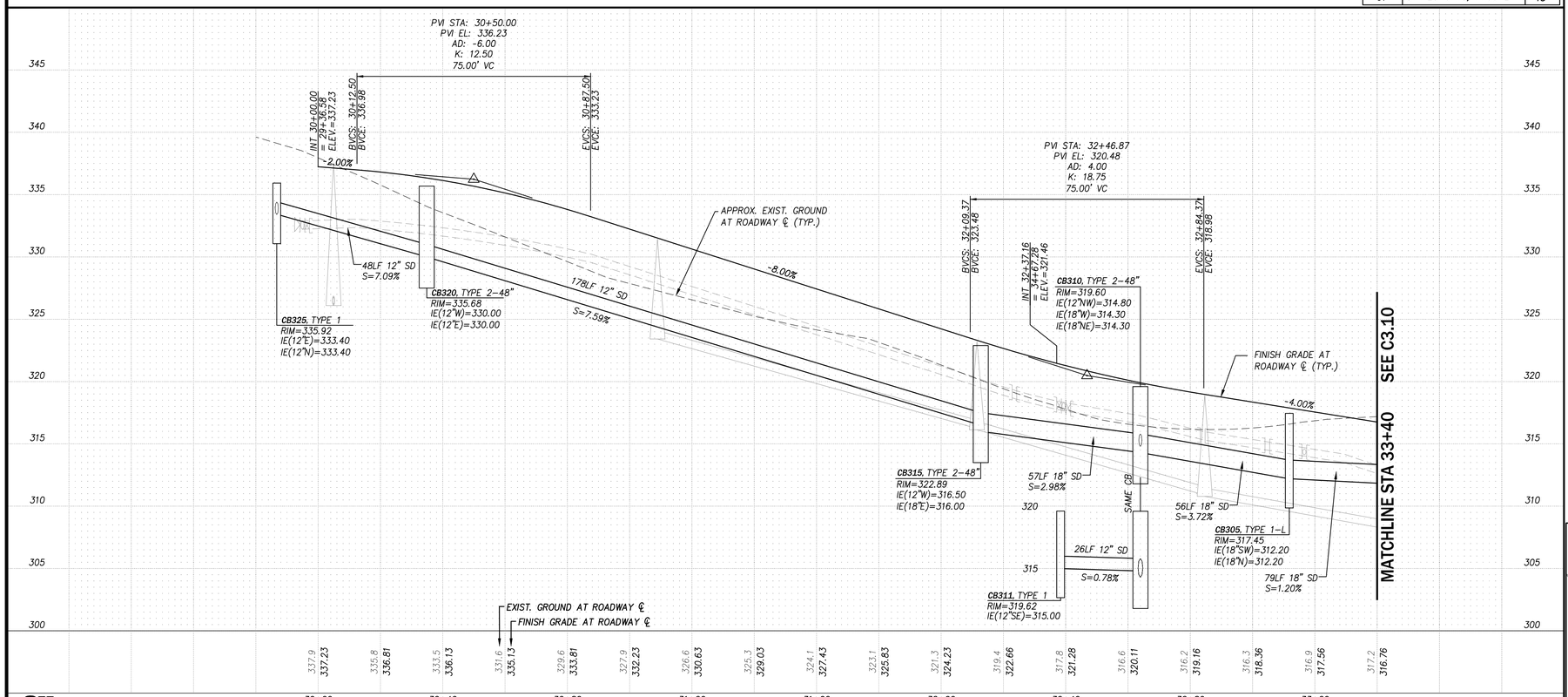
PTN. OF NW 1/4 OF SEC 31, TWP 28 N, R7E W.M.



DRIVEWAY TABLE		
LOT	STATION, OFFSET	WIDTH
26-28	STA 33+54.10, 14.00' RT	18'
29	STA 33+72.00, 14.00' RT	18'
30	STA 32+29.49, 14.00' LT	18'
31	STA 31+81.98, 14.00' LT	18'
32	STA 31+36.98, 14.00' LT	18'
35	STA 29+96.56, 14.00' RT	18'
36	STA 34+09.54, 14.00' LT	18'
59	STA 28+81.47, 14.00' RT	18'
63	STA 30+21.18, 14.00' LT	18'
64	STA 29+81.18, 14.00' LT	18'
65	STA 29+33.14, 14.00' LT	18'
66	STA 29+01.18, 14.00' LT	18'
67	STA 28+61.18, 14.00' LT	18'



136TH STREET SE/201ST AVENUE SE

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

CONSTRUCTION NOTES

1. CEMENT CONC. DRIVEWAY TYPE 2 PER COM STD. DET. 311, REFER TO DRIVEWAY TABLE THIS SHT. FOR LOCATION AND WIDTH
2. CEMENT CONC. SIDEWALK PER COM STD. DET. 309, WIDTH PER PLAN
3. CEMENT CONC. CURB AND GUTTER PER COM STD. DET. 305
4. 6" PVC (UNO) ROOF COLLECTION PIPE, SEE DET. ON SHT. C3.102, APPROX. LENGTH PER PLAN
5. APPROX. LIMIT OF GRADING
6. COMBINATION CURB RAMP PER WSDOT STD. PLAN F-40.14-03, SEE DET. ON SHT. C3.105 & C3.106
7. MATCH EXIST. IMPROVEMENTS
8. SAWCUT REMOVE AND REPLACE EXIST. AC PVMT.
9. 4" PVC PERFORATED WALL DRAIN
10. WATER QUALITY TREATMENT VAULT PER DET. ON SHT. C3.22
11. NYLOPLAST INLINE DRAIN WITH STANDARD GRATE, O.A.E
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- TOP 246 / TOE 242 (4) — FINISHED GRADE AT TOP/TOE OF WALL
- WALL DRAIN
- SAWCUT
- 420 — PROPOSED 2 FT CONTOUR
- EXISTING CONTOUR
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- INTERCEPTOR TRENCH PER DET. ON C3.101
- STORM DRAIN PIPE
- SD — EXIST. STORM DRAIN PIPE
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- AC PAVEMENT VALLEY, FLOWLINE
- SD CATCH BASIN
- CLEANOUT PER DET. ON SHT. C4.100
- ASPHALT PAVEMENT
- CONCRETE PAVEMENT

NOTES:
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2. ALL CATCH BASIN LOCATIONS REFERENCED TO CENTER OF STRUCTURE. GRATE PLACEMENT SHALL BE PER STRUCTURE PLACEMENT DETAIL ON SHEET C3.101.
3. ALL CATCH BASIN STRUCTURES SHALL BE PER COM STD. PLANS 402, 403, AND 404 RESPECTIVELY AND PROVIDED WITH FRAME AND VANED GRATE PER COM STD. DET. 405 AND 406.
4. SEE CITY STD. STORM DRAINAGE NOTES ON SHEET C0.01.
5. ETHAFOAM/RIGID INSULATION SHALL BE INSTALLED BETWEEN PIPES WHERE CLEARANCE IS 3-INCHES OR LESS.
6. ALL 4" MSE WALL DRAINS TO BE TIGHT LINED DIRECTLY INTO THE ROOF DRAIN LINE AT THE PROPERTY LINE THAT DISCHARGES TO THE PRIVATE STORM DRAIN SYSTEM UNLESS CALLED OUT OTHERWISE. SEE WALL PLANS FOR CONNECTION POINT CALLOUTS.

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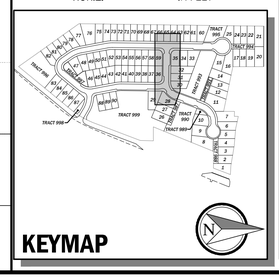
0 5 10 VERT. IN FEET
0 20 40 HORIZ. IN FEET



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CITY OF MONROE ENGINEERING

By _____ Date 05/12/2022

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NO.	DATE	REVISION	BY	CK.
1	5/4/22	CITY PERMIT SUBMITTAL	PCE	MJH

MATTHEW J. HOPKINS — STATE OF WASHINGTON — 22400 — REGISTERED PROFESSIONAL ENGINEER — 5/5/2022

GARIBALDI PRD
ENGINEERING PERMIT PACKAGE
GRADING AND DRAINAGE PLAN AND PROFILE
CITY OF MONROE SNOHOMISH COUNTY, WA

CLIENT
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1010 MARKET STREET
KIRKALND, WA 98033
PHONE: (425)876-9390

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PROJECT NO.
0054-18-028

DRAWING
C3.09

SHEET 26 OF 85

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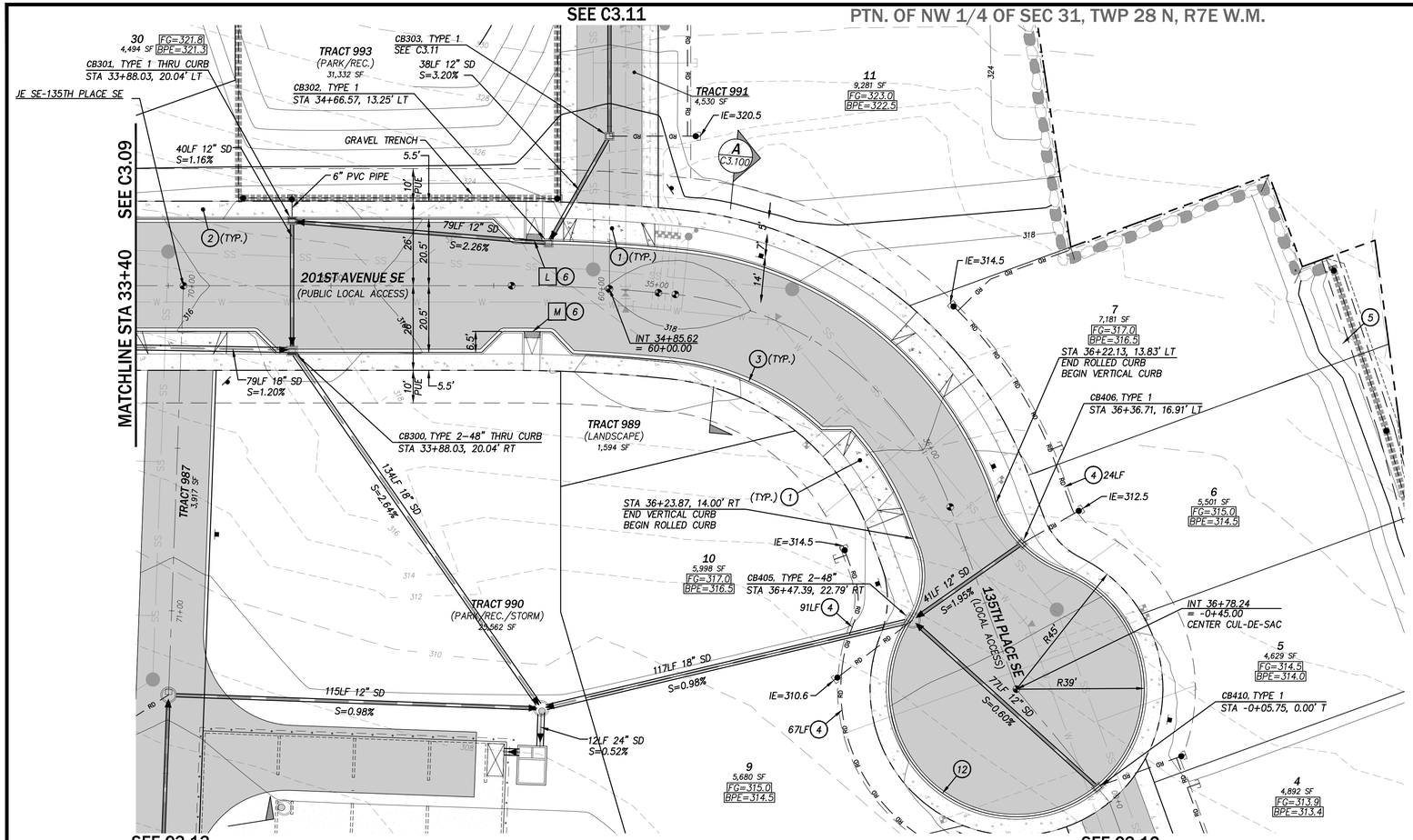
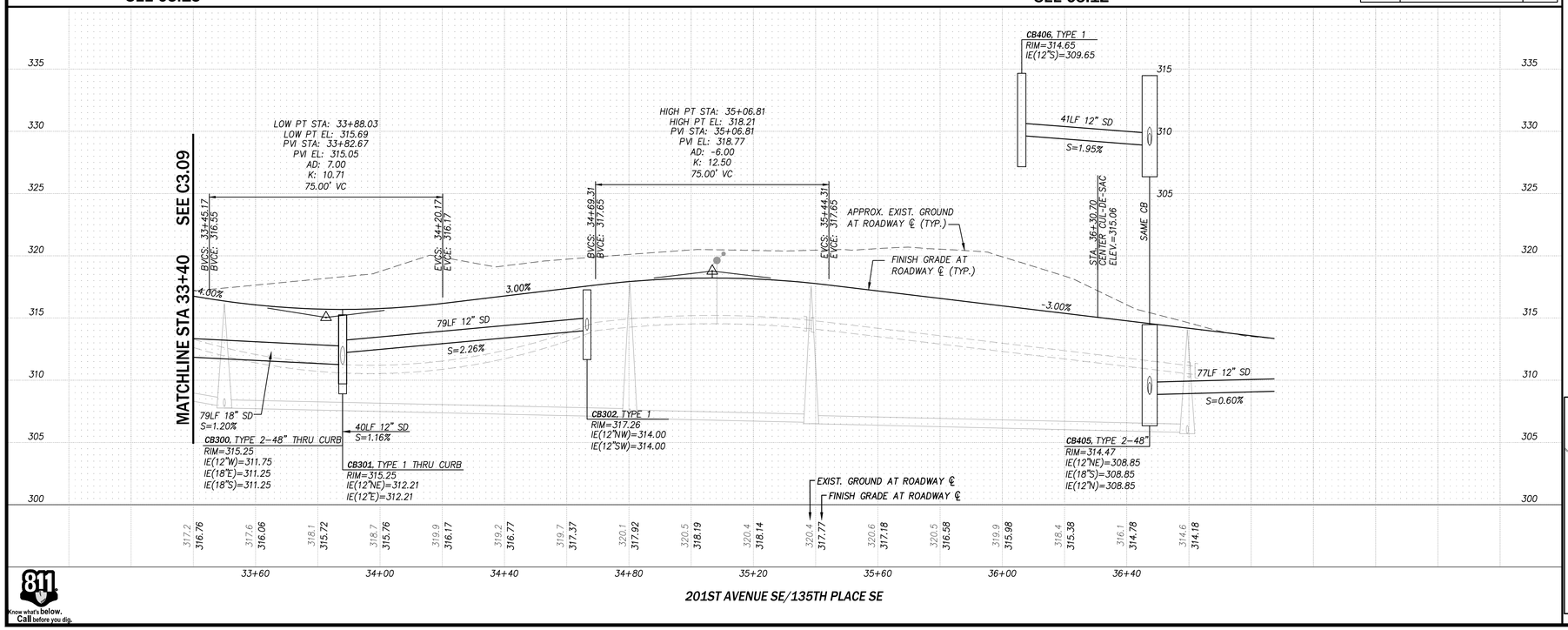
KEYMAP





CONSTRUCTION NOTES

1. CEMENT CONC. DRIVEWAY TYPE 2 PER COM STD. DET. 311, REFER TO DRIVEWAY TABLE THIS SHT. FOR LOCATION AND WIDTH
2. CEMENT CONC. SIDEWALK PER COM STD. DET. 309, WIDTH PER PLAN
3. CEMENT CONC. CURB AND GUTTER PER COM STD. DET. 305
4. 6" PVC (UNO) ROOF COLLECTION PIPE, SEE DET. ON SHT. C3.102, APPROX. LENGTH PER PLAN
5. APPROX. LIMIT OF GRADING
6. COMBINATION CURB RAMP PER WSDOT STD. PLAN F-40.14-03, SEE DET. ON SHT. C3.105 & C3.106
7. MATCH EXIST. IMPROVEMENTS
8. SAWCUT REMOVE AND REPLACE EXIST. AC PVMT.
9. 4" PVC PERFORATED WALL DRAIN
10. WATER QUALITY TREATMENT VAULT PER DET. ON SHT. C3.22
11. NYLOPLAST INLINE DRAIN WITH STANDARD GRATE, O.A.E
12. CEMENT CONC. ROLLED CURB 2 PER WSDOT STD. PLAN F-10.18-02

LEGEND

- BPE= — BEARING PAD ELEVATION
- FG= — FINISHED GRADE ELEVATION
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- TOP 246 / TOE 242 (4) — FINISHED GRADE AT TOP/TOE OF WALL
- WALL DRAIN
- SAWCUT
- 420 — PROPOSED 2 FT CONTOUR
- EXISTING CONTOUR
- ×520.9 — SPOT ELEV. (FINISH GRADE)
- INTERCEPTOR TRENCH PER DET. ON C3.101
- STORM DRAIN PIPE
- SD — EXIST. STORM DRAIN PIPE
- RD — BUILDING STORM
- AC PAVEMENT VALLEY, FLOWLINE
- SD CATCH BASIN
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DRIVEWAY TABLE		
LOT	STATION, OFFSET	WIDTH
1-10	STA 36+41.96, 11.52' LT	106'
11-14	STA 34+84.26, 14.00' LT	20'

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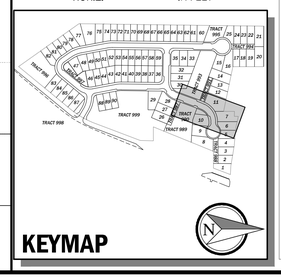

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PROJECT NO.
0054-18-028

DRAWING
C3.10

SHEET 27 OF 85

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CGRD541828
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CUSD541828
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TBLOCK
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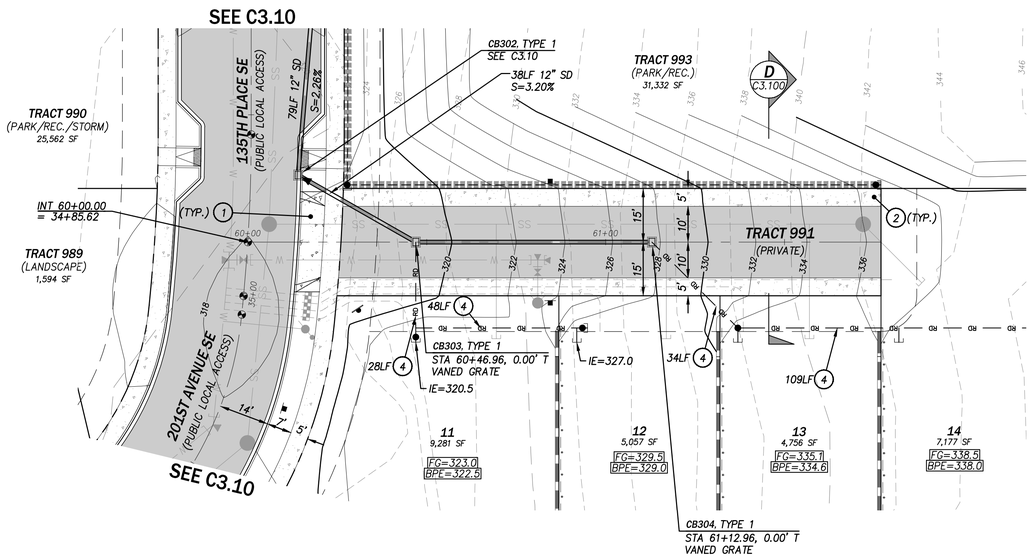
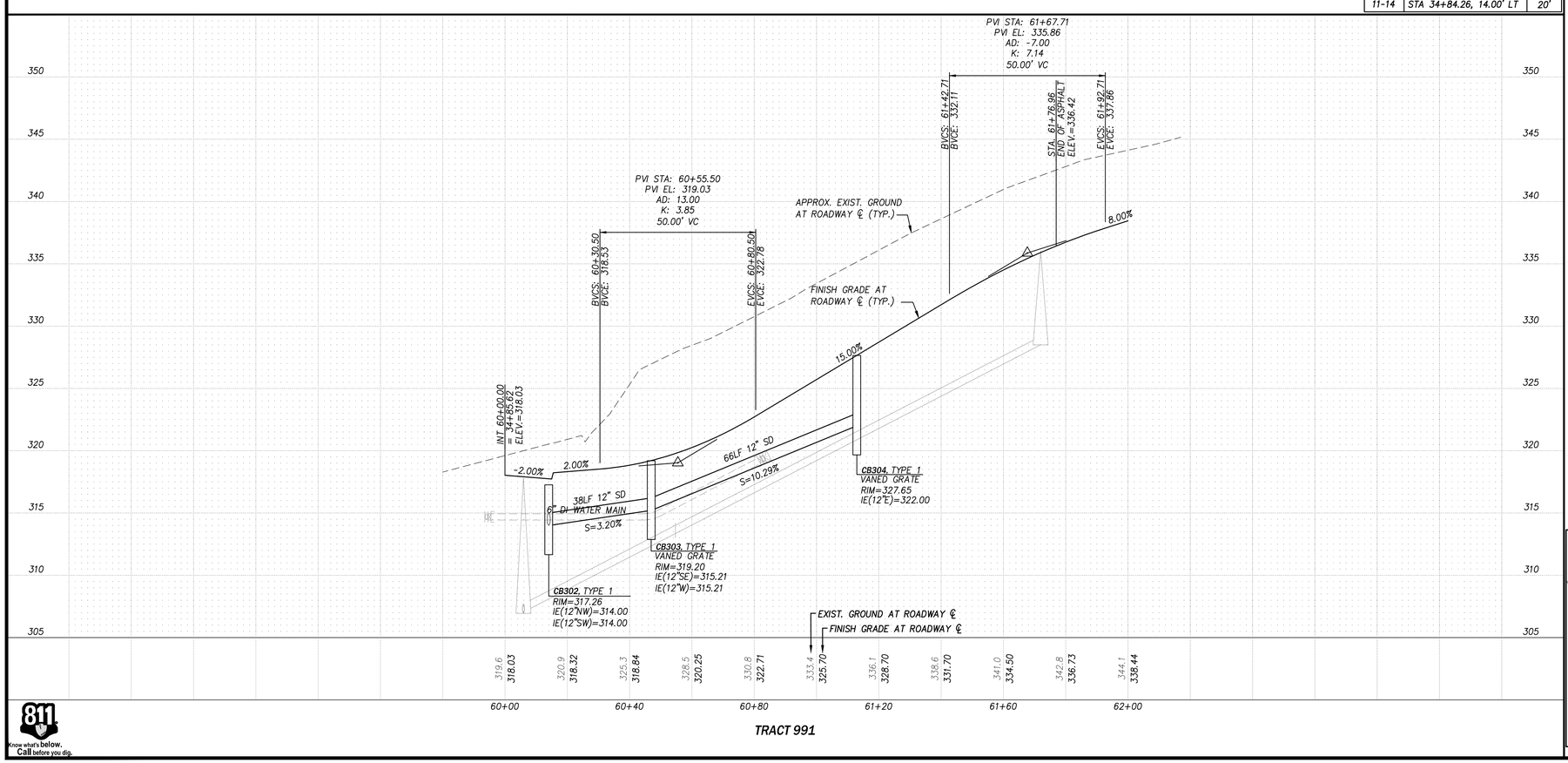
KEYMAP

PTN. OF NW 1/4 OF SEC 31, TWP 28 N, R7E W.M.



DRIVEWAY TABLE		
LOT	STATION, OFFSET	WIDTH
11-14	STA 34+84.26, 14.00' LT	20'



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5. APPROX. LIMIT OF GRADING
6. COMBINATION CURB RAMP PER WSDOT STD. PLAN F-40.14-03, SEE DET. ON SHT. C3.105 & C3.106
7. MATCH EXIST. IMPROVEMENTS
8. SAWCUT REMOVE AND REPLACE EXIST. AC PVMT.
9. 4" PVC PERFORATED WALL DRAIN
10. WATER QUALITY TREATMENT VAULT PER DET. ON SHT. C3.22
11. NYLOPLAST INLINE DRAIN WITH STANDARD GRATE, O.A.E
12. CEMENT CONC. ROLLED CURB 2 PER WSDOT STD. PLAN F-10.18-02

LEGEND

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- WALL DRAIN
- SAWCUT
- 420 — PROPOSED 2 FT CONTOUR
- EXISTING CONTOUR
- ×520.9 — SPOT ELEV. (FINISH GRADE)
- INTERCEPTOR TRENCH PER DET. ON C3.101
- STORM DRAIN PIPE
- SD — EXIST. STORM DRAIN PIPE
- RD — BUILDING STORM
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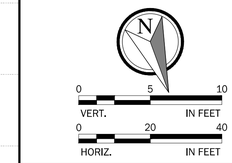

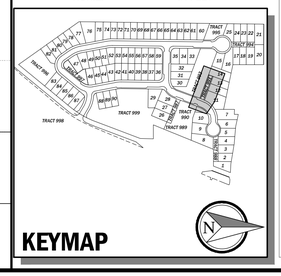

KEYMAP

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PROJECT NO.
0054-18-028

DRAWING
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SHEET 28 OF 85

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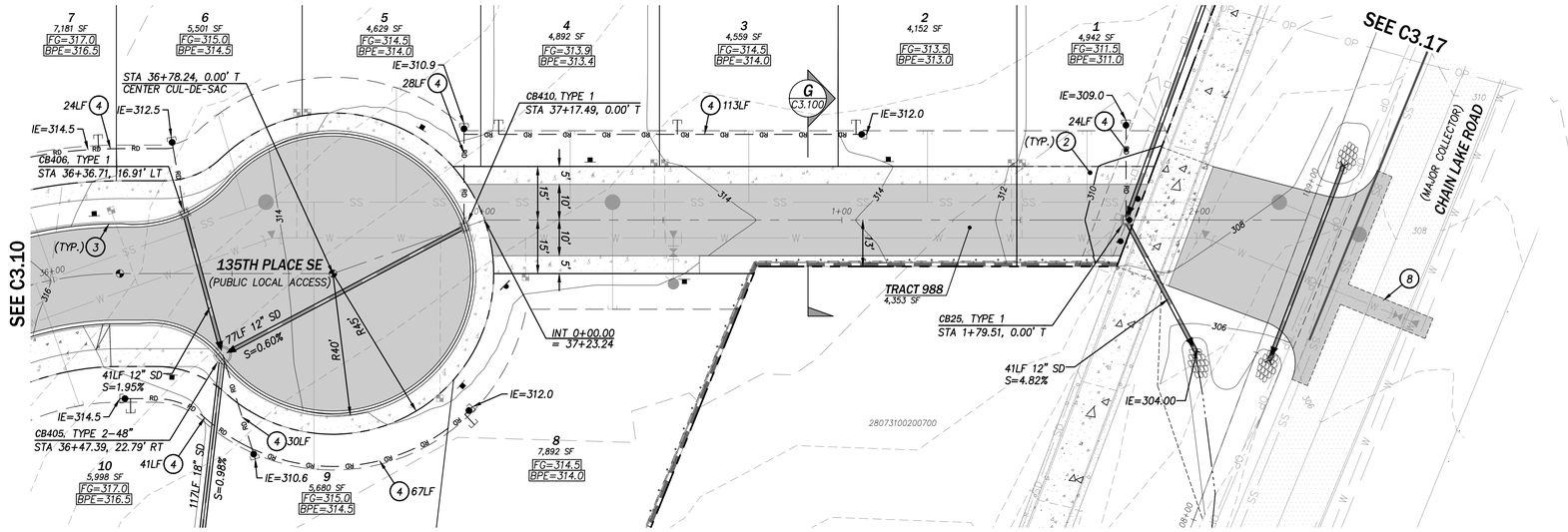
KEYMAP

PTN. OF NW 1/4 OF SEC 31, TWP 28 N, R7E W.M.



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LOT	STATION, OFFSET	WIDTH
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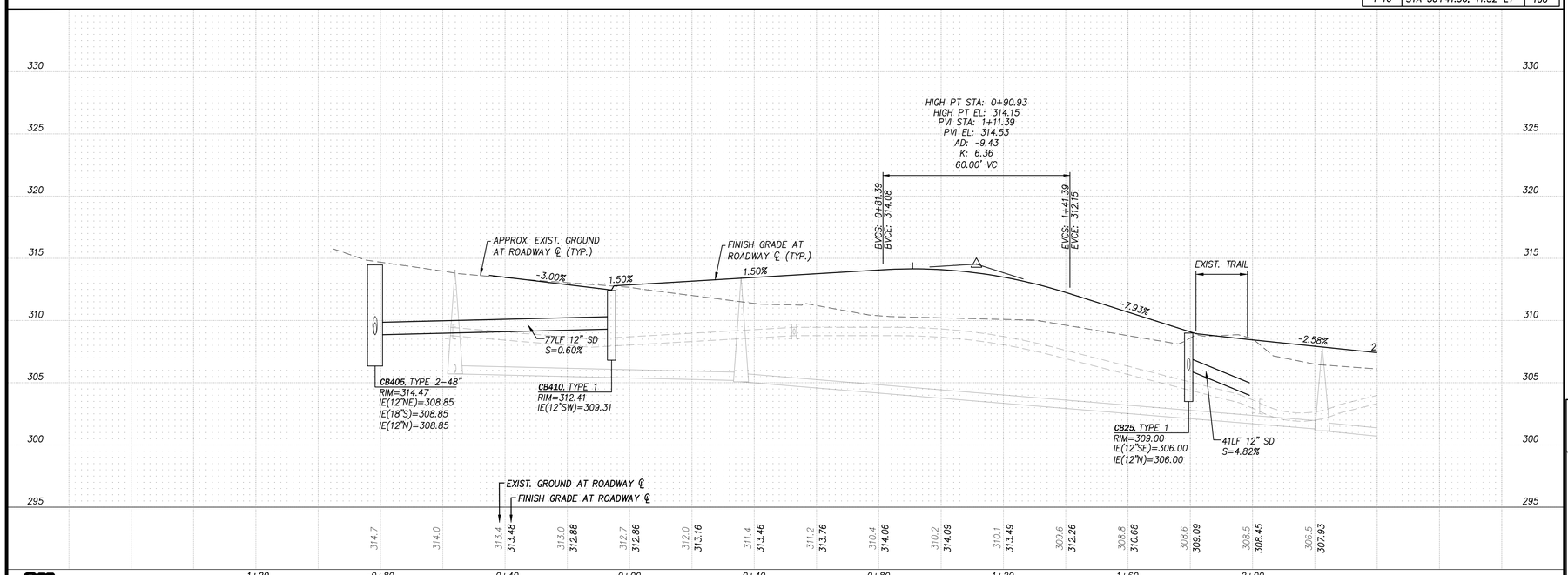

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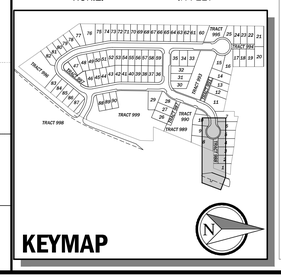

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C3.12

SHEET 29 OF 85

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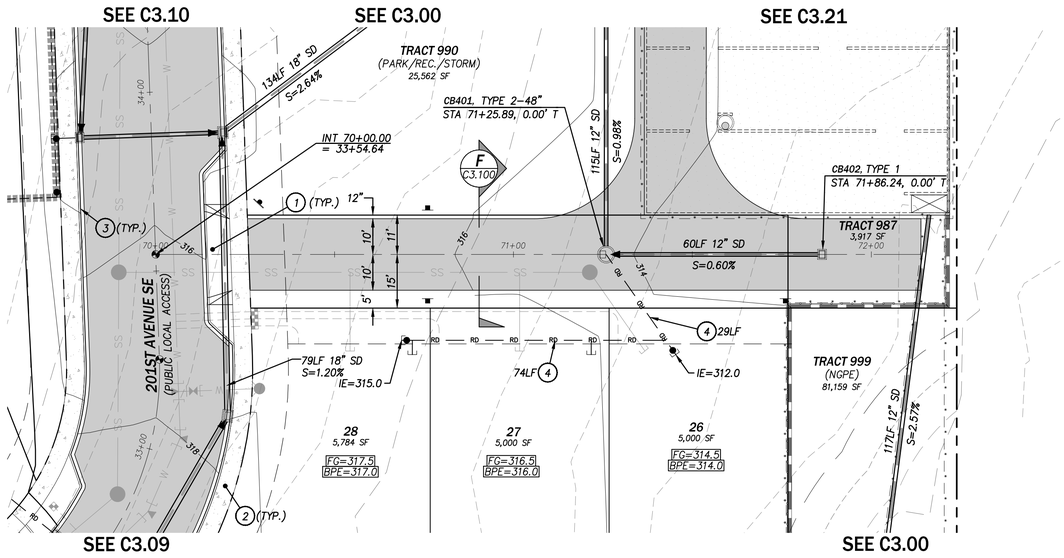

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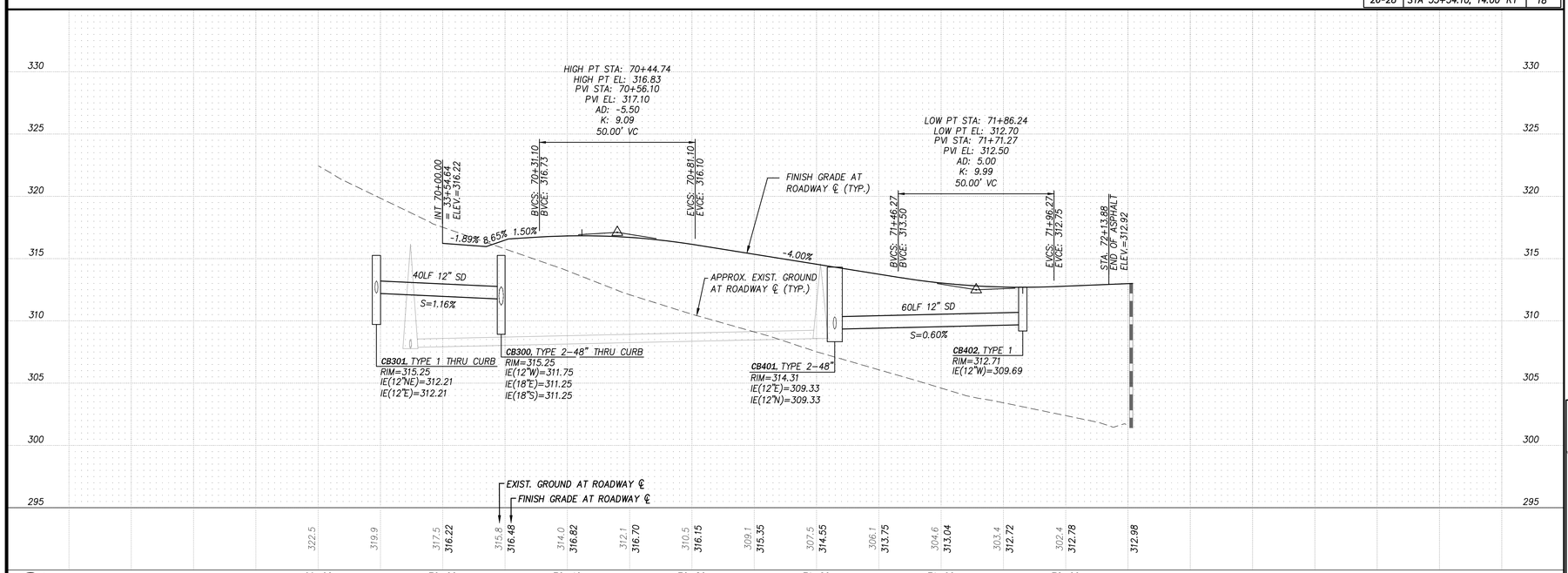
DRIVEWAY TABLE		
LOT	STATION, OFFSET	WIDTH
26-28	STA 33+54.10, 14.00' RT	18'



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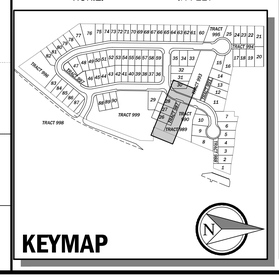

KEYMAP

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By _____ Date 05/12/2022

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NO.	DATE	REVISION	BY	CK.
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MATTHEW J. HOPKINS — STATE OF WASHINGTON — 22818 — REGISTERED PROFESSIONAL ENGINEER — 5/5/2022

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GRADING AND DRAINAGE PLAN AND PROFILE

SNOHOMISH COUNTY, WA

CITY OF MONROE

CLIENT

Garibaldi Lake, LLC
1010 MARKET STREET
KIRKALND, WA 98033
PHONE: (425)876-9390

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PROJECT NO.
0054-18-028

DRAWING
C3.13

SHEET 30 OF 85

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CSIT541828
CUSD541828
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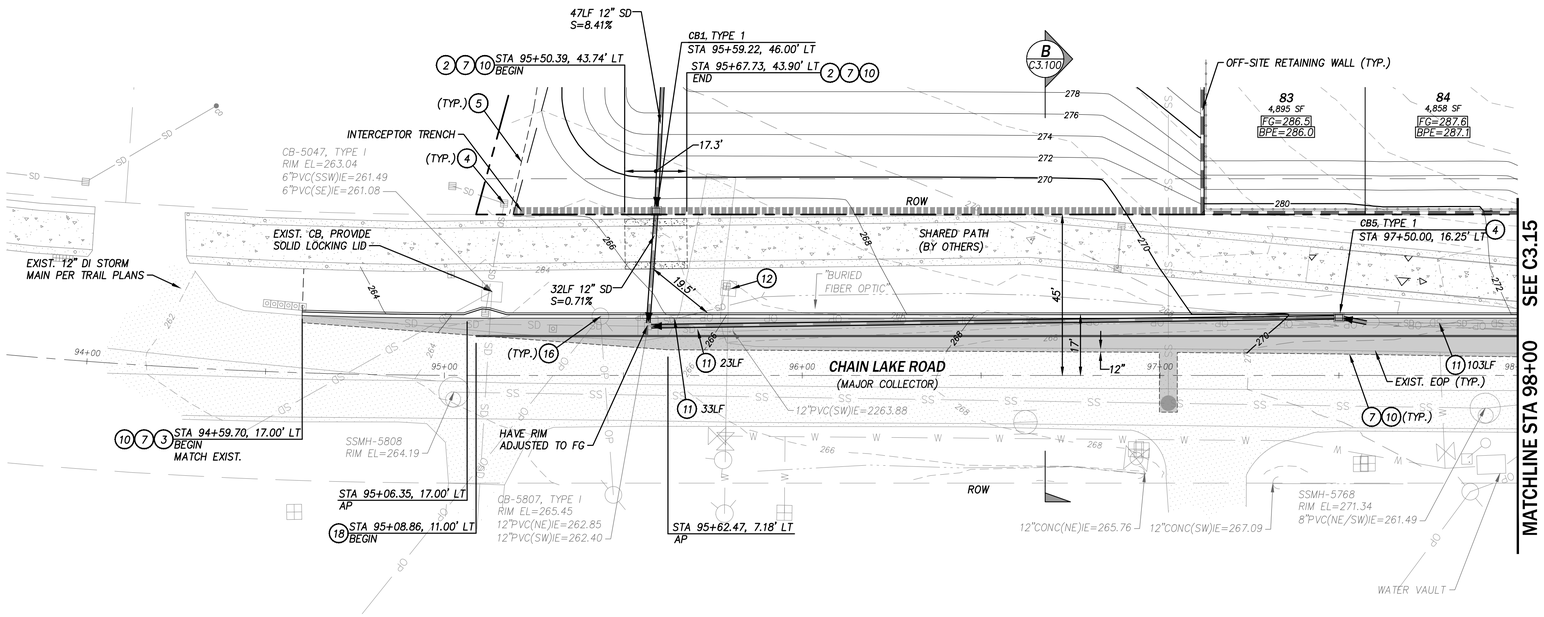
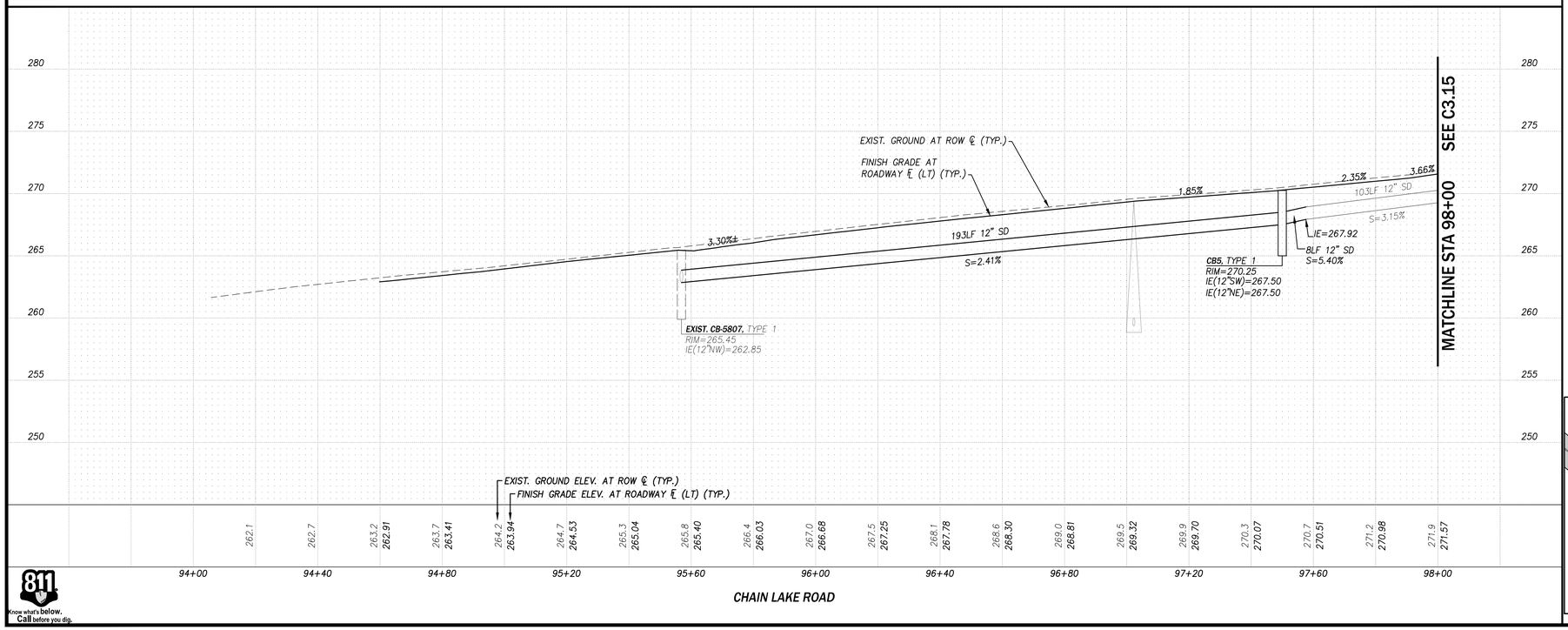
CNOT541828
KEYMAP

PTN. OF NW 1/4 OF SEC 31, TWP 28 N, R7E W.M.





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CONSTRUCTION NOTES

1. CEMENT CONC. DRIVEWAY TYPE 2 PER COM STD. DET. 307B, REFER TO DRIVEWAY TABLE THIS SHT. FOR LOCATION AND WIDTH
2. CEMENT CONC. SIDEWALK PER COM STD. DET. 306, WIDTH PER PLAN
3. CEMENT CONC. CURB AND GUTTER PER COM STD. DET. 305A
4. PIPE INLET PROTECTION PER DET. ON SHT. C3.101
5. APPROX. LIMIT OF GRADING
6. COMBINATION CURB RAMP PER WSDOT STD. PLAN F-40.14-03, SEE DET. SHT. C3.105-C3.106
7. MATCH EXIST. IMPROVEMENTS
8. DEBRIS BARRIER PER DET. ON SHT. C3.101
9. PIPE OUTLET PROTECTION PER DET. ON SHT. C3.101
10. SAWCUT AND REMOVE EXIST. AC PVMT.
11. REMOVE EXIST. STORM CULVERT, APPROX. LENGTH PER PLAN
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13. REMOVE EXIST. OVERHEAD POWER SERVICE PER PURVEYOR
14. AC RAMP, SEE SHT. C3.105 FOR DETAILS
15. RELOCATE FIRE HYDRANT, SEE SHT. C4.00
16. RELOCATE EXIST. UTILITY POLE PER PURVEYOR
17. REMOVE EXIST. CB AND STORM DRAINS
18. PAINTED WHITE EDGE LINE PER WSDOT STD. PLAN M-20.10-03
19. CROSSWALK PVMT. MARKINGS PER COM STD. DWG. 325, SEE C0.22
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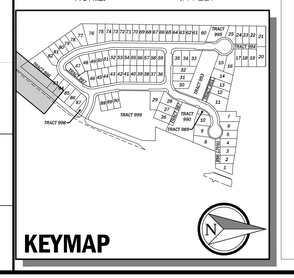

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PROJECT NO.
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C3.14

SHEET 31 OF 85

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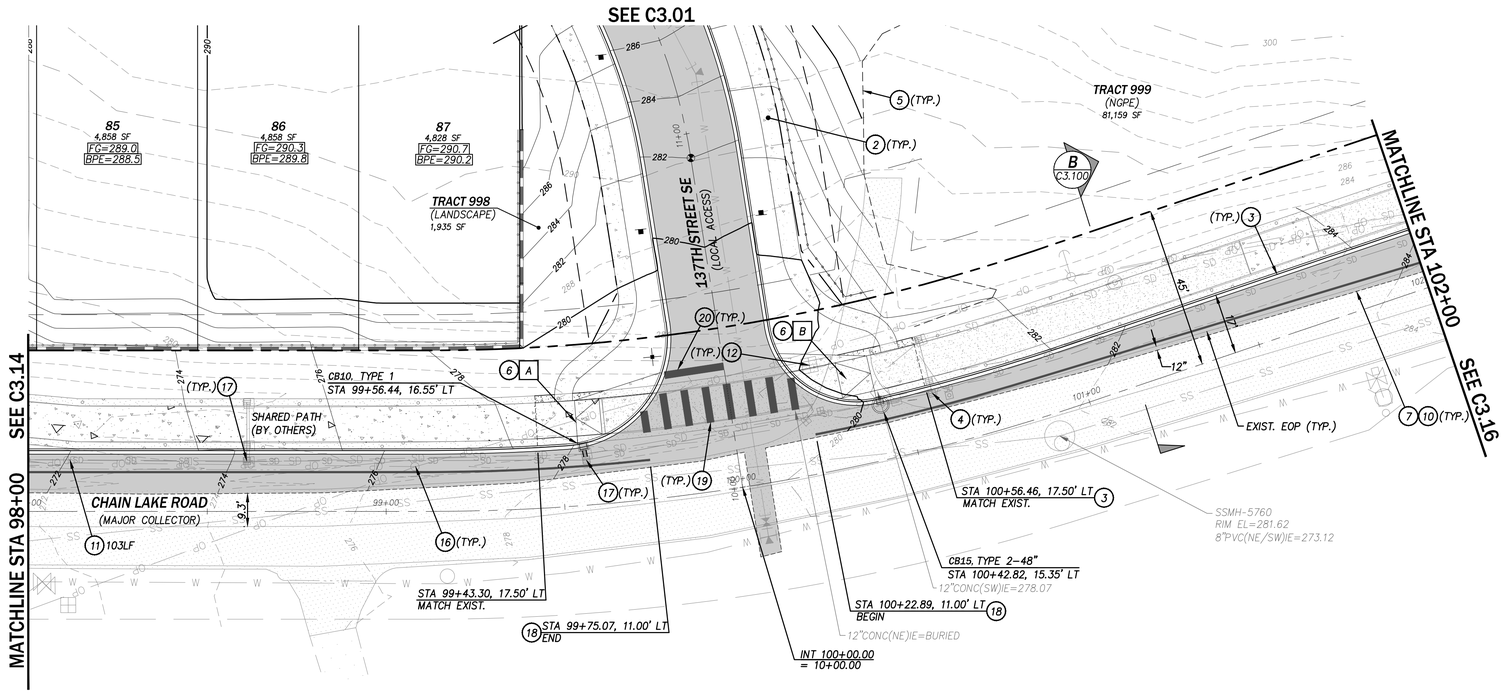

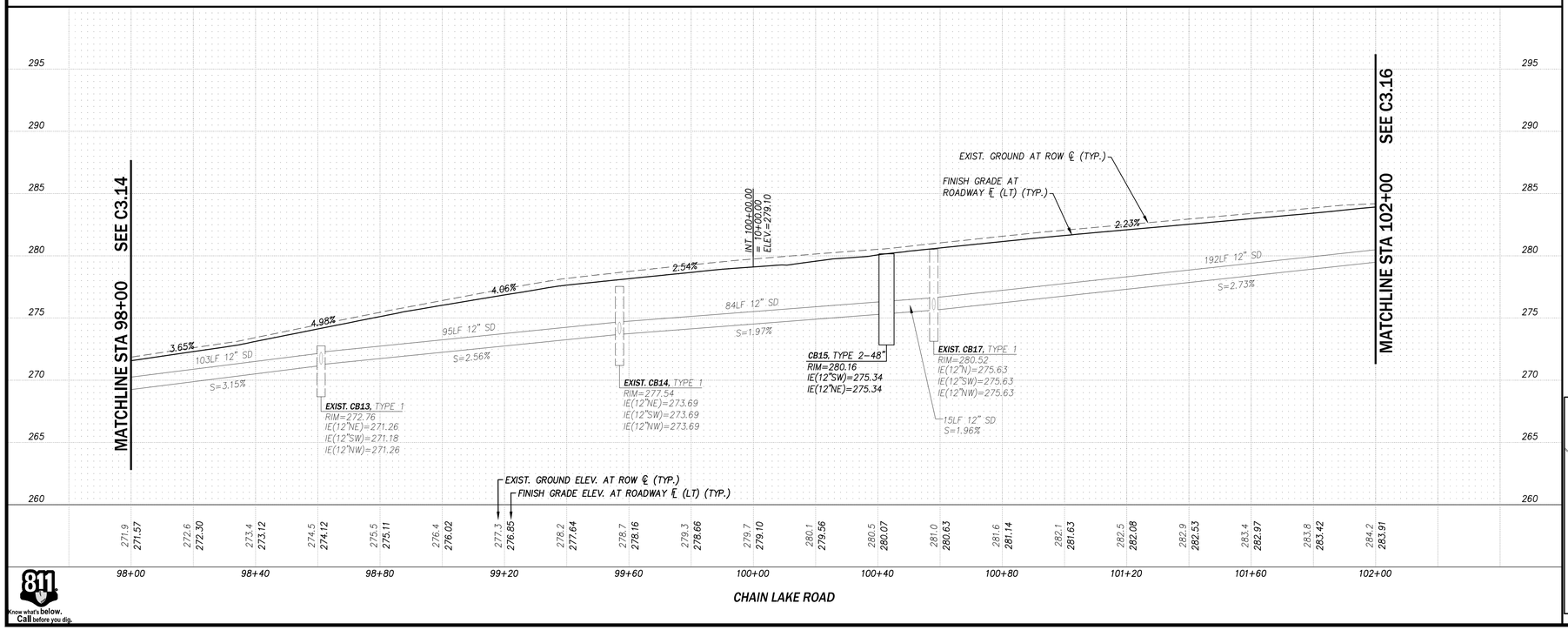

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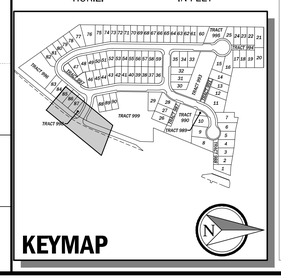

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PROJECT NO.
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DRAWING
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SHEET 32 OF 85

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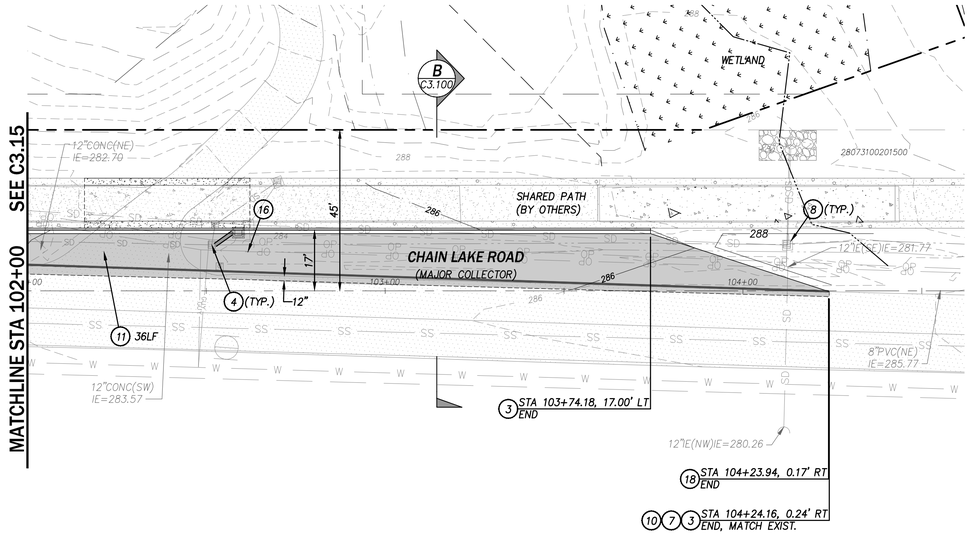

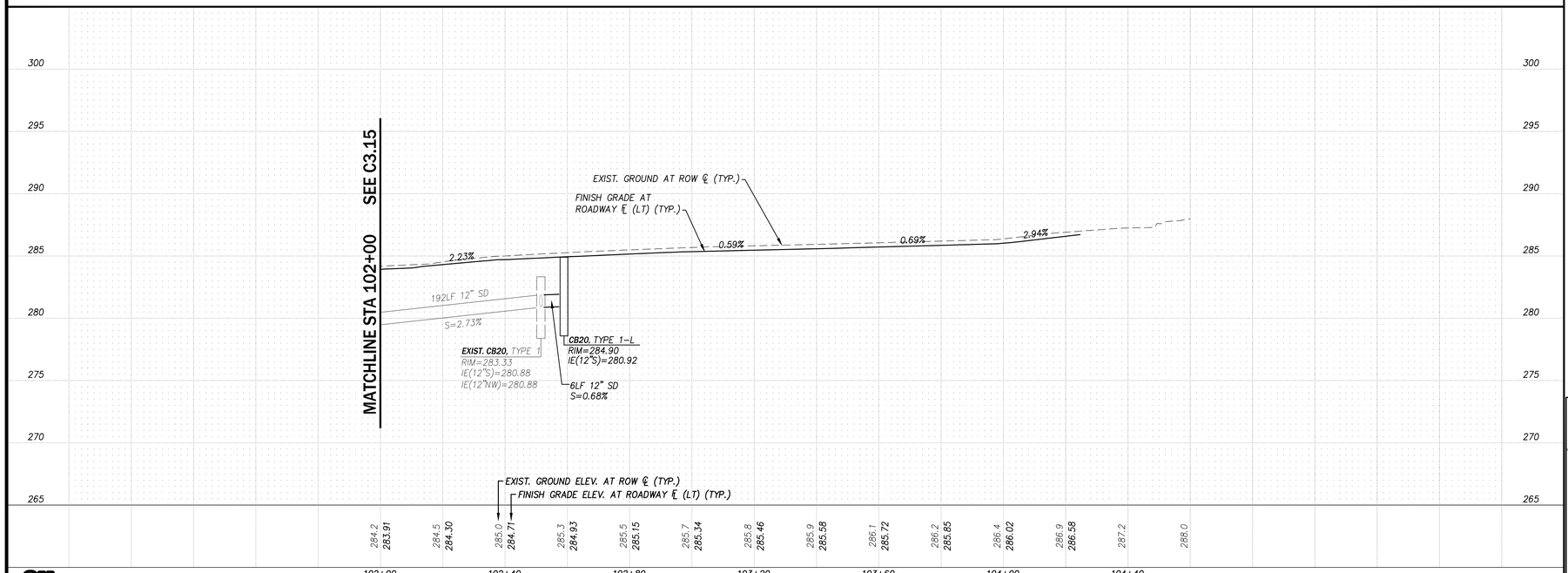

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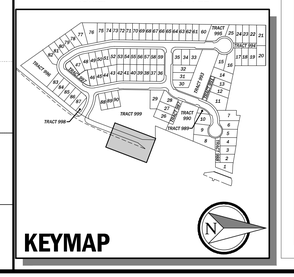

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PROJECT NO.
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SHEET 33 OF 85

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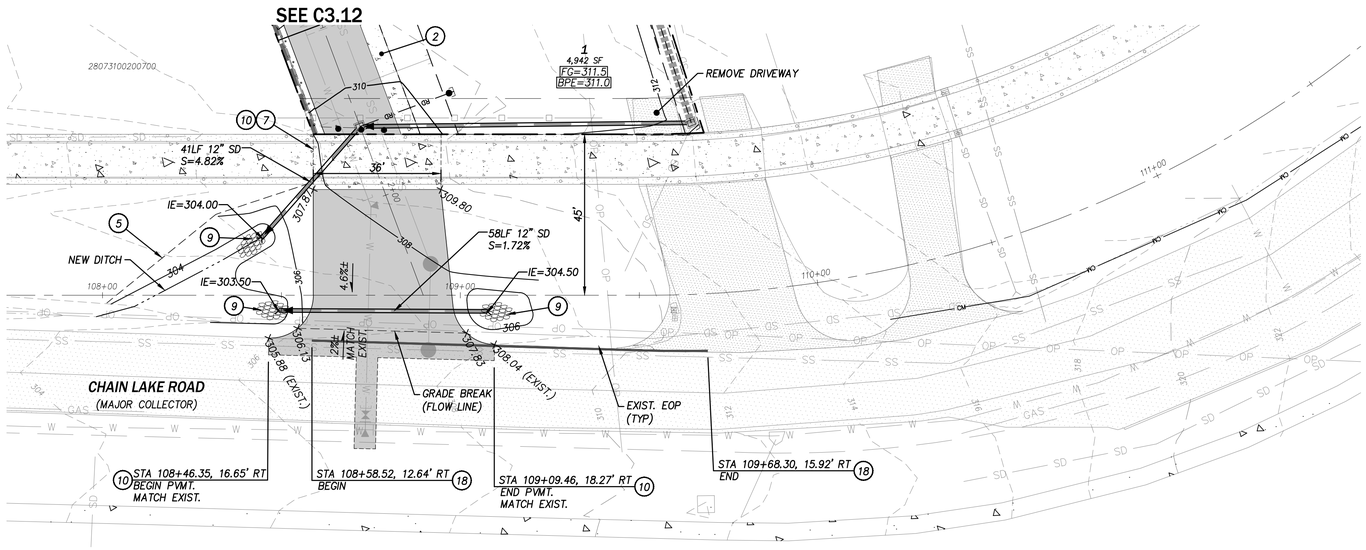

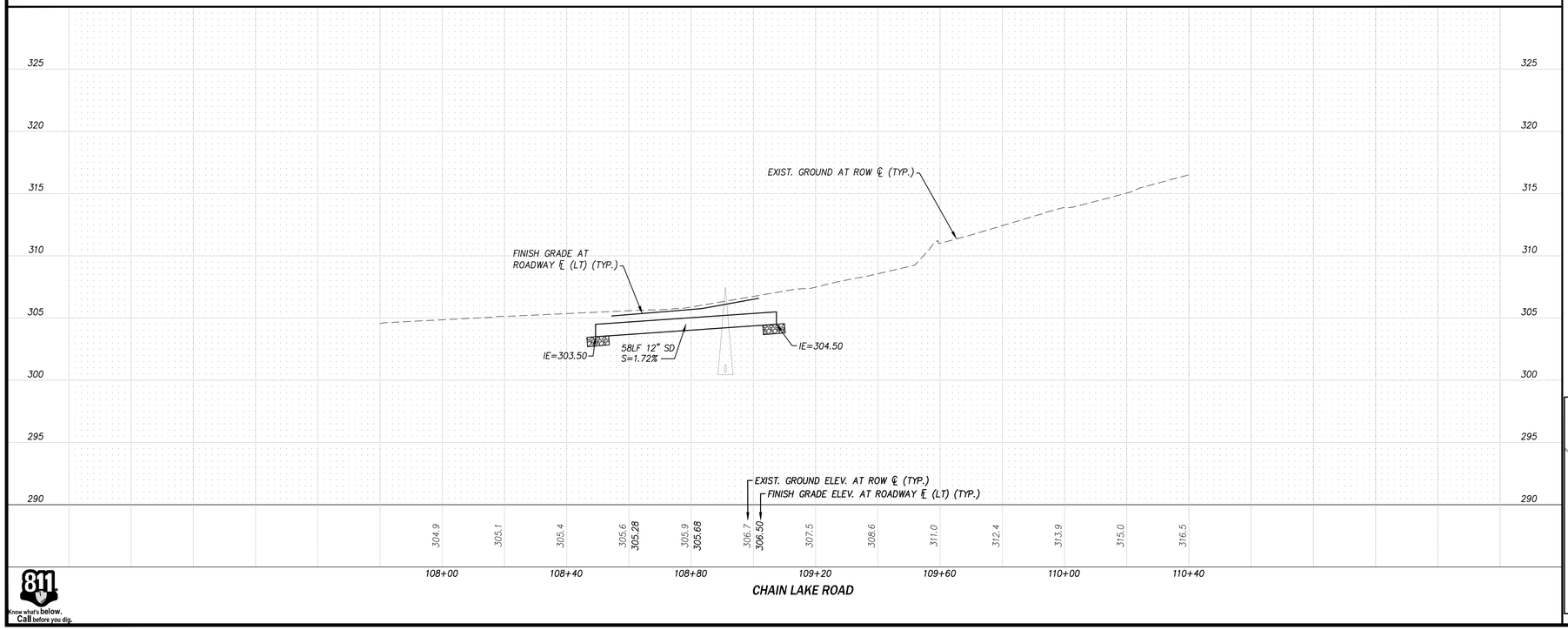

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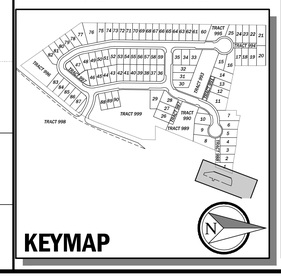

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FRONTAGE PLAN AND PROFILE

CITY OF MONROE — SNOHOMISH COUNTY, WA

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Garibaldi Lake, LLC
1010 MARKET STREET
KIRKALND, WA 98033
PHONE: (425)876-9390

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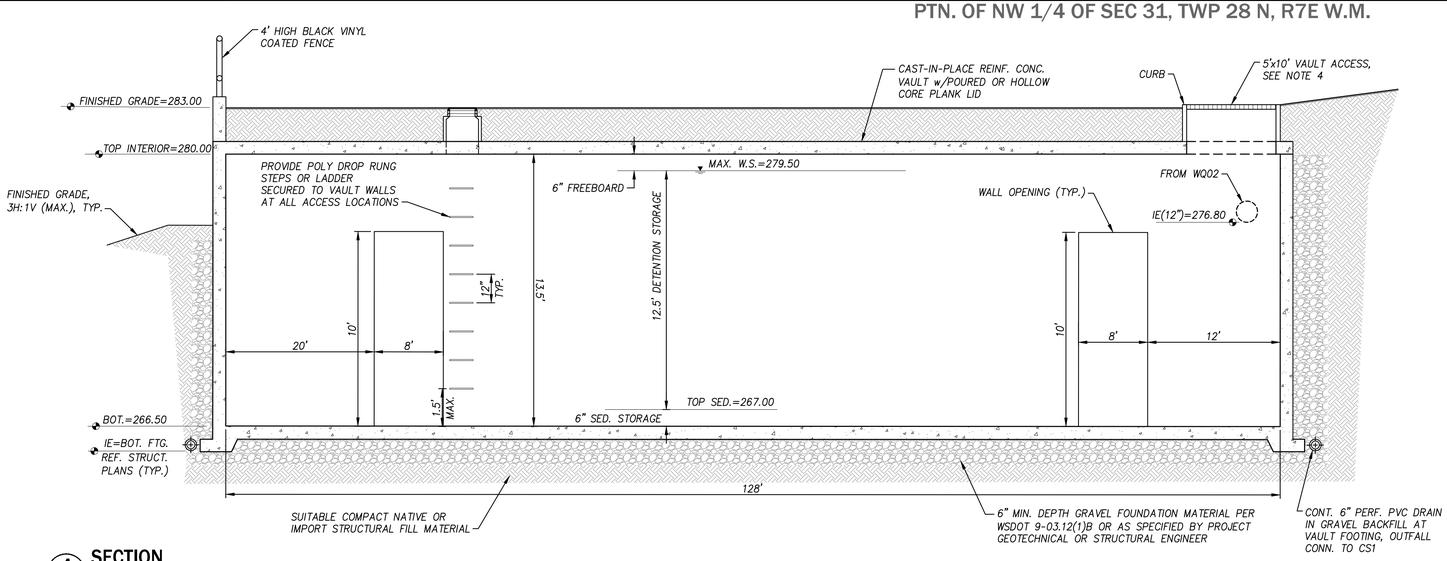

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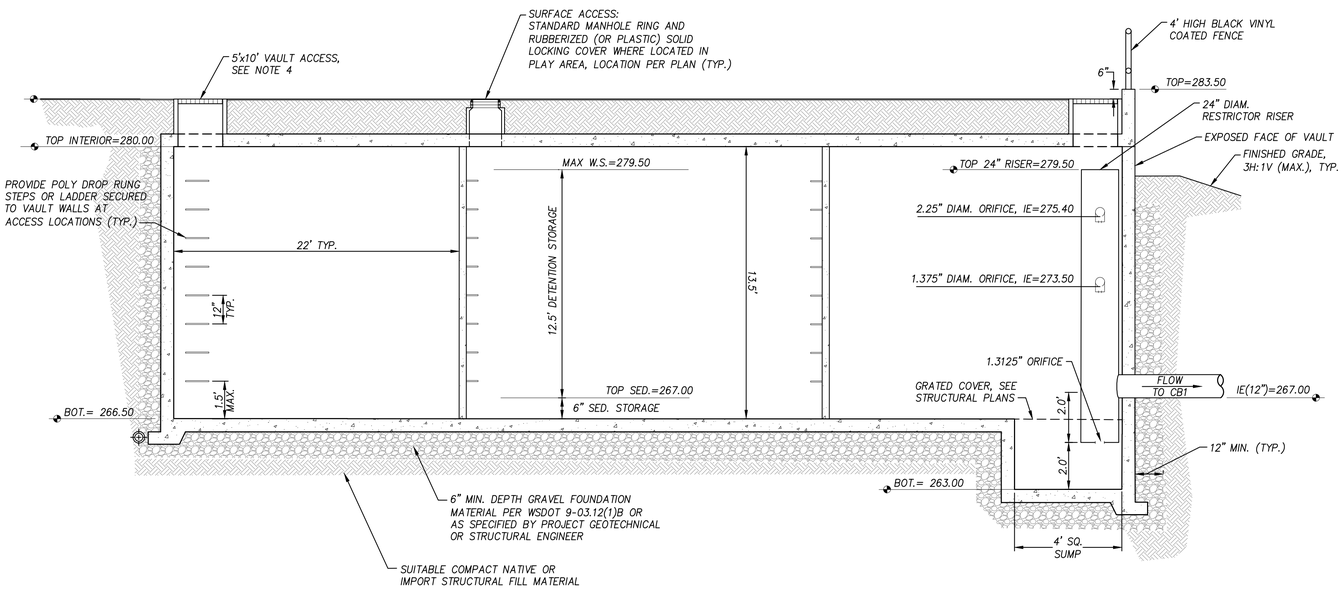

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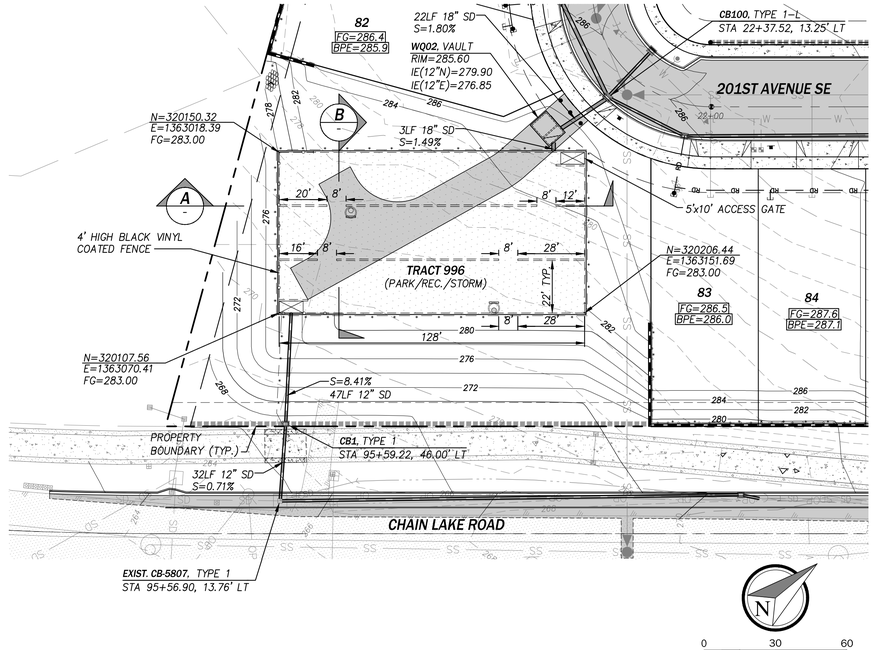

VAULT PLAN

SCALE: AS NOTED

NOTES:

1. VAULTS AND ALL APPURTENANCES SHALL MEET THE STRUCTURAL REQUIREMENTS FOR OVERBURDEN SUPPORT UNDER A MINIMUM HS-25 TRAFFIC LOADING AND 45K ON 18"X18" PAD OUTRIGGER LOADING WITH ANY SPECIAL PROVISIONS OF THE STRUCTURAL PLANS AND DETAILS.
2. ALL METAL PARTS SHALL BE CORROSION RESISTANT STEEL PARTS SHALL BE STAINLESS STEEL, OR EQUIVALENT.
3. A CONTINUOUS PVC OR HYDROPHILIC WATER STOP SHALL BE INSTALLED AT ALL CAST-IN-PLACE CONCRETE CONSTRUCTION OR EXPANSION JOINTS. THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH MANUFACTURER DATA FOR THE SPECIFIC TYPE AND MODEL OF WATER STOP PROPOSED FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.
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VAULT PLAN AND SECTIONS

SNOHOMISH COUNTY, WA

CITY OF MONROE

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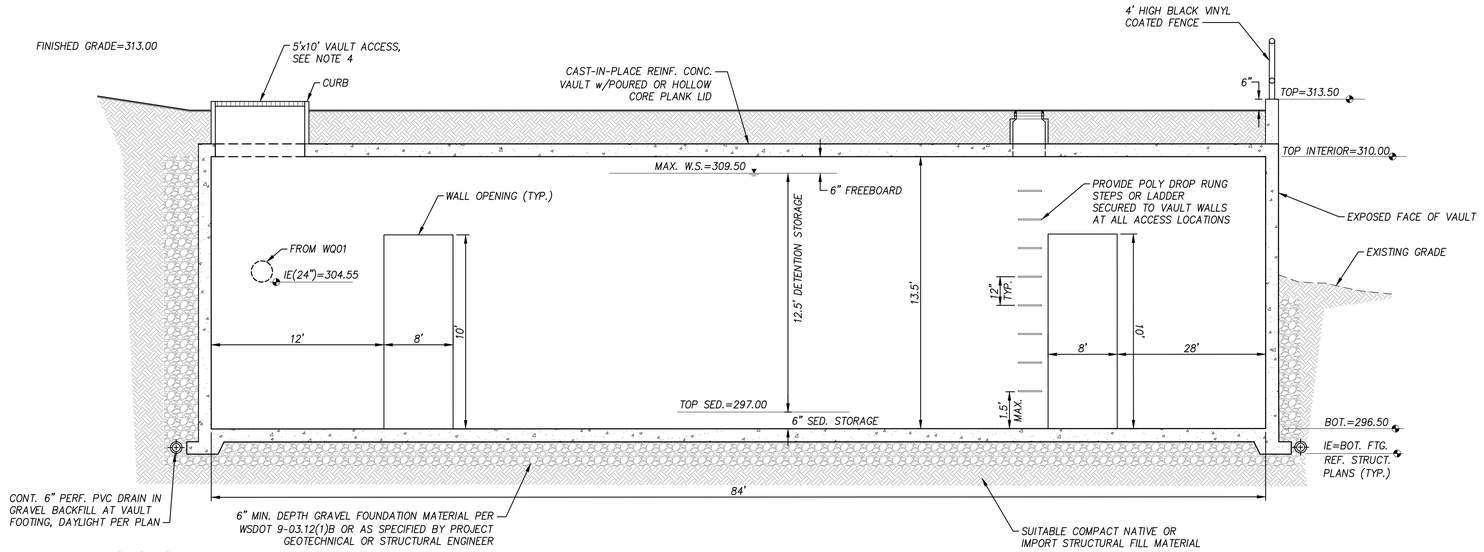

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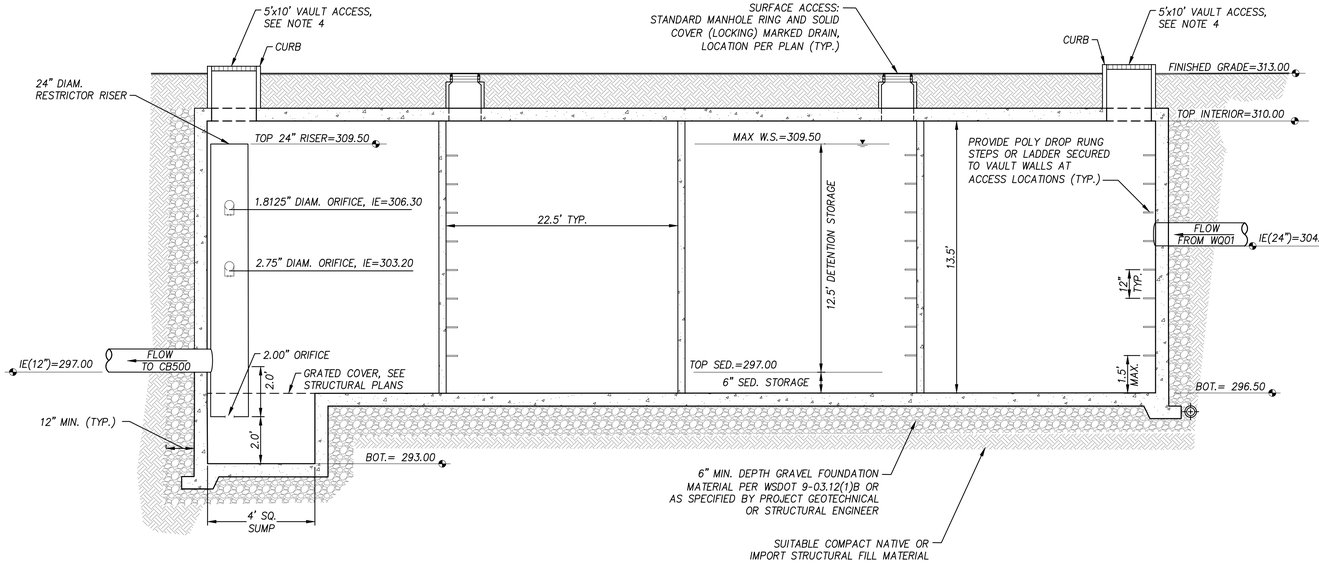

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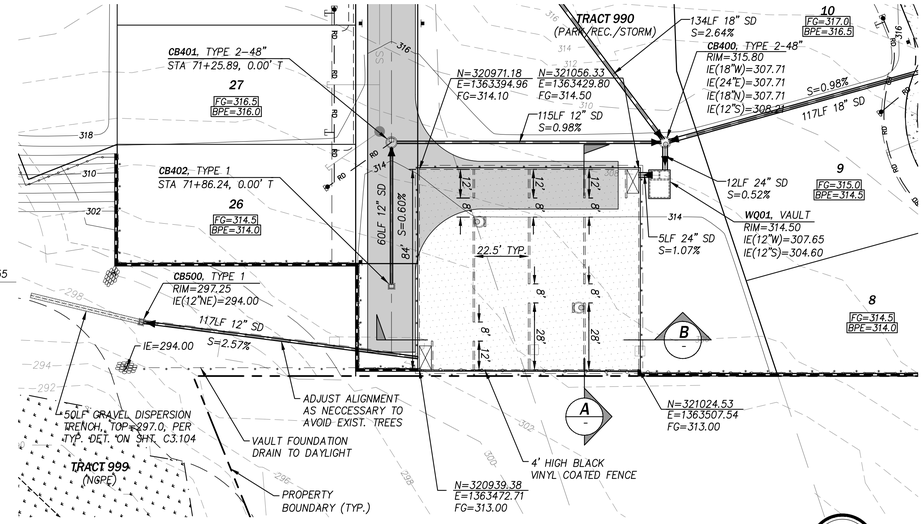

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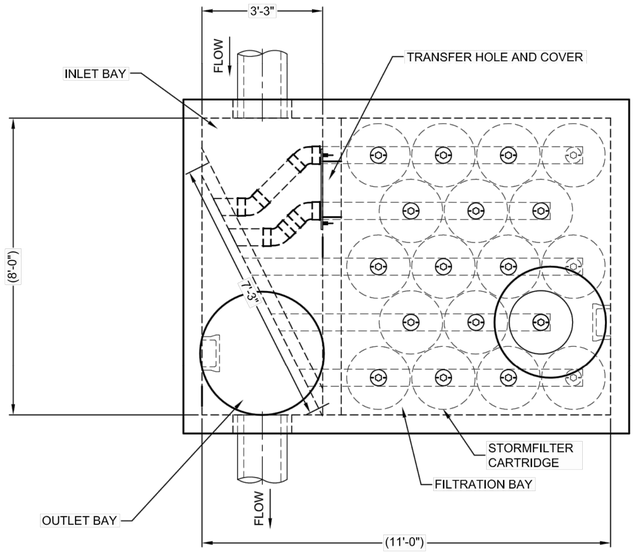
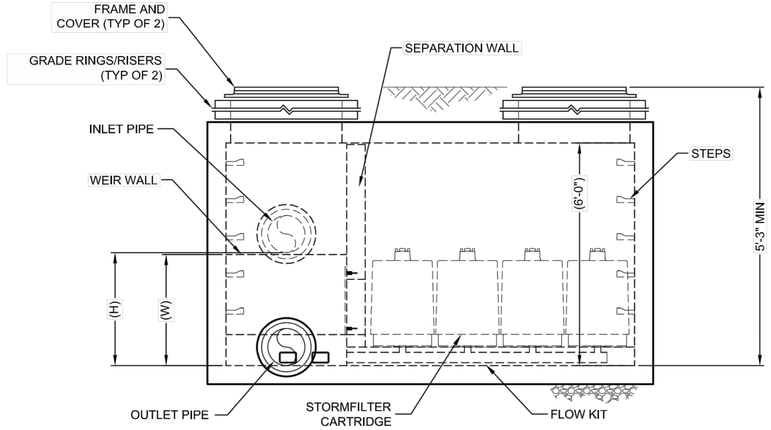


PLAN



ELEVATION

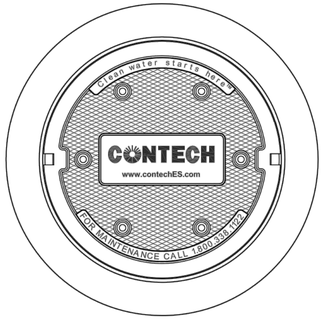
The Stormwater Management StormFilter®

THIS PRODUCT MAY BE PROTECTED BY ONE OR MORE OF THE FOLLOWING U.S. PATENTS: 5,322,631; 5,504,378; 5,707,527; 5,849,181 AND/OR FOREIGN EQUIVALENTS. RELATED FOREIGN PATENTS, OR OTHER PATENTS PENDING.

STORMFILTER DESIGN TABLE

- THE 8' x 11' PEAK DIVERSION STORMFILTER TREATMENT CAPACITY VARIES BY CARTRIDGE COUNT AND LOCALLY APPROVED SURFACE AREA SPECIFIC FLOW RATE. PEAK CONVEYANCE CAPACITY TO BE DETERMINED BY ENGINEER OF RECORD.
- THE PEAK DIVERSION STORMFILTER IS AVAILABLE IN A LEFT INLET (AS SHOWN) OR RIGHT INLET CONFIGURATION.
- ALL PARTS AND INTERNAL ASSEMBLY PROVIDED BY CONTECH UNLESS OTHERWISE NOTED.

CARTRIDGE HEIGHT	27"	18"	LOW DROP
SYSTEM HYDRAULIC DROP (H - REQ'D. MIN.)	3.05'	2.3'	1.8'
HEIGHT OF WEIR (W)	3.00'	2.25'	1.75'
TREATMENT BY MEDIA SURFACE AREA	1 gpm/ft²	1 gpm/ft²	1 gpm/ft²
CARTRIDGE FLOW RATE (gpm)	11.25	7.5	5



FRAME AND COVER
(DIAMETER VARIES)
N.T.S.

PERFORMANCE SPECIFICATION
FILTER CARTRIDGES SHALL BE MEDIA-FILLED, PASSIVE, SIPHON ACTUATED, RADIAL FLOW, AND SELF CLEANING. **RADIAL MEDIA DEPTH SHALL BE 7-INCHES**. FILTER MEDIA CONTACT TIME SHALL BE AT LEAST **75 SECONDS**.
SPECIFIC FLOW RATE SHALL BE **1 GPM/SF (MAXIMUM)**. SPECIFIC FLOW RATE IS THE MEASURE OF THE FLOW (GPM) DIVIDED BY THE MEDIA SURFACE CONTACT AREA (SF).

GENERAL NOTES
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. DIMENSIONS MARKED WITH ( ) ARE REFERENCE DIMENSIONS. ACTUAL DIMENSIONS MAY VARY.
3. FOR FABRICATION DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHTS, PLEASE CONTACT YOUR CONTECH REPRESENTATIVE. www.ContechES.com
4. STORMFILTER WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
5. STRUCTURE SHALL MEET AASHTO HS20 LOAD RATING, ASSUMING EARTH COVER OF 0' - 5' AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 AND BE CAST WITH THE CONTECH LOGO.

INSTALLATION NOTES
A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE STORMFILTER STRUCTURE (LIFTING CLUTCHES PROVIDED).
C. CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL SECTIONS AND ASSEMBLE STRUCTURE.
D. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT PIPES. MATCH OUTLET PIPE INVERT WITH OUTLET BAY FLOOR.
E. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO PROTECT CARTRIDGES FROM CONSTRUCTION-RELATED EROSION RUNOFF.
F. CONTRACTOR TO REMOVE THE TRANSFER HOLE COVER WHEN THE SYSTEM IS BROUGHT ONLINE.

CONTECH®
ENGINEERED SOLUTIONS LLC
www.ContechES.com
9025 Centre Pointe Dr., Suite 400, West Chester, OH 45069
800-338-1122 513-645-7000 513-645-7993 FAX

THE STORMWATER MANAGEMENT STORMFILTER
8' x 11' PEAK DIVERSION STORMFILTER
STANDARD DETAIL

SITE SPECIFIC DATA REQUIREMENTS	
STRUCTURE ID	WQ01
WATER QUALITY FLOW RATE (cfs)	0.53
PEAK FLOW RATE (cfs)	8.23
RETURN PERIOD OF PEAK FLOW (yrs)	100
# OF CARTRIDGES REQUIRED	13
CARTRIDGE FLOW RATE	18.79
MEDIA TYPE (CFS, PERLITE, ZPG)	PSORB

PIPE DATA	I.E.	MATERIAL	DIAMETER
INLET PIPE	307.65	LCPE (ADS N-12)	12"
OUTLET PIPE	304.60	LCPE (ADS N-12)	12"

SITE SPECIFIC DATA REQUIREMENTS	
STRUCTURE ID	WQ02
WATER QUALITY FLOW RATE (cfs)	0.465
PEAK FLOW RATE (cfs)	6.62
RETURN PERIOD OF PEAK FLOW (yrs)	100
# OF CARTRIDGES REQUIRED	12
CARTRIDGE FLOW RATE	18.79
MEDIA TYPE (CFS, PERLITE, ZPG)	PSORB

PIPE DATA	I.E.	MATERIAL	DIAMETER
INLET PIPE	279.90	LCPE (ADS N-12)	12"
OUTLET PIPE	276.85	LCPE (ADS N-12)	12"

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WATER QUALITY DETAILS
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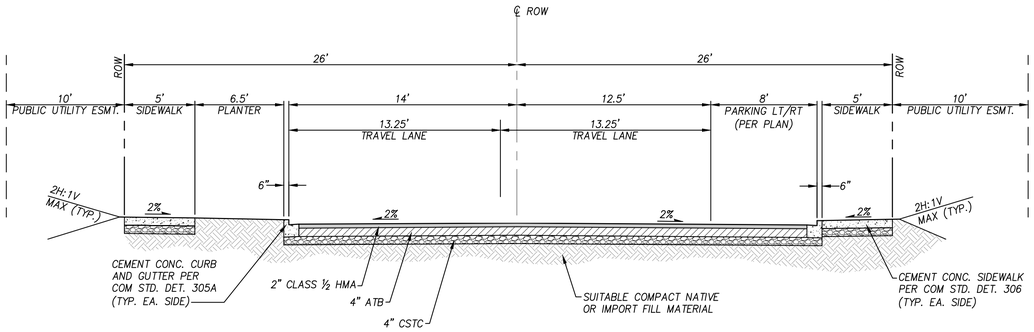
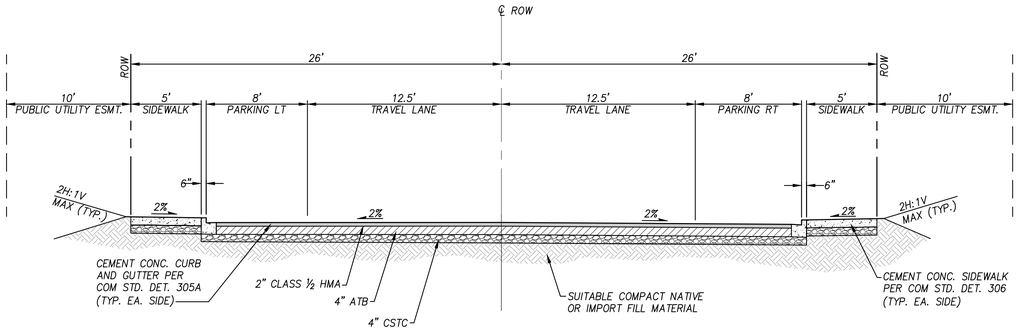
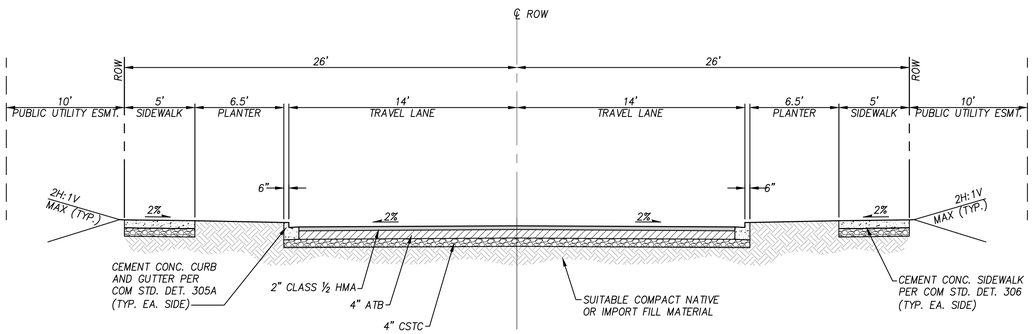


PARALLEL PARKING ONE SIDE



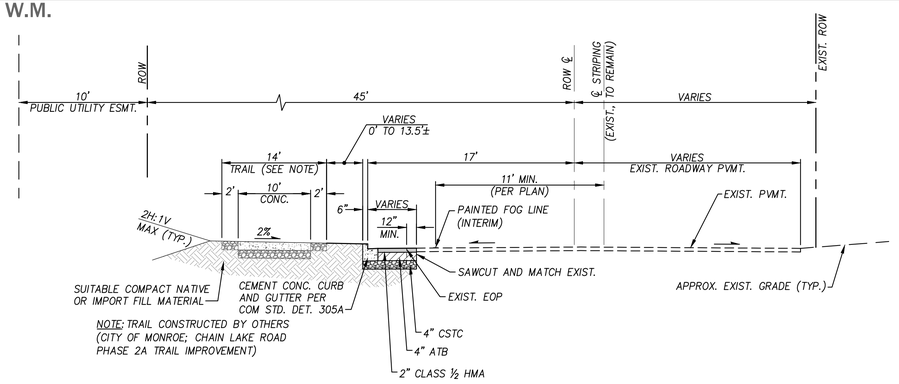
PARALLEL PARKING EACH SIDE



STANDARD

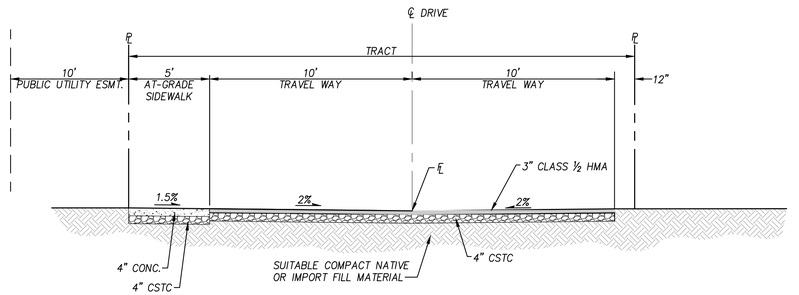
A C.020 TYPICAL ROAD SECTION - LOCAL ACCESS

NOT TO SCALE (PUBLIC; ON-STREET PARKING CONDITIONS PER PLAN)



B C0.20 TYPICAL ROAD SECTION - CHAIN LAKE ROAD

NOT TO SCALE (PUBLIC, MAJOR COLLECTOR)



C C0.20 TYPICAL ROAD SECTION - TRACT 988

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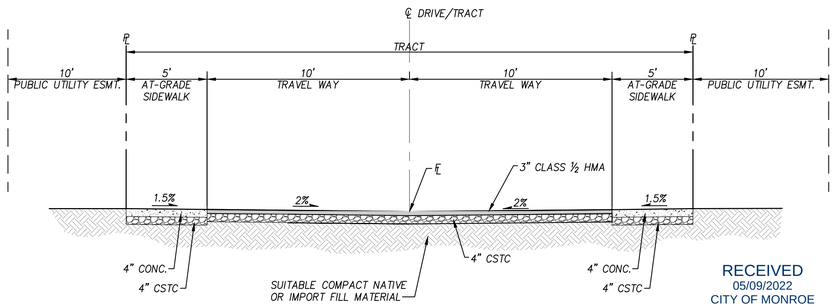

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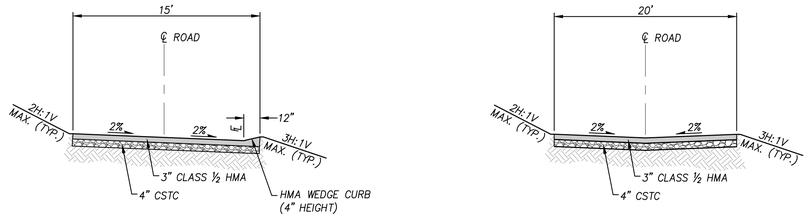
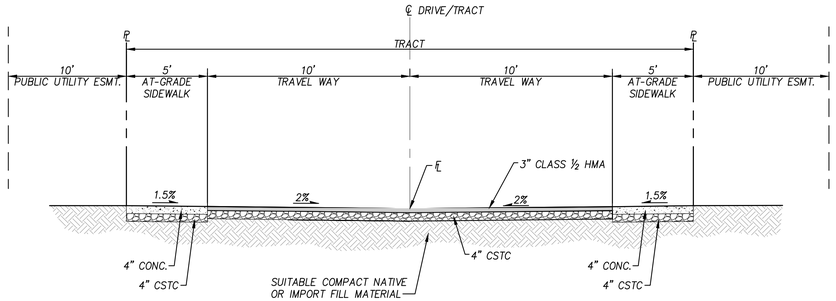


E C0.20 TYPICAL ROAD SECTION - VAULT ACCESS ROAD

NOT TO SCALE

F C0.20 TYPICAL ROAD SECTION - TRACT 987

NOT TO SCALE



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MATTHEW J. HOPKINS — STATE OF WASHINGTON — 22810 — REGISTERED PROFESSIONAL ENGINEER — 5/5/2022

GARIBALDI PRD

ENGINEERING PERMIT PACKAGE

TYPICAL ROADWAY SECTIONS

CITY OF MONROE — SNOHOMISH COUNTY, WA

CLIENT

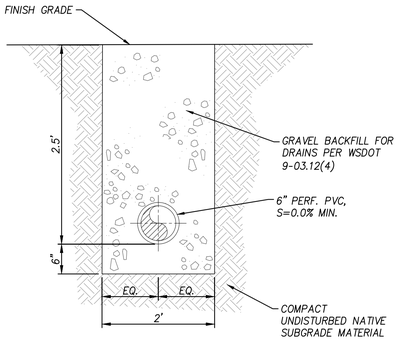
Garibaldi Lake, LLC
1010 MARKET STREET
KIRKALND, WA 98033
PHONE: (425)876-9390

C|P|H CONSULTANTS
Site Planning • Civil Engineering
Landscape Architecture • Land Use Consulting
11321-B NE 120th Street
Kirkland, WA 98034 • (425) 285-2390
101 South Wenatchee Avenue, Suite C3
Wenatchee, WA 98801 • (509) 293-7731
www.cphconsultants.com

PROJECT NO.
0054-18-028

DRAWING
C3.100

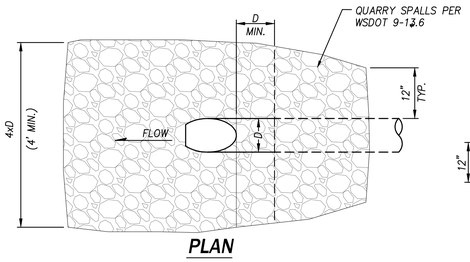
SHEET 38 OF 85



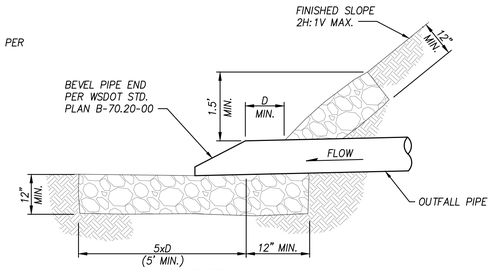
NOTE:
THE PROJECT GEOTECHNICAL ENGINEER SHALL OBSERVE THE TRENCH EXCAVATION AT THE TIME OF CONSTRUCTION TO CONFIRM WHETHER ADDITIONAL DEPTH IS NECESSARY TO MEET THE INTENT OF THEIR DESIGN RECOMMENDATION TO INTERCEPT GROUNDWATER.

TYPICAL GRAVEL INTERCEPTOR TRENCH SECTION

NOT TO SCALE



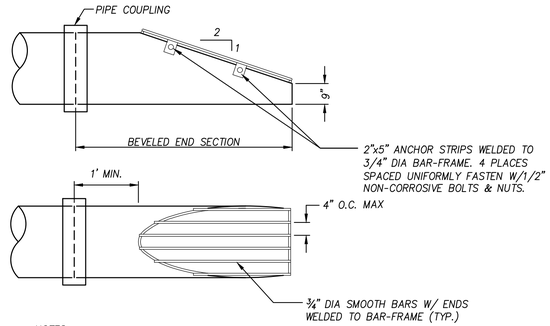
PLAN



SECTION

PIPE OUTLET PROTECTION

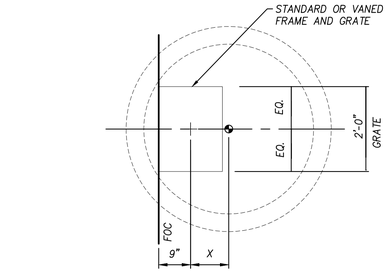
NOT TO SCALE

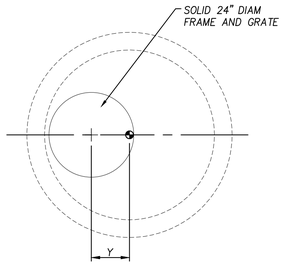


NOTES:
1. CMP OR CPEP SMOOTH INTERIOR END SECTION SHOWN; FOR CONCRETE PIPE BEVELED END SECTION, SEE SCPW STD. DET. 5-050.
2. ALL METAL PARTS AND BOLTS SHALL BE ALUMINUM, FASTENERS SHALL BE STAINLESS STEEL

DEBRIS BARRIER DETAIL

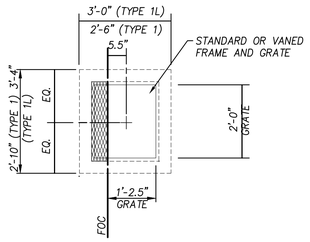
NOT TO SCALE

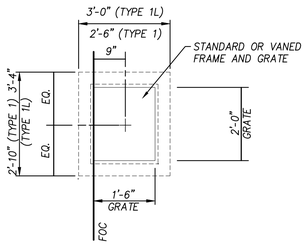




CB TYPE 2		X	Y
I.D.	O.D.		
48"	56"	11"	12"
54"	63"	14.5"	15"
60"	70"	18"	18"
72"	84"	24"	24"
96"	112"	37"	36"

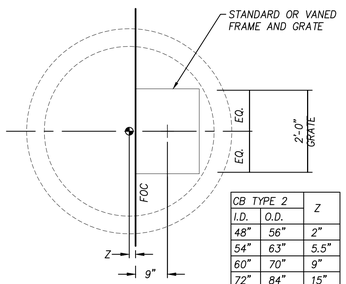
TYPE 2





TYPE 1 and TYPE 1L (THROUGH CURB INLET)

TYPE 1 and TYPE 1L



CB TYPE 2		Z
I.D.	O.D.	
48"	56"	2"
54"	63"	5.5"
60"	70"	9"
72"	84"	15"
96"	112"	28"

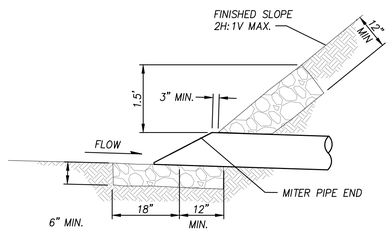
REVERSE TYPE 2
(SEE NOTE 3)

NOTES:
1. CENTER OF GRATE = CENTER OF STRUCTURE FOR TYPE 1 AND TYPE 1L STRUCTURES ONLY
2. NORTHING AND EASTING (OR STATION AND OFFSET FROM CONSTRUCTION CENTERLINE) SHOWN ON PLAN REFERENCES CENTER OF STRUCTURE FOR ALL DRAINAGE FACILITIES UNLESS OTHERWISE NOTED ON PLANS
3. REVERSE TYPE 2 CATCH BASIN TO BE INSTALLED ONLY AT LOCATIONS SPECIFIED ON PLANS

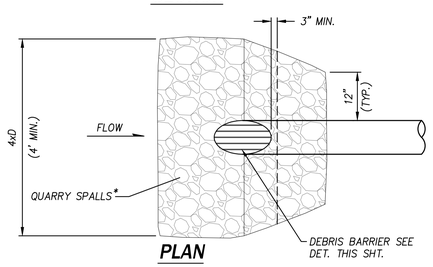
LEGEND
+ = CENTER OF GRATE
⊕ = CENTER OF STRUCTURE
FOC = FACE OF CURB

STRUCTURE PLACEMENT DETAIL

NOT TO SCALE



SECTION



PLAN

* QUARRY SPALLS MATERIALS PER WSDOT 9-13.6

PIPE INLET PROTECTION

NOT TO SCALE

RECEIVED
05/09/2022
CITY OF MONROE

These plans have been reviewed for compliance with the City of Monroe Public Works Design and Construction Standards and required conditions regarding water, sanitary sewer, storm water management, and streets only. Prior to beginning construction additional approvals may be required from other city departments or state or federal agencies.

☒ Approved ☐ Approved as corrected

The granting of this approval does not presume to give authority to violate or cancel the provisions of any law, conditions or regulation regarding this development activity or the performance of construction. Subject to field inspection and correction. No changes authorized unless approved by the City Engineer.

CITY OF MONROE ENGINEERING

By _____ Date 05/12/2022

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1	5/4/22	CITY PERMIT SUBMITTAL	PCE	MJH

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DRAWING
C3.101

SHEET 39 OF 85

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

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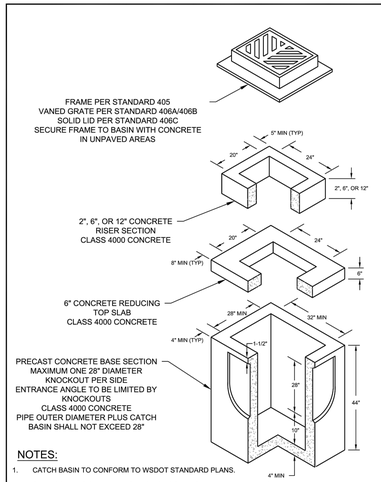
5/5/2022 10:03 AM PETER EVANS



NOTES:

1. CATCH BASIN TO CONFORM TO WSDOT STANDARD PLANS.
2. MAXIMUM DEPTH FROM FINISH GRADE TO PIPE INVERT SHALL BE LESS THAN 5 FEET. TYPE II CATCH BASIN SHALL BE REQUIRED WHERE INVERT DEPTHS ARE 5 FEET OR GREATER.
3. SAND COLLARS SHALL BE USED ON SMOOTH BORE EXTERNAL PIPES.
4. RISER STACK SHALL NOT DEFLECT MORE THAN 6" HORIZONTALLY OVER TOTAL RISER STACK HEIGHT.

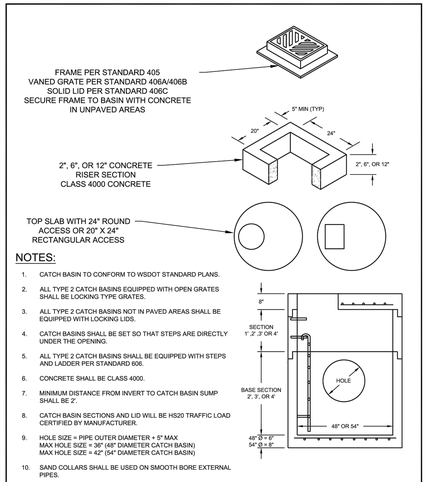
DESCRIPTION	DESIGNATION
TYPE 1 CATCH BASIN	402
SCALE: NOT TO SCALE	REVISED: NOV 10, 2021



NOTES:

1. CATCH BASIN TO CONFORM TO WSDOT STANDARD PLANS.
2. SAND COLLARS SHALL BE USED ON SMOOTH BORE EXTERNAL PIPES.
3. RISER STACK SHALL NOT DEFLECT MORE THAN 6" HORIZONTALLY OVER TOTAL RISER STACK HEIGHT.

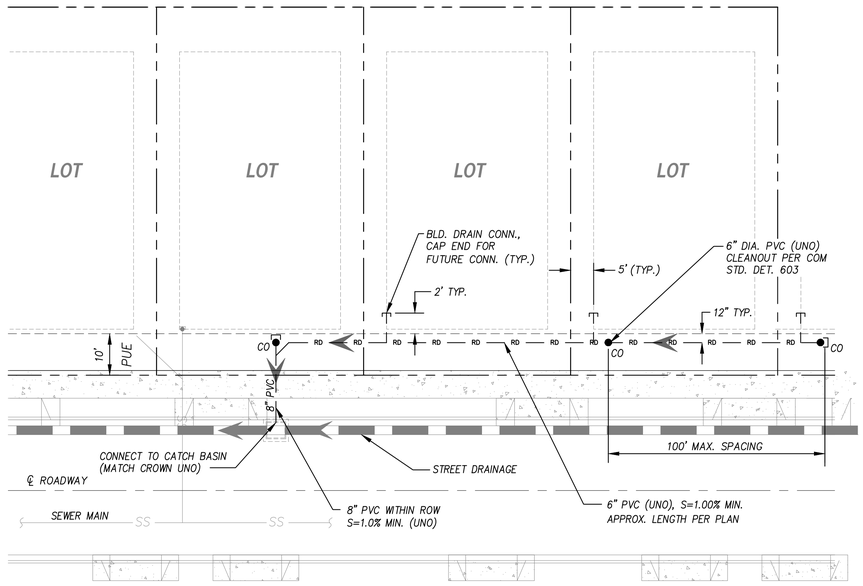
DESCRIPTION	DESIGNATION
TYPE 1L CATCH BASIN	403
SCALE: NOT TO SCALE	REVISED: NOV 10, 2021



NOTES:

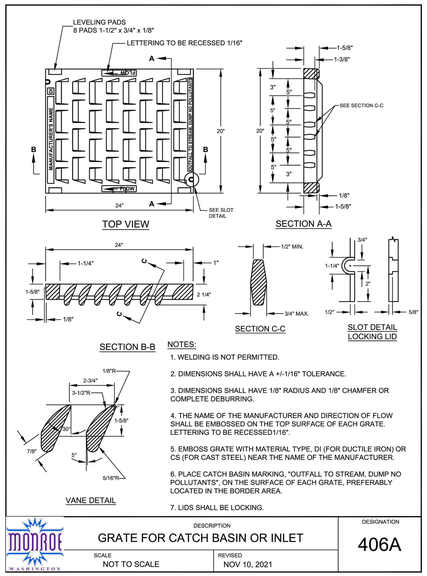
1. CATCH BASIN TO CONFORM TO WSDOT STANDARD PLANS.
2. ALL TYPE 2 CATCH BASINS EQUIPPED WITH OPEN GRATES SHALL BE LOCKING TYPE GRATES.
3. ALL TYPE 2 CATCH BASINS NOT IN PAVED AREAS SHALL BE EQUIPPED WITH LOCKING LIDS.
4. CATCH BASINS SHALL BE SET SO THAT STEPS ARE DIRECTLY UNDER THE OPENING.
5. ALL TYPE 2 CATCH BASINS SHALL BE EQUIPPED WITH STEPS AND LADDER PER STANDARD 606.
6. CONCRETE SHALL BE CLASS 4000.
7. MINIMUM DISTANCE FROM INVERT TO CATCH BASIN SUMP SHALL BE 2'.
8. CATCH BASIN SECTIONS AND LID WILL BE HS20 TRAFFIC LOAD CERTIFIED BY MANUFACTURER.
9. HOLE SIZE = PIPE OUTER DIAMETER + 5" MAX
   MAX HOLE SIZE = 36" (48" DIAMETER CATCH BASIN)
   MAX HOLE SIZE = 42" (54" DIAMETER CATCH BASIN)
10. SAND COLLARS SHALL BE USED ON SMOOTH BORE EXTERNAL PIPES.
11. RISER STACK SHALL NOT DEFLECT MORE THAN 6" HORIZONTALLY OVER TOTAL RISER STACK HEIGHT.

DESCRIPTION	DESIGNATION
TYPE II CATCH BASIN 48" OR 54"	404
SCALE: NOT TO SCALE	REVISED: NOV 10, 2021



TYPICAL ROOF DRAIN COLLECTION SYSTEM

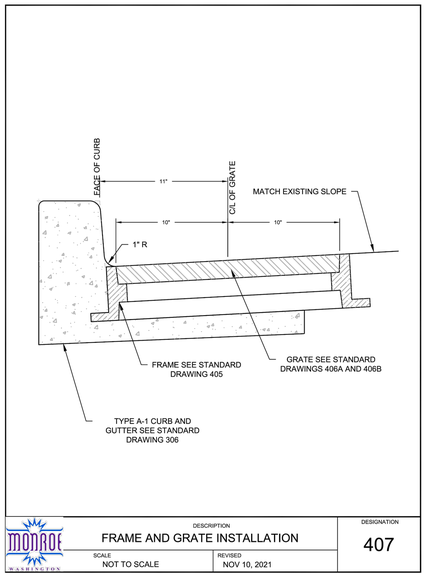
NOT TO SCALE



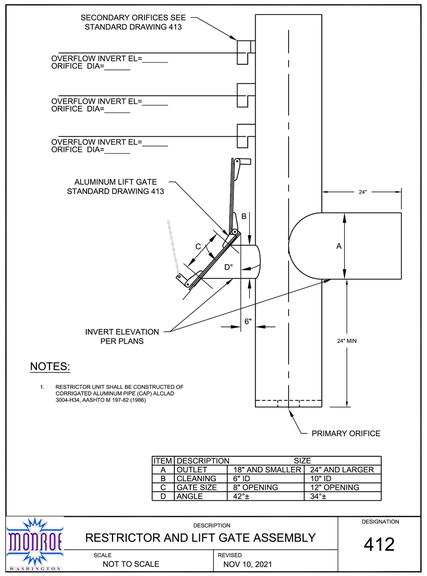
NOTES:

1. WELDING IS NOT PERMITTED.
2. DIMENSIONS SHALL HAVE A +/-1/16" TOLERANCE.
3. DIMENSIONS SHALL HAVE 1/8" RADIUS AND 1/8" CHAMFER OR COMPLETE DEBURRING.
4. THE NAME OF THE MANUFACTURER AND DIRECTION OF FLOW SHALL BE EMBOSSED ON THE TOP SURFACE OF EACH GRATE. LETTERING TO BE RECESSED1/16".
5. EMBOSS GRATE WITH MATERIAL TYPE, DI (FOR DUCTILE IRON) OR CS (FOR CAST STEEL) NEAR THE NAME OF THE MANUFACTURER.
6. PLACE CATCH BASIN MARKING, "OUTFALL TO STREAM, DUMP NO POLLUTANTS", ON THE SURFACE OF EACH GRATE, PREFERABLY LOCATED IN THE BORDER AREA.
7. LIDS SHALL BE LOCKING.

DESCRIPTION	DESIGNATION
GRATE FOR CATCH BASIN OR INLET	406A
SCALE: NOT TO SCALE	REVISED: NOV 10, 2021



DESCRIPTION	DESIGNATION
FRAME AND GRATE INSTALLATION	407
SCALE: NOT TO SCALE	REVISED: NOV 10, 2021

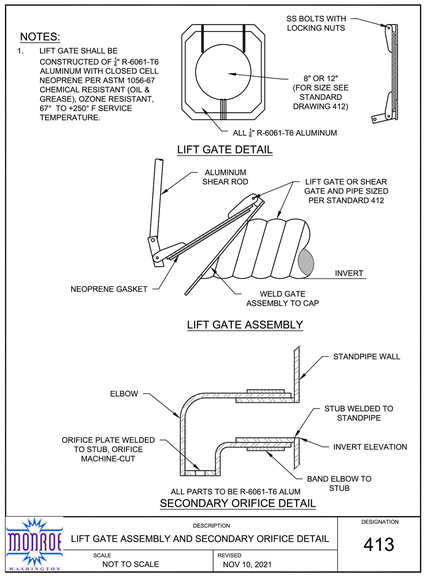


NOTES:

1. RESTRICTOR UNIT SHALL BE CONSTRUCTED OF CORRIGATED ALUMINUM PIPE (CAP) ALCLAD 3004-H34, AASHTO M 197-82 (1986)

ITEM	DESCRIPTION	SIZE	
A	OUTLET	18" AND SMALLER	24" AND LARGER
B	CLEANING	6" ID	10" ID
C	GATE SIZE	8" OPENING	12" OPENING
D	ANGLE	42"±	34"±

DESCRIPTION	DESIGNATION
RESTRICTOR AND LIFT GATE ASSEMBLY	412
SCALE: NOT TO SCALE	REVISED: NOV 10, 2021



DESCRIPTION	DESIGNATION
LIFT GATE ASSEMBLY AND SECONDARY ORIFICE DETAIL	413
SCALE: NOT TO SCALE	REVISED: NOV 10, 2021

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05/09/2022
CITY OF MONROE

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SHEET 40 OF 85

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5/5/2022 10:03 AM PETER EVANS

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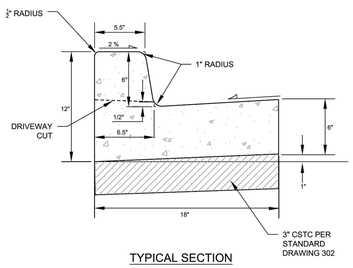


TYPICAL SECTION

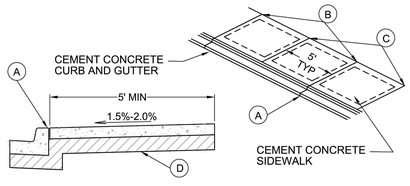
NOTES

1. MID DEPTH EXPANSION JOINTS SHALL BE PLACED ON 10 FOOT CENTERS AND ADJACENT TO CATCH BASINS, TANGENT POINTS OF STREETS, ALLEYS, AND DRIVEWAYS. ½" EXPANSION JOINT BETWEEN BACK OF CURB AND SIDEWALK. PRE-MOLDED JOINT FILLER MAY BE ½" WIDE AND CONFORM TO AASHTO DESIGN M213.
2. CONCRETE SHALL BE CLASS 4000 CONCRETE.
3. STEEL FORMS SHALL BE USED ON TANGENT SECTIONS. WOOD FORMS TO BE USED ON CURVED SECTIONS.
4. FINISH SHALL BE LIGHT BROOM FINISH.

DESCRIPTION	DESIGNATION
CEMENT CONCRETE CURB AND GUTTER	305
SCALE: NOT TO SCALE	REVISED: NOV 10, 2021

NOTES:

1. CONSTRUCTION OF SIDEWALKS SHALL BE IN ACCORDANCE WITH THE CURRENT 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.
2. CONCRETE SHALL BE CLASS 4000 CONCRETE.
3. 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.
4. ALL JOINTS SHALL BE CLEAN AND EDGED WITH A 4" FLASH ROUNDED EDGE.
5. THE WIDTH OF SIDEWALK SHALL BE 5 FEET MIN. FOR SINGLE FAMILY RESIDENTIAL PROPERTY USES AND 8 FEET MIN. FOR COMMERCIAL/INDUSTRIAL AND MULTI-FAMILY RESIDENTIAL PROPERTY USES.
6. FINISH SHALL BE A LIGHT BROOM FINISH.
7. SUBGRADE COMPACTION FOR SIDEWALKS SHALL MEET A MINIMUM 95% OF MAXIMUM DENSITY IN ACCORDANCE WITH WSDOT/APWA SPECIFICATIONS.
8. PLANTER STRIPS REQUIRED BUT NOT SHOWN.
9. SIDEWALK SHALL BE AT LEAST 6" THICK IN DRIVEWAYS.
10. THE FINISHED SIDEWALK SHALL BE SPRAYED WITH A TRANSPARENT CURING COMPOUND AND COVERED BY WATERPROOF PAPER OR PLASTIC SHEETING IN THE EVENT OF RAIN OR OTHER INCLEMENT WEATHER. CURING TIME SHALL BE FOR A MINIMUM OF 72 HOURS.
11. ALL JOINTS SHALL BE CLEANED AND EDGED WITH AN EDGER HAVING A 1/4" RADIUS AND 4" FLASHING.
12. CLEAR WIDTH OF WALKING SURFACES SHALL BE 36" MINIMUM REF ADAS 403.5.1



FLAG NOTES:

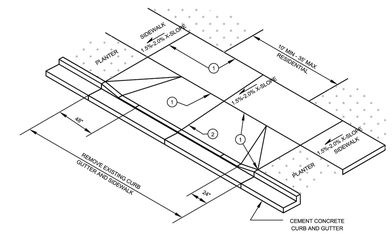
(A) EXPANSION JOINTS CONSISTING OF 3/8" X 2" PREMOLDED JOINT MATERIAL SHALL BE PLACED AROUND FIRE HYDRANTS, POLES, METER BOXES AND OTHER OBSTRUCTIONS AND ALONG WALLS OR STRUCTURES IN PAVED AREAS. EXPANSION JOINTS SHALL ALSO BE PLACED AT THE BEGINNING AND THE END OF EACH CURVE, ON EACH SIDE OF STRUCTURES, DROP CURB DRIVEWAYS AND CURB RAMPS, BETWEEN SIDEWALK AND BACK OF CURB WHEN POURED SEPARATELY, AND AT OTHER LOCATIONS AS DIRECTED BY THE ENGINEER. FULL EXPANSION JOINTS SHALL GENERALLY BE PLACED TO MATCH THOSE PLACED ON ADJACENT CURB WITH A MAXIMUM SPACING OF 10 FEET.

(B) CONTRACTION JOINTS (DUMMY JOINTS) CONSISTING OF 3/8" X 2" OF PREMOLDED JOINT MATERIAL SHALL BE CONSTRUCTED AT INTERVALS NOT TO EXCEED 10 FEET. WHEN SIDEWALKS ARE PLACED BY SLIP-FORMING, A PREMOLDED STRIP OF 3/8" THICK AND UP TO FULL DEPTH MAY BE USED. CONTRACTION JOINTS (DUMMY JOINTS) IN SIDEWALKS SHALL BE LOCATED SO AS TO MATCH THE JOINTS IN THE CURB WHETHER SIDEWALK IS ADJACENT TO CURB OR SEPARATED BY A PLANTING STRIP. JOINT SEALANTS FOR SAWED CONSTRUCTION JOINTS SHALL MEET THE REQUIREMENTS OF SECTION 9-04.2 OF THE WSDOT/APWA SPECIFICATIONS.

(C) SCORE MARKS, 1/4" DEEP WITH 2" FLASH ON EITHER SIDE OF CENTER SCORE, ARE TO BE PLACED ON 5 FOOT CENTERS, AND TO CORRESPOND TO THE MARKINGS IN EXISTING SIDEWALKS. WHEN THE SIDEWALK WIDTH EXCEEDS 8 FEET, A LONGITUDINAL SCORE AT THE CENTER OF THE SIDEWALK SHALL BE PROVIDED.

(D) 6" INCHES OF CRUSHED SURFACING TOP COURSE COMPACTED TO 95% DENSITY.

DESCRIPTION	DESIGNATION
CEMENT CONCRETE SIDEWALK	309
SCALE: NOT TO SCALE	REVISED: NOV 10, 2021



LEGEND:

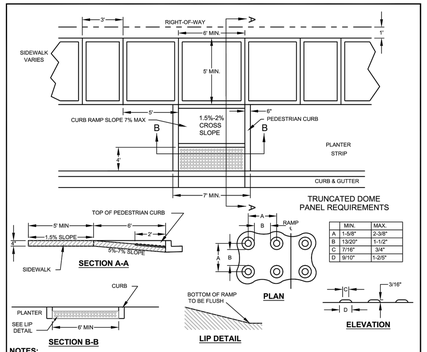
(1) 4" DEPTH EXPANSION JOINT, 3/8" MINIMUM THICKNESS.

(2) 4" DEPTH EXPANSION JOINT, 3/8" MINIMUM THICKNESS IF WIDTH OF DRIVEWAY IS 15 FEET OR GREATER.

NOTES:

1. MAXIMUM 20' FOR RESIDENTIAL DRIVEWAY WITH TWO CAR GARAGE.
2. DRIVEWAY SECTION WITHIN PUBLIC RIGHT-OF-WAY IS TO BE SURFACED WITH ASPHALT OR CONCRETE.
3. DRIVEWAY CEMENT CONCRETE SHALL BE A MIN OF 6" THICK AND BE PLACED ON A MINIMUM OF 4" CRUSHED SURFACING TOP COURSE COMPACTED TO 95% MAXIMUM DENSITY,
4. CONCRETE SHALL BE CLASS 4000 PSI CONCRETE.
5. CLEAN AND EDGE WITH 4" FLASHING TO ALL JOINTS.

DESCRIPTION	DESIGNATION
CEMENT CONCRETE DRIVEWAY TYPE II	311
SCALE: NOT TO SCALE	REVISED: NOV 10, 2021

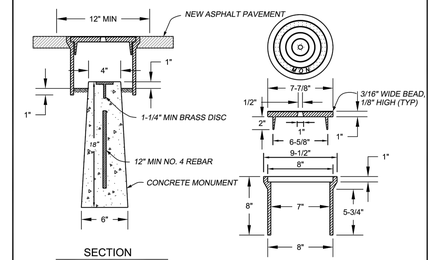


	MIN.	MAX.
A	1-5/8"	2-3/8"
B	13/20"	1-1/2"
C	7/16"	3/4"
D	9/10"	1-2/5"

NOTES:

1. THE CURB RAMP SHALL BE POURED SEPERATE FROM THE SIDEWALK SECTION.
2. TRUNCATED DOME PANELS ARE REQUIRED AS SHOWN AND SHALL BE INSTALLED PER THE MANUFACTURER'S REQUIREMENTS.
3. STAMPING OF TRUNCATED DOMES FOR CURB RAMPS SHALL NOT BE ALLOWED.
4. THE MINIMUM PANEL SIZE SHALL BE 2'X3'. THE DETECTABLE WARNING PATTERN AREA SHALL BE YELLOW IN COMPLIANCE WITH STANDARD SPECIFICATION WSDOT/APWA 8-14.3(5).
5. 2" DEPTH EXPANSIONS SHALL BORDER ALL JOINTS. THERE SHALL BE NO EXPANSIONS AROUND THE TRUNCATED DOME PANEL.
6. CURB RAMP RUNNING SLOPE SHALL NOT REQUIRE THE RAMP LENGTH TO EXCEED 15 FEET. WHEN APPLYING THE 15-FOOT MAXIMUM LENGTH THE RUNNING SLOPE OF THE CURB RAMP IS ALLOWED TO EXCEED 8.3%. USE A SINGLE CONSTANT SLOPE FROM THE BOTTOM OF RAMP TO TOP OF RAMP.
7. MAXIMUM COUNTER SLOPE IN GUTTER SHALL BE 5%.
8. GRADE BREAKS SHALL BE FLUSH AND PERPENDICULAR TO THE DIRECTION OF TRAVEL AT THE TOP AND BOTTOM OF RAMP RUNS. GRADE BREAKS SHALL NOT BE PERMITTED ON THE SURFACE OF RAMP RUNS AND LANDINGS.
9. BEYOND THE BOTTOM GRADE BREAK A CLEAR SPACE OF 4' BY 4' MINIMUM SHALL BE PROVIDED WITHIN THE WIDTH OF THE CROSSWALK AND OUTSIDE THE PARALLEL VEHICLE TRAVEL LANE.
10. DETECTABLE WARNING SURFACES SHALL BE PLACED PER WSDOT STANDARD PLAN F-45.10.02. DETECTABLE WARNING SURFACES SHALL BE SIZED PER WSDOT STANDARDS.
11. WHEN A RAMP IS CONSTRUCTED TO SERVE A CROSSWALK A SUBSEQUENT RECEIVING RAMP SHALL ALSO BE CONSTRUCTED ACROSS THE STREET IN ACCORDANCE WITH THESE PLANS UNLESS THERE IS NO CURB OR SIDEWALK ON THAT END OF THE CROSSWALK.

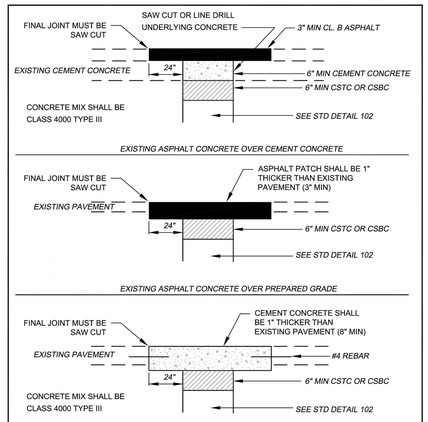
DESCRIPTION	DESIGNATION
CURB RAMP, TYPE II	314
SCALE: NOT TO SCALE	REVISED: NOV 10, 2021



NOTES

1. THE OFF STREET MONUMENT SHALL BE THE SAME EXCEPT USING A NO. 8 REBAR AND WITHOUT A CASE AND COVER. THE OFF STREET MONUMENT SHALL BE 3" ABOVE GRADE.
2. MONUMENT CASE AND COVER SHALL BE CAST IRON.
3. BRASS DISC SHALL BEAR LAND SURVEYOR'S REGISTRATION NUMBER.

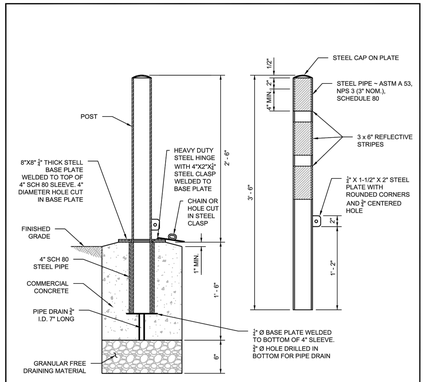
DESCRIPTION	DESIGNATION
SURVEY MONUMENT	316
SCALE: NOT TO SCALE	REVISED: NOV 10, 2021



NOTES

1. ALL TRENCHES IN ROADWAY AREAS SHALL BE BACKFILLED AND PATCHED WITH TEMPORARY ASPHALT AT THE END OF EACH WORK DAY UNLESS PERMISSION IS GRANTED TO DO OTHERWISE BY THE CITY ENGINEER.
2. ALL TEMPORARY PATCHES ON TRENCHES SHALL BE PERMANENTLY PATCHED WITHIN 2 WEEKS OF COMPLETION OF WORK WITHIN THE ROADWAY AREA.

DESCRIPTION	DESIGNATION
PAVEMENT PATCHING DETAIL	317
SCALE: NOT TO SCALE	REVISED: NOV 10, 2021



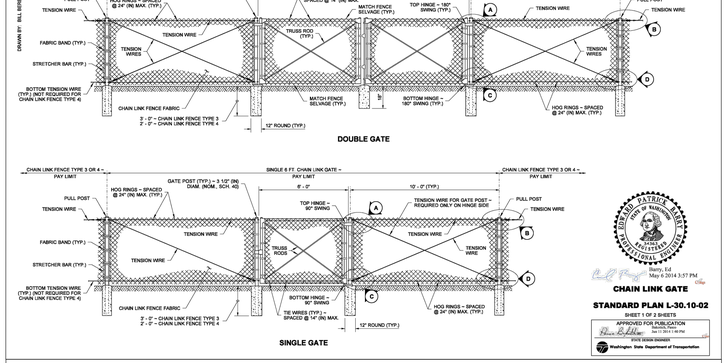
NOTES

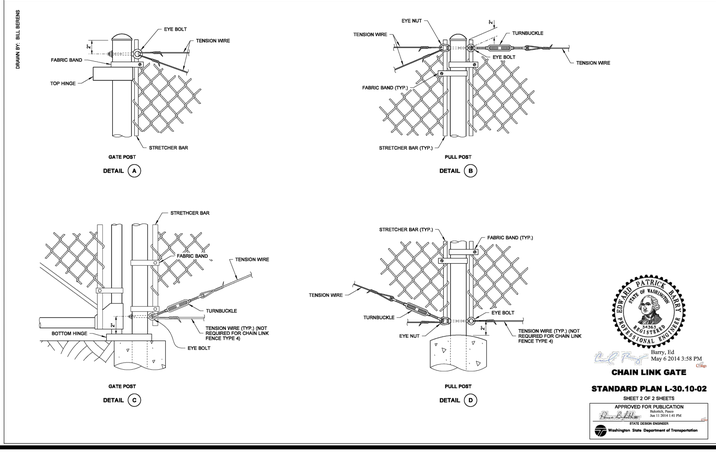
1. USE FAIRWEATHER FURNISHING PRODUCTS BOLLARDS.
2. ALL STEEL SHALL BE HOT-DIPPED GALVANIZED.
3. ADD THREE REFLECTIVE 6-INCH STRIPS TO BOLLARD.

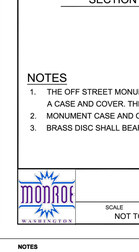
DESCRIPTION	DESIGNATION
BOLLARD	330
SCALE: NOT TO SCALE	REVISED: NOV 10, 2021

NOTES

1. Materials shall meet the requirements of Standard Specification 9-16.







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These plans have been reviewed for compliance with the City of Monroe Public Works Design and Construction Standards and required conditions regarding water, sanitary sewer, storm water management, and streets only. Prior to beginning construction additional approvals may be required from other city departments or state or federal agencies.

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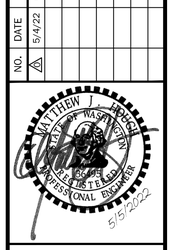
CITY OF MONROE ENGINEERING

By _____ Date 05/12/2022

NO.	DATE	REVISION	BY	CK.
1	5/4/22	CITY PERMIT SUBMITTAL	PCE	MJH



GARIBALDI PRD

ENGINEERING PERMIT PACKAGE

GRADING AND DRAINAGE DETAILS

SNOHOMISH COUNTY, WA

CITY OF MONROE

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Garibaldi Lake, LLC
1010 MARKET STREET
KIRKALND, WA 98033
PHONE: (425)876-9390

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11321-B NE 120th Street
Kirkland, WA 98034 • (425) 285-2390
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PROJECT NO.
0054-18-028

DRAWING
C3.103

SHEET 41 OF 85

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

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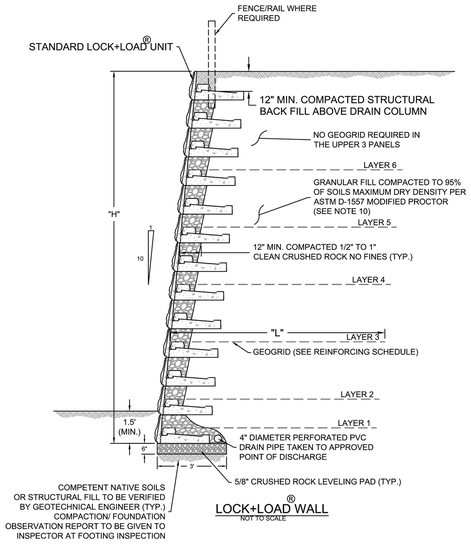
PTN. OF NW 1/4 OF SEC 31, TWP 28 N, R7E W.M.



REINFORCING SCHEDULE

TOTAL NUMBER OF PANELS IN WALL	TOTAL WALL HEIGHT "H"	LAYER NO.	REINFORCEMENT TYPE	REINFORCEMENT LENGTH "L"	HEIGHT (FT)
3 OR LESS	NO REINFORCEMENT REQUIRED				
4	5.33 FT	1	MIRAFI 5 XT	5.00 FT	0.66
5	6.67 FT	1	MIRAFI 5 XT	5.50 FT	0.66
		2	MIRAFI 5 XT	5.50 FT	2.00
6	8.0 FT	1	MIRAFI 5 XT	6.50 FT	0.66
		2	MIRAFI 5 XT	6.50 FT	2.00
		3	MIRAFI 5 XT	6.50 FT	3.33
7	9.33 FT	1	MIRAFI 5 XT	7.50 FT	0.66
		2	MIRAFI 5 XT	7.50 FT	2.00
		3	MIRAFI 5 XT	7.50 FT	4.66
8	10.67 FT	1	MIRAFI 5 XT	8.50 FT	0.66
		2	MIRAFI 5 XT	8.50 FT	2.00
		3	MIRAFI 5 XT	8.50 FT	4.66
		4	MIRAFI 5 XT	8.50 FT	6.00
9	12.0 FT	1	MIRAFI 5 XT	10.00 FT	0.66
		2	MIRAFI 5 XT	10.00 FT	2.00
		3	MIRAFI 5 XT	10.00 FT	4.66
		4	MIRAFI 5 XT	10.00 FT	7.33
10	13.33 FT	1	MIRAFI 5 XT	11.00 FT	0.66
		2	MIRAFI 5 XT	11.00 FT	2.00
		3	MIRAFI 5 XT	11.00 FT	4.66
		4	MIRAFI 5 XT	11.00 FT	7.33
		5	MIRAFI 5 XT	11.00 FT	8.66
11	14.67 FT	1	MIRAFI 5 XT	12.00 FT	0.66
		2	MIRAFI 5 XT	12.00 FT	2.00
		3	MIRAFI 5 XT	12.00 FT	4.66
		4	MIRAFI 5 XT	12.00 FT	7.33
		5	MIRAFI 5 XT	12.00 FT	10.00
12	16.00 FT	1	MIRAFI 5 XT	13.00 FT	0.66
		2	MIRAFI 5 XT	13.00 FT	2.00
		3	MIRAFI 5 XT	13.00 FT	4.66
		4	MIRAFI 5 XT	13.00 FT	7.33
		5	MIRAFI 5 XT	13.00 FT	10.00
		6	MIRAFI 5 XT	13.00 FT	11.33
13	17.33 FT	1	MIRAFI 5 XT	14.00 FT	0.66
		2	MIRAFI 5 XT	14.00 FT	2.00
		3	**MIRAFI 5 XT**	**14.00 FT**	**4.66**
		4	MIRAFI 5 XT	14.00 FT	7.33
		5	MIRAFI 5 XT	14.00 FT	10.00
		6	MIRAFI 5 XT	14.00 FT	12.66

NOTE: GEOGRID ELEVATION TOLERANCE ± 3" (ALL DIMENSIONS ARE IN FEET)

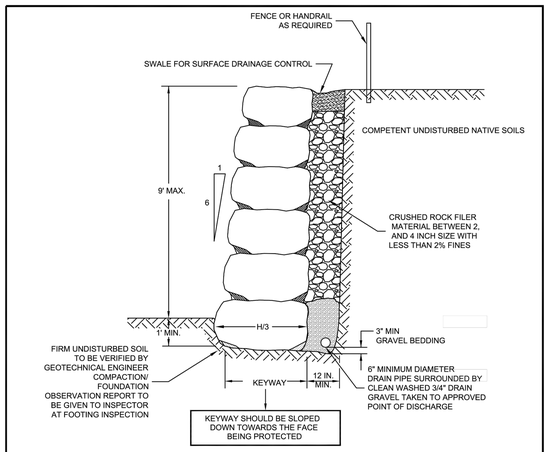
GENERAL NOTES

1) REFER TO CIVIL GRADING PLANS FOR WALL ALIGNMENTS AND ELEVATIONS.
2) REFER TO REINFORCING SCHEDULE FOR GEOGRID LENGTHS AND ELEVATIONS.
3) GEOGRID ELEVATION MEASURED FROM TOP OF CRUSHED ROCK LEVELING PAD.
4) GEOGRID LENGTH "L" MEASURED FROM BACK OF FACE UNIT.
5) GEOGRID SHALL BE INSTALLED BEHIND WALL WITH MACHINE DIRECTION (STRONGEST AXIS) PERPENDICULAR TO WALL.
6) GEOGRID SHALL BE INSTALLED ON HORIZONTAL SURFACE OF COMPACTED STRUCTURAL FILL.
7) GEOGRID SHALL BE PULLED TIGHT BEHIND WALL. STAKE END OF GEOGRID AS REQUIRED TO MAINTAIN TENSION BEFORE COVERING WITH STRUCTURAL FILL.
8) PROTECT GEOGRID FROM CONSTRUCTION DAMAGE PER MANUFACTURERS SPECIFICATIONS. CONSTRUCTION EQUIPMENT SHALL NOT TRAVEL DIRECTLY ON GEOGRID. ANY GEOGRID THAT IS DAMAGED SHALL BE REPLACED WITH NEW GEOGRID AT CONTRACTORS EXPENSE.
9) LOCK+LOAD ® WALL ASSEMBLY TO BE COMPLETED PER MANUFACTURERS SPECIFICATIONS.
10) STRUCTURAL FILL SHALL BE PLACED AND COMPACTED ACCORDING TO RECOMMENDATIONS PROVIDED IN THE GEOTECHNICAL REPORT, GARIBALDI PROPERTY, MONROE WASHINGTON, PROJECT NO. T-8079, PREPARED BY TERRA ASSOCIATES, INC., DATED DECEMBER, 2018 STRUCTURAL FILL IN REINFORCED ZONE SHALL BE GRANULAR MATERIAL WITH A MAXIMUM AGGREGATE SIZE OF 3-INCHES AND A MAXIMUM SOIL FINES (LESS THAN # 200 SIEVE) CONTENT OF 30 PERCENT.
11) HEAVY CONSTRUCTION EQUIPMENT SUCH AS VIBRATORY DRUM ROLLERS, LOADED DUMP TRUCKS, FRONT-END LOADERS, ETC., SHALL NOT OPERATE WITHIN FIVE FEET OF BACK OF WALLS. STRUCTURAL FILL PLACED IN THIS ZONE SHALL HAVE MAXIMUM LOOSE LIFT THICKNESS OF 12 INCHES AND SHALL BE COMPACTED USING HAND OPERATED COMPACTION EQUIPMENT.

Terra Associates, Inc.
Consultants in Geotechnical Engineering Geology and Environmental Earth Sciences

LOCK+LOAD WALL DETAIL
GARIBALDI PROPERTY
MONROE, WASHINGTON

Proj.No. T-8079 | Date: APR 2022 | Figure 1



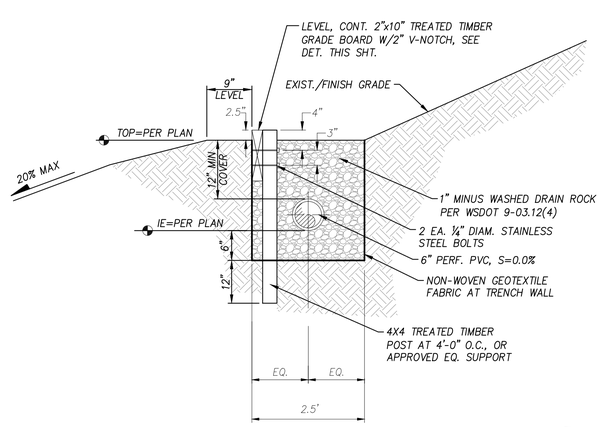
ROCKERY NOTES:

1. REFER TO CIVIL GRADING DRAWINGS FOR WALL ALIGNMENTS, AND ELEVATIONS.
2. ROCKERY CONSTRUCTION SHALL BE COMPLETED IN ACCORDANCE WITH THE ASSOCIATION OF ROCKERY CONTRACTORS GUIDELINES.
3. ROCK USED MUST MEET THE REQUIREMENTS FOR ROCK QUALITY SPECIFIED IN SECTION 9-13.7(1) OF THE WSDOT STANDARDS SPECIFICATIONS (2019).
4. ALL CAP ROCKS MUST BE SECURE AND NOT ABLE TO BE DISLODGED BY HAND.

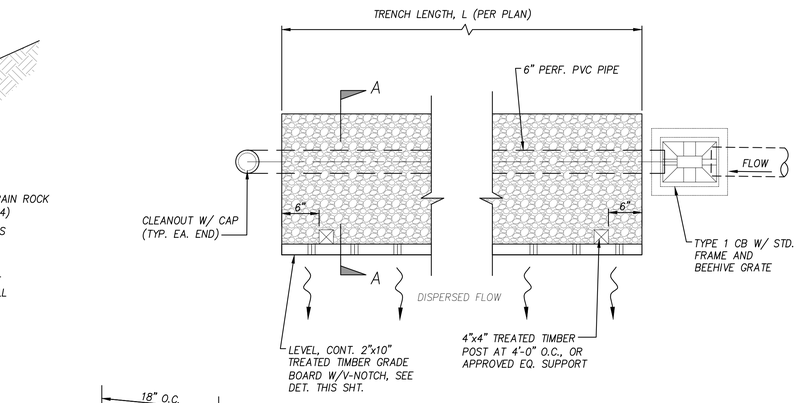
Terra Associates, Inc.
Consultants in Geotechnical Engineering Geology and Environmental Earth Sciences

CUT ROCKERY DETAIL
GARIBALDI PROPERTY
MONROE, WASHINGTON

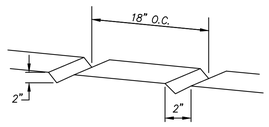
Proj. No.T-8079 | Date APR 2022 | Figure 2



SECTION A-A



PLAN



V-NOTCH DETAIL

TYPICAL GRAVEL DISPERSION TRENCH

NOT TO SCALE

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CITY OF MONROE ENGINEERING

By _____ Date 05/12/2022

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KIRKALND, WA 98033
PHONE: (425)876-9390

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0054-18-028

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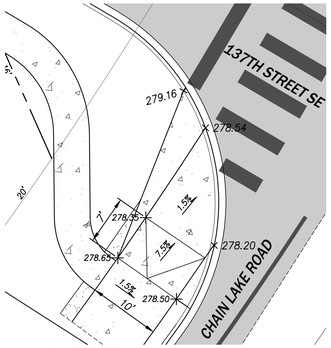
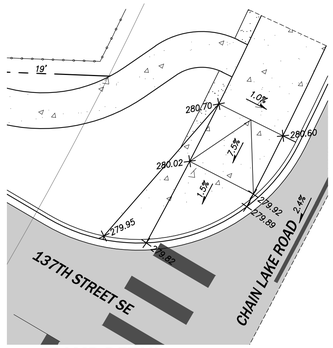


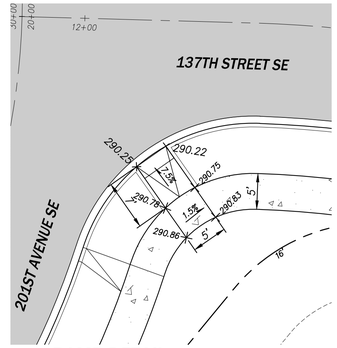
1 A RAMP DETAIL
SCALE: 1"=10'

CURB RETURN TABLE						
NO.	RADIUS	L	Δ	FOC LOCATION		℄ ELEV.
1	30.0'	49.7'	94°55'53"	PC=	STA 10+48.95, 14.00' LT	278.95
				Δ/4=	STA 10+36.88, 16.54' LT	278.70
				Δ/2=	STA 99+75.07, 26.27' LT	278.39
				3Δ/4=	STA 99+64.40, 19.41' LT	278.20
				PT=	STA 99+51.90, 17.00' LT	277.95



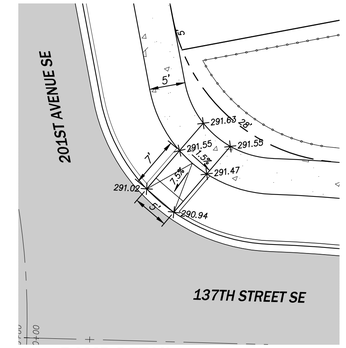
2 B RAMP DETAIL
SCALE: 1"=10'

CURB RETURN TABLE						
NO.	RADIUS	L	Δ	FOC LOCATION		℄ ELEV.
2	25.0'	41.0'	94°03'49"	PC=	STA 100+42.01, 17.00' LT	280.14
				Δ/4=	STA 100+31.69, 18.99' LT	279.86
				Δ/2=	STA 10+25.04, 21.96' RT	279.88
				3Δ/4=	STA 10+33.36, 16.08' RT	279.63
				PT=	STA 10+43.34, 14.00' RT	279.09



3 C RAMP DETAIL
SCALE: 1"=10'

CURB RETURN TABLE						
NO.	RADIUS	L	Δ	FOC LOCATION		℄ ELEV.
3	25.0'	32.4'	74°08'57"	PC=	STA 20+28.44, 14.00' LT	290.34
				Δ/4=	STA 20+21.56, 15.57' LT	290.29
				Δ/2=	STA 11+90.28, 18.94' LT	290.23
				3Δ/4=	STA 11+83.13, 15.24' LT	290.18
				PT=	STA 11+75.06, 14.00' LT	290.12



4 D RAMP DETAIL
SCALE: 1"=10'

CURB RETURN TABLE						
NO.	RADIUS	L	Δ	FOC LOCATION		℄ ELEV.
4	25.0'	33.8'	77°23'48"	PC=	STA 11+75.26, 14.00' RT	290.13
				Δ/4=	STA 11+83.44, 15.46' RT	290.56
				Δ/2=	STA 19+83.55, 19.63' LT	290.98
				3Δ/4=	STA 24+45.06, 268.70' RT	291.41
				PT=	STA 24+53.34, 267.29' RT	291.83

5 E RAMP DETAIL
SCALE: 1"=10'

CURB RETURN TABLE						
NO.	RADIUS	L	Δ	FOC LOCATION		℄ ELEV.
5	25.0'	39.3'	90°03'17"	PC=	STA 28+97.55, 14.00' RT	333.82
				Δ/4=	STA 29+07.12, 15.91' RT	334.34
				Δ/2=	STA 30+21.35, 21.33' RT	334.86
				3Δ/4=	STA 30+29.46, 15.91' RT	335.38
				PT=	STA 30+39.04, 14.00' RT	335.84

6 F RAMP DETAIL
SCALE: 1"=10'

CURB RETURN TABLE						
NO.	RADIUS	L	Δ	FOC LOCATION		℄ ELEV.
6	25.0'	39.2'	89°56'43"	PC=	STA 30+38.96, 14.00' LT	335.92
				Δ/4=	STA 30+29.40, 15.90' LT	336.93
				Δ/2=	STA 29+57.88, 21.31' RT	337.98
				3Δ/4=	STA 29+65.98, 15.90' RT	339.03
				PT=	STA 29+75.55, 14.00' RT	340.07

7 RAMP DETAIL
SCALE: 1"=10'

CURB RETURN TABLE						
NO.	RADIUS	L	Δ	FOC LOCATION		℄ ELEV.
7	35.0'	31.9'	52°13'46"	PC=	STA 32+34.21, 27.56' LT	357.31
				Δ/4=	STA 32+28.65, 21.87' LT	357.05
				Δ/2=	STA 32+21.94, 17.57' LT	356.80
				3Δ/4=	STA 32+14.45, 14.90' LT	356.57
				PT=	STA 32+06.54, 14.00' LT	356.28

8 RAMP DETAIL
SCALE: 1"=10'

CURB RETURN TABLE						
NO.	RADIUS	L	Δ	FOC LOCATION		℄ ELEV.
8	35.0'	25.0'	40°56'32"	PC=	STA 32+13.39, 14.68' RT	356.55
				Δ/4=	STA 32+19.38, 16.44' RT	356.73
				Δ/2=	STA 32+24.96, 19.24' RT	356.92
				3Δ/4=	STA 32+29.96, 22.99' RT	357.10
				PT=	STA 32+34.21, 27.56' RT	357.31

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KEYMAP

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CK. MJH

MATTHEW J. HOPKINS
STATE OF WASHINGTON
22818
REGISTERED PROFESSIONAL ENGINEER
5/5/2022

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CURB RETURN AND RAMP DETAILS

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Garibaldi Lake, LLC
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PHONE: (425)876-9390

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Wenatchee, WA 98801 • (509) 293-7731
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PROJECT NO.
0054-18-028

DRAWING
C3.105

SHEET 43 OF 85

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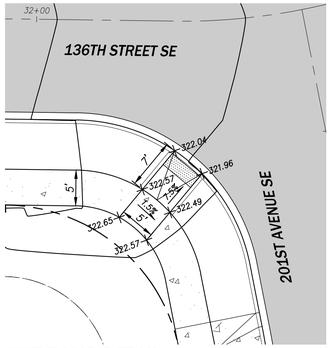
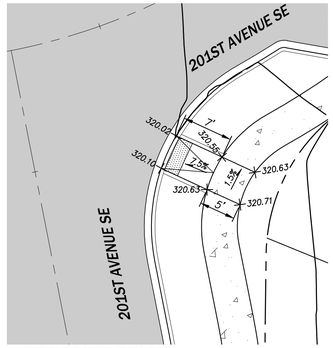
5/5/2022 10:07 AM PETER EVANS

KEYMAP
CGRD541828
CSIT541828
TBLOCK



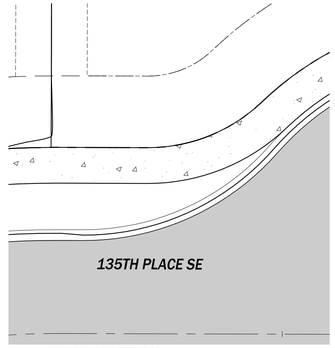
9 G **RAMP DETAIL**
SCALE: 1"=10'

CURB RETURN TABLE						
NO.	RADIUS	L	Δ	FOC LOCATION		℄ ELEV.
9	25.0'	34.1'	78°06'17"	PC=	STA 32+05.78, 14.00' RT	323.49
				Δ/4=	STA 32+14.14, 15.44' RT	322.74
				Δ/2=	STA 32+49.50, 19.59' LT	322.00
				3Δ/4=	STA 34+42.11, 15.44' LT	321.25
				PT=	STA 34+33.75, 14.00' LT	320.51



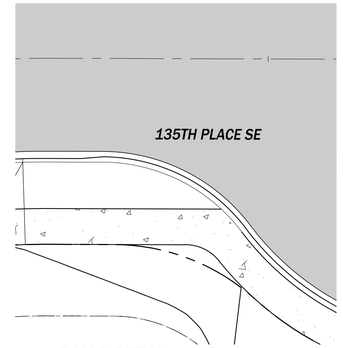
10 H **RAMP DETAIL**
SCALE: 1"=10'

CURB RETURN TABLE						
NO.	RADIUS	L	Δ	FOC LOCATION		℄ ELEV.
10	25.0'	31.3'	71°49'13"	PC=	STA 34+34.52, 14.00' RT	320.49
				Δ/4=	STA 34+42.23, 15.22' RT	320.30
				Δ/2=	STA 32+52.49, 19.77' RT	320.06
				3Δ/4=	STA 32+57.92, 15.51' RT	319.84
				PT=	STA 32+64.45, 14.00' RT	319.60



11 **RAMP DETAIL**
SCALE: 1"=10'

CURB RETURN TABLE						
NO.	RADIUS	L	Δ	FOC LOCATION		℄ ELEV.
11	35.3'	15.0'	24°26'13"	PC=	STA 36+48.68, 25.82' LT	314.34
				Δ/4=	STA 36+43.17, 20.72' LT	314.52
				Δ/2=	STA 36+36.71, 16.91' LT	314.69
				3Δ/4=	STA 36+29.59, 14.55' LT	314.87
				PT=	STA 36+22.13, 13.75' LT	315.04



12 **RAMP DETAIL**
SCALE: 1"=10'

CURB RETURN TABLE						
NO.	RADIUS	L	Δ	FOC LOCATION		℄ ELEV.
12	25.2'	11.6'	26°23'53"	PC=	STA 36+26.87, 13.75' RT	314.95
				Δ/4=	STA 36+32.64, 14.42' RT	314.84
				Δ/2=	STA 36+38.10, 16.38' RT	314.74
				3Δ/4=	STA 36+42.96, 19.54' RT	314.62
				PT=	STA 36+46.98, 23.73' RT	314.52

I **RAMP DETAIL**
SCALE: 1"=10'

J **RAMP DETAIL**
SCALE: 1"=10'

K **RAMP DETAIL**
SCALE: 1"=10'

L **RAMP DETAIL**
SCALE: 1"=10'

M **RAMP DETAIL**
SCALE: 1"=10'

KEYMAP

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MATTHEW J. HOPKINS — STATE OF WASHINGTON — 22818 — REGISTERED PROFESSIONAL ENGINEER — 5/5/2022

GARIBALDI PRD

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CURB RETURN AND RAMP DETAILS

CITY OF MONROE — SNOHOMISH COUNTY, WA

CLIENT

Garibaldi Lake, LLC
1010 MARKET STREET
KIRKALND, WA 98033
PHONE: (425)876-9390

CPH CONSULTANTS
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PROJECT NO.
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SHEET 44 OF 85

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TBLOCK
OTRL541828
ODRVWY541828

PTN. OF NW 1/4 OF SEC 31, TWP 28 N, R7E W.M.

200TH AVENUE SE (PUBLIC LOCAL ACCESS)
201ST AVENUE SE (LOCAL ACCESS)
136TH STREET SE (PUBLIC LOCAL ACCESS)
135TH PL SE (PUBLIC LOCAL ACCESS)
97TH ST SE (LOCAL ACCESS)
CHAIN LAKE ROAD

TRACT 994 (PARK/REC.)
TRACT 995 (PARK/REC.)
TRACT 996 (PARK/REC./STORM)
TRACT 997 (LANDSCAPE)
TRACT 998 (LANDSCAPE)
TRACT 999 (NGPE)
TRACT 993 (PARK/REC.)
TRACT 991
TRACT 989 (LANDSCAPE)
TRACT 990 (PARK/REC./STORM)
TRACT 987
TRACT 988

REMOVE EXIST. BLOWOFF ASSEMBLY, CONN. EXIST. 8" DI WATER
8" DI WATER (TYP.)
NO PARKING FIRE LANE SIGN (TYP.)
FIRE HYDRANT
SSMH125
SSMH130
SSMH135
SSMH120
SSMH115
SSMH110
SSMH105
SSMH100 CONN. TO EXIST. 8" SS MAIN
SSMH200
SSMH205
SSMH210
SSMH215
SSMH300 CONN. TO EXIST. 8" SS MAIN
SSMH305
SSMH310
SSMH315
SSMH320
SSMH325
SSMH326
SSMH327
SSMH328
SSMH330
SSMH335
SSMH340
348LF 8" PVC S=0.0699
193LF 8" PVC S=0.0799
35LF 8" PVC S=0.0122
130LF 8" PVC S=0.0633
178LF 8" PVC S=0.0308
192LF 8" PVC S=0.0939
59LF 8" PVC S=0.0234
191LF 8" PVC S=0.0791
172LF 8" PVC S=0.0606
174LF 8" PVC S=0.0562
398LF 8" PVC S=0.0419
103LF 8" PVC S=0.0700
68LF 8" PVC S=0.0774
62LF 8" PVC S=0.0471
166LF 8" PVC S=0.1292
131LF 8" PVC S=0.0055
61LF 8" PVC S=0.0055
132LF 8" PVC S=0.0055
128LF 8" PVC S=0.0055
97LF 8" PVC S=0.0055
24LF 8" PVC S=0.0227
187LF 8" PVC S=0.0205
100' PSE ESMT.
HOT TAP CONN. TO EXIST. 8" DI WATER MAIN
EXIST. 8" PVC SANITARY SEWER
EXIST. 8" DI WATER MAIN
EXIST. ROW ℄ (TYP.)
ROW ℄ (TYP.)
ROW (TYP.)
SSMH-5808 RIM EL=264.19
SSMH-5768 RIM EL=271.34 8"PVC(NE/SW)IE=261.49
SSMH-5760 RIM EL=281.82 8"PVC(NE/SW)IE=273.12
SSMH-5752 RIM EL=289.12 8"PVC(NE/SW)IE=277.37
SSMH-5712 RIM EL=289.92 8"PVC(NE/SW)IE=278.12
SSMH-5708 RIM EL=301.55 8"PVC(NE/SE)IE=294.35
SSMH-5708 RIM EL=301.55 8"PVC(NW)IE=292.60 8"PVC(E/SW)IE=292.60
28073100205300
28073100205200
28073100204701
28073100204200
28073100201500
28073100200700
28073100202400
28073100202002
28073100200100
28073100200
28073100202000
28073100201900
01141900099100
01154400098900
01173400099000

LEGEND

- SD — STORM DRAIN
- TYPE 1 SD CATCH BASIN
- TYPE 2 SD CATCH BASIN
- SS — SANITARY SEWER MAIN
- STANDARD PRECAST SEWER MANHOLE
- SIDE SEWER SERVICE W/CLEANOUT
- W — WATER MAIN
- WATER SERVICE (PIPE)
- WATER METER
- FIRE HYDRANT (FH)
- GATE VALVE
- AIR-VAC ASSEMBLY

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CITY OF MONROE ENGINEERING

By _____ Date 05/12/2022

N

0 50 100
PLAN IN FEET

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CK. MJH

MATTHEW J. HOPKINS — STATE OF WASHINGTON — 22400 — REGISTERED PROFESSIONAL ENGINEER — 5/5/2022

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OVERALL UTILITY PLAN

CITY OF MONROE — SNOHOMISH COUNTY, WA

CLIENT

Garibaldi Lake, LLC
1010 MARKET STREET
KIRKALND, WA 98033
PHONE: (425)876-9390

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PROJECT NO.
0054-18-028

DRAWING
C4.00

SHEET 45 OF 85

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CGRD541828
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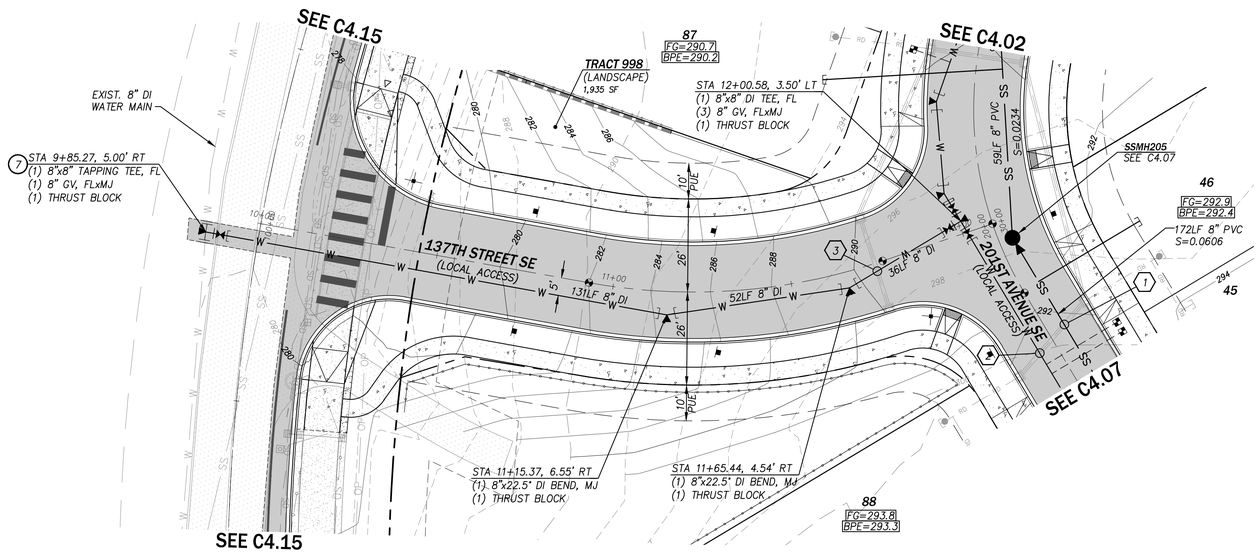
CUSD541828
CUWS541828
TBLOCK
OTRL541828
CNOT541828
KEYMAP

PTN. OF NW 1/4 OF SEC 31, TWP 28 N, R7E W.M.

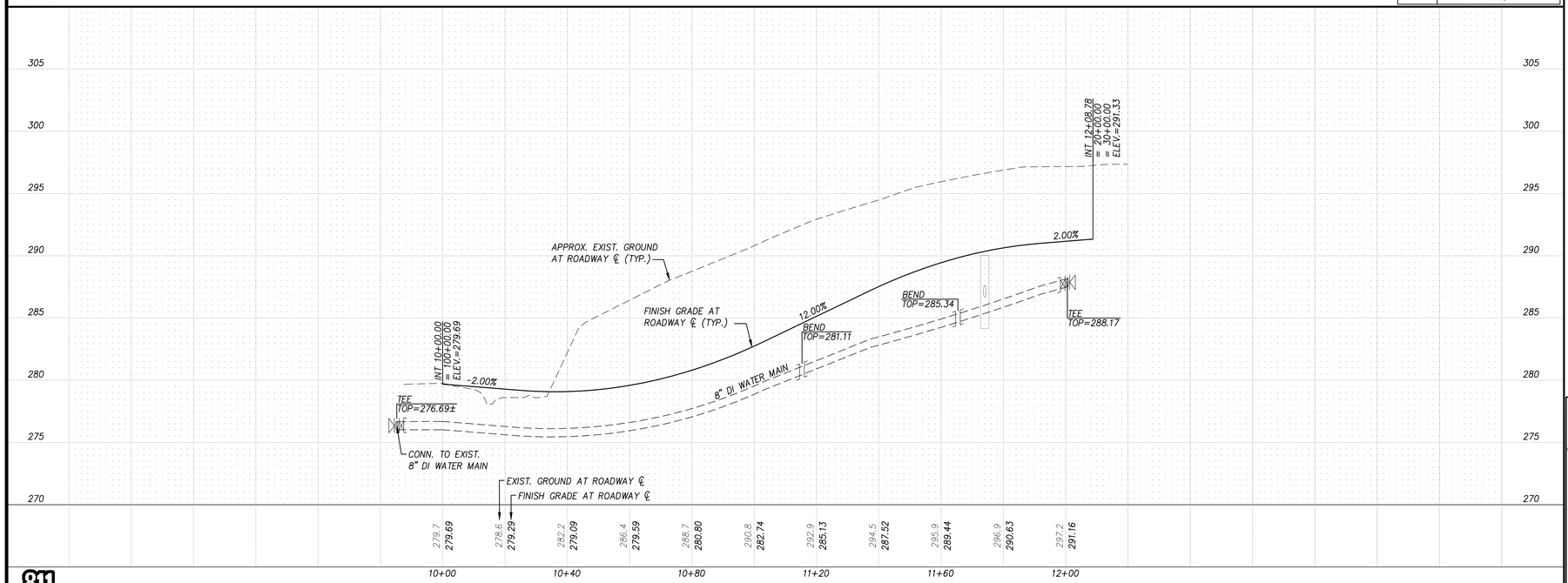


UTILITY CROSSING DATA

1	BOT 12" SD=288.53
	TOP 8" SS=286.81
2	BOT 12" SD=288.65
	TOP 8" WA=288.08
3	BOT 12" SD=286.63
	TOP 8" WA=286.03

WATER METER TABLE

LOT	STATION, OFFSET
45	STA 30+44.63, 18.00' LT
46	STA 30+41.63, 18.00' LT
87	STA 20+46.80, 18.00' LT



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CONSTRUCTION NOTES

1. 6" SIDE SEWER CONNECTION, 2% MIN. SLOPE PER COM STD. DET. 602
2. 48" SANITARY SEWER MANHOLE W/ MANHOLE RING AND COVER PER COM STD. DET. 604 AND 608
3. SANITARY SEWER SERVICE W/CAPPED END FOR FUTURE CONN., SEE NOTE 5 BELOW
4. ¾" x ⅝" WATER SERVICE PER COM STD. DET. 501
5. FIRE HYDRANT ASSEMBLY PER COM STD. DET. 506
6. 1" AIR AND VACUUM RELEASE VALVE PER COM STD. DET. 511
7. CONN. EXIST. 8" DI w/TAPPING TEE PER COM STD. DET. 513
8. 1" IRRIGATION WATER SERVICE PER COM STD. DET. 501 W/ DOUBLE CHECK VALVE ASSEMBLY PER COM STD. DET. 517S
9. 1" WATER SERVICE PER COM STD. DET. 501

NOTES:

1. THE INVERT ELEVATION FOR INDIVIDUAL SANITARY SEWER SERVICE CONNECTION STUBS SHALL BE SET A MIN. OF 4 FEET BELOW THE BEARING PAD ELEVATION (BPE).
2. PIPE BEDDING FOR SANITARY SEWER MAIN SHALL BE PER COM STD. DET. 611.
3. ALL SANITARY SEWER PIPE SHALL BE SDR-35 ASTM D3034. UNLESS OTHERWISE NOTED.
4. SEE REQUIRED WATER AND SEWER CONSTRUCTION NOTES ON DRAWING C0.01.
5. BUILDING SEWER SERVICES SHALL BE TERMINATED WITH A CAPPED END AS SHOWN FOR FUTURE CONNECTION AND EXTENSION WITH BUILDING CONSTRUCTION. A CLEANOUT SHALL BE INSTALLED WITH EACH SEWER SERVICE EXTENSION AT THE TIME OF BUILDING CONSTRUCTION.

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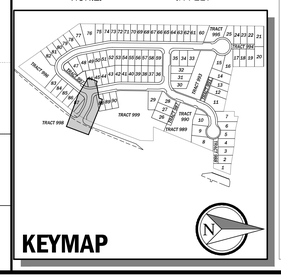

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MATTHEW J. HOUSER — STATE OF WASHINGTON — 22400 — REGISTERED PROFESSIONAL ENGINEER
5/5/2022

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UTILITY PLAN AND PROFILE

CITY OF MONROE — SNOHOMISH COUNTY, WA

CLIENT
Garibaldi Lake, LLC
1010 MARKET STREET
KIRKALND, WA 98033
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PROJECT NO.
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SHEET 46 OF 85

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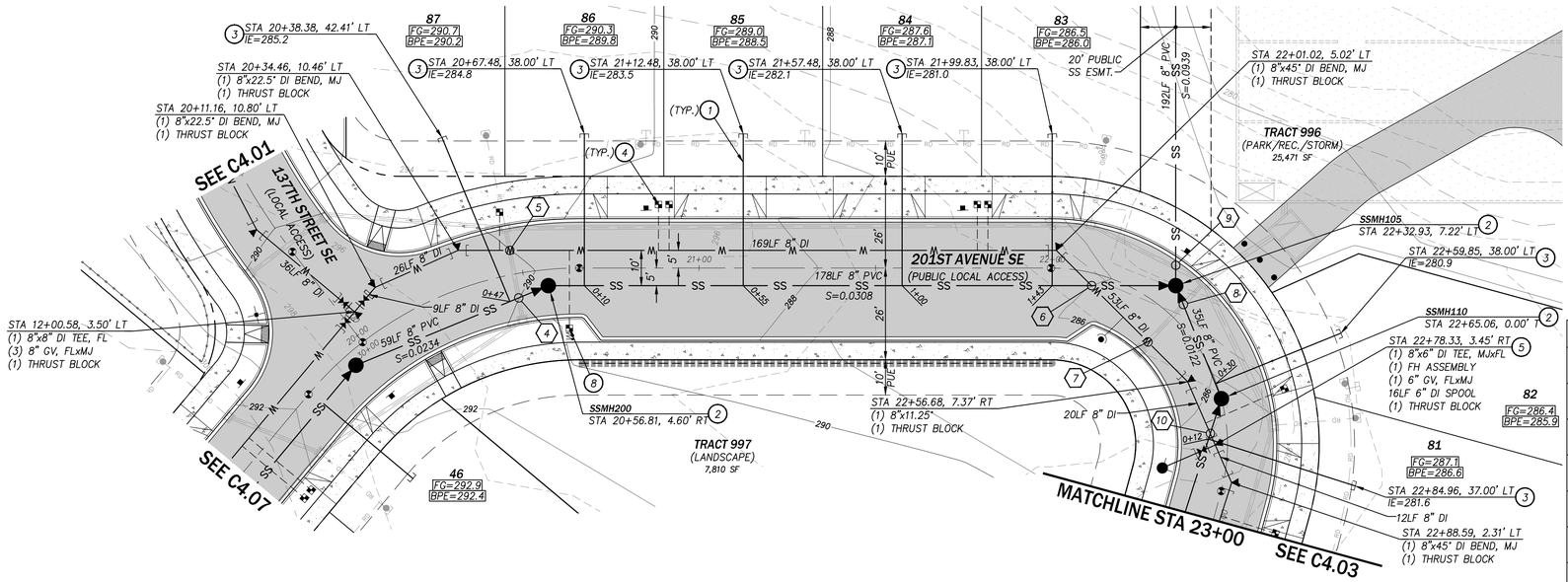
CGRD541828
CSIT541828
CUSD541828
CUWS541828
TBLOCK
OTRL541828
CNOT541828
KEYMAP

PTN. OF NW 1/4 OF SEC 31, TWP 28 N, R7E W.M.

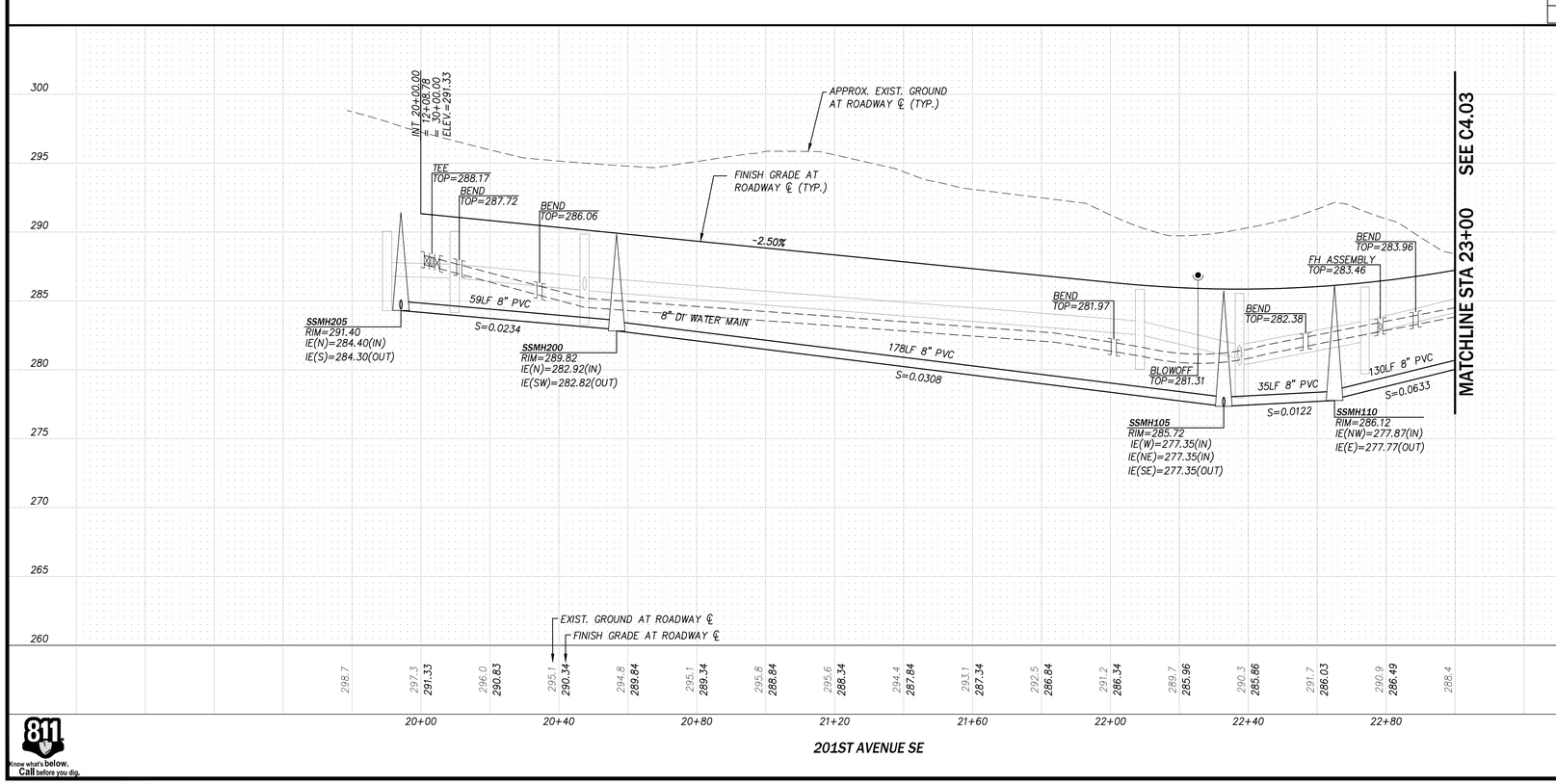


UTILITY CROSSING DATA

4	BOT 12" SD=286.45
	TOP 8" SS=283.82
5	BOT 12" SD=285.85
	TOP 8" WA=285.25
6	BOT 8" WA=280.80
	TOP 8" SS=278.78
7	BOT 12" SD=281.97
	TOP 8" WA=281.37
8	BOT 12" SD=281.15
	TOP 8" SS=278.11
9	BOT 12" SD=281.13
	TOP 8" SS=277.56
10	BOT 8" WA=282.58
	TOP 8" SS=279.22

WATER METER TABLE

LOT	STATION, OFFSET
81	STA 22+99.04, 17.99' LT
82	STA 22+66.46, 18.00' LT
83	STA 21+81.80, 18.01' LT
84	STA 21+78.80, 18.01' LT
85	STA 20+91.48, 18.00' LT
86	STA 20+88.48, 18.00' LT
87	STA 20+46.80, 18.00' LT



CONSTRUCTION NOTES

1. 6" SIDE SEWER CONNECTION, 2% MIN. SLOPE PER COM STD. DET. 602
2. 48" SANITARY SEWER MANHOLE W/ MANHOLE RING AND COVER PER COM STD. DET. 604 AND 608
3. SANITARY SEWER SERVICE W/CAPPED END FOR FUTURE CONN., SEE NOTE 5 BELOW
4. ¾" x ⅝" WATER SERVICE PER COM STD. DET. 501
5. FIRE HYDRANT ASSEMBLY PER COM STD. DET. 506
6. 1" AIR AND VACUUM RELEASE VALVE PER COM STD. DET. 511
7. CONN. EXIST. 8" DI w/TAPPING TEE PER COM STD. DET. 513
8. 1" IRRIGATION WATER SERVICE PER COM STD. DET. 501 W/ DOUBLE CHECK VALVE ASSEMBLY PER COM STD. DET. 517S
9. 1" WATER SERVICE PER COM STD. DET. 501

NOTES:

1. THE INVERT ELEVATION FOR INDIVIDUAL SANITARY SEWER SERVICE CONNECTION STUBS SHALL BE SET A MIN. OF 4 FEET BELOW THE BEARING PAD ELEVATION (BPE).
2. PIPE BEDDING FOR SANITARY SEWER MAIN SHALL BE PER COM STD. DET. 611.
3. ALL SANITARY SEWER PIPE SHALL BE SDR-35 ASTM D3034. UNLESS OTHERWISE NOTED.
4. SEE REQUIRED WATER AND SEWER CONSTRUCTION NOTES ON DRAWING C0.01.
5. BUILDING SEWER SERVICES SHALL BE TERMINATED WITH A CAPPED END AS SHOWN FOR FUTURE CONNECTION AND EXTENSION WITH BUILDING CONSTRUCTION. A CLEANOUT SHALL BE INSTALLED WITH EACH SERVICE EXTENSION AT THE TIME OF BUILDING CONSTRUCTION.

NO.	DATE	REVISION	BY	CK.
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MATTHEW J. HOPKINS — STATE OF WASHINGTON — 22810 — REGISTERED PROFESSIONAL ENGINEER
5/5/2022

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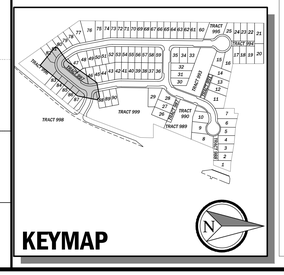

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PROJECT NO.
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CNOT541828
KEYMAP

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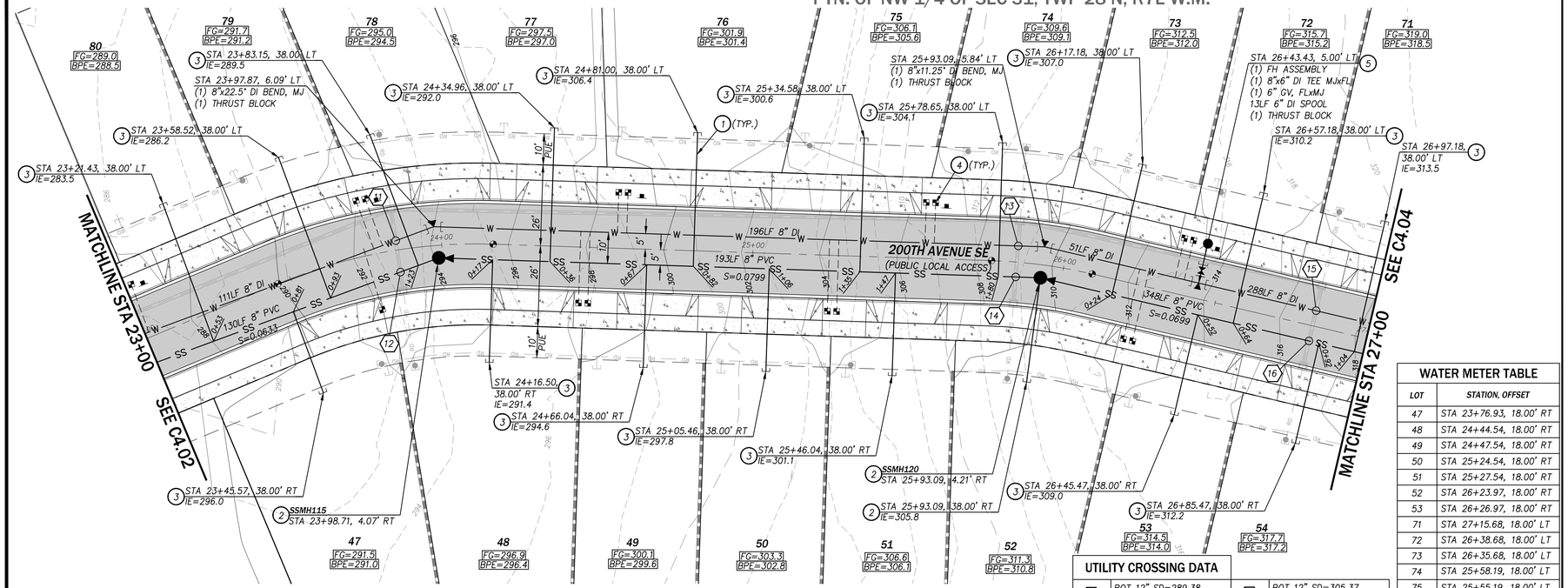

CONSTRUCTION NOTES

1. 6" SIDE SEWER CONNECTION, 2% MIN. SLOPE PER COM STD. DET. 602
2. 48" SANITARY SEWER MANHOLE W/ MANHOLE RING AND COVER PER COM STD. DET. 604 AND 608
3. SANITARY SEWER SERVICE W/CAPPED END FOR FUTURE CONN., SEE NOTE 5 BELOW
4. ¾" x ⅝" WATER SERVICE PER COM STD. DET. 501
5. FIRE HYDRANT ASSEMBLY PER COM STD. DET. 506
6. 1" AIR AND VACUUM RELEASE VALVE PER COM STD. DET. 511
7. CONN. EXIST. 8" DI w/TAPPING TEE PER COM STD. DET. 513
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9. 1" WATER SERVICE PER COM STD. DET. 501

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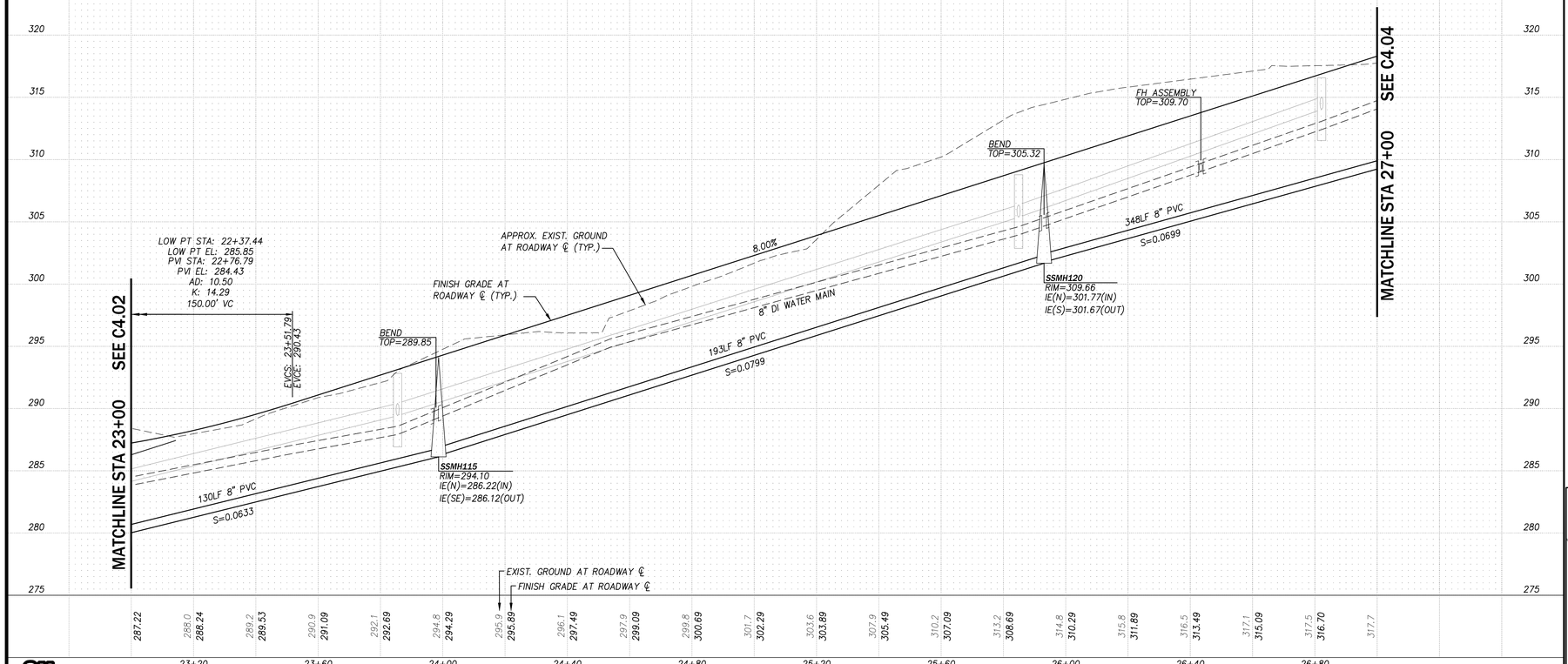
2. PIPE BEDDING FOR SANITARY SEWER MAIN SHALL BE PER COM STD. DET. 611.
3. ALL SANITARY SEWER PIPE SHALL BE SDR-35 ASTM D.3034. UNLESS OTHERWISE NOTED.
4. SEE REQUIRED WATER AND SEWER CONSTRUCTION NOTES ON DRAWING C0.01.
5. BUILDING SEWER SERVICES SHALL BE TERMINATED WITH A CAPPED END AS SHOWN FOR FUTURE CONNECTION AND EXTENSION WITH BUILDING CONSTRUCTION. A CLEANOUT SHALL BE INSTALLED WITH EACH SEWER SERVICE EXTENSION AT THE TIME OF BUILDING CONSTRUCTION.

WATER METER TABLE

LOT	STATION, OFFSET
47	STA 23+76.93, 18.00' RT
48	STA 24+44.54, 18.00' RT
49	STA 24+47.54, 18.00' RT
50	STA 25+24.54, 18.00' RT
51	STA 25+27.54, 18.00' RT
52	STA 26+23.97, 18.00' RT
53	STA 26+26.97, 18.00' RT
71	STA 27+15.68, 18.00' LT
72	STA 26+38.68, 18.00' LT
73	STA 26+35.68, 18.00' LT
74	STA 25+58.19, 18.00' LT
75	STA 25+55.19, 18.00' LT
76	STA 24+59.29, 18.00' LT
77	STA 24+56.29, 18.00' LT
78	STA 23+78.67, 18.00' LT
79	STA 23+75.96, 18.00' LT
80	STA 23+02.06, 17.99' LT

UTILITY CROSSING DATA

11	BOT 12" SD=289.38
	TOP 8" WA=288.68
12	BOT 12" SD=289.44
	TOP 8" SS=285.98
13	BOT 12" SD=305.31
	TOP 8" WA=304.71
14	BOT 12" SD=305.37
	TOP 8" SS=301.72
15	BOT 12" SD=313.97
	TOP 8" WA=313.12
16	BOT 12" SD=314.03
	TOP 8" SS=308.68



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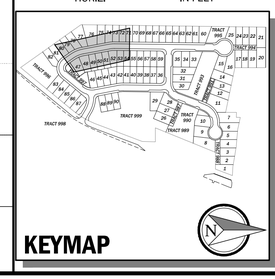

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☒ Approved ☐ Approved as corrected

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CITY OF MONROE ENGINEERING

By _____ Date 05/12/2022

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NO.	DATE	REVISION	BY	CK.
1	5/4/22	CITY PERMIT SUBMITTAL	PCE	MJH

MATTHEW J. HOPKINS — STATE OF WASHINGTON — 22810 — REGISTERED PROFESSIONAL ENGINEER — 5/5/2022

GARIBALDI PRD

ENGINEERING PERMIT PACKAGE

UTILITY PLAN AND PROFILE

CITY OF MONROE — SNOHOMISH COUNTY, WA

CLIENT

Garibaldi Lake, LLC
1010 MARKET STREET
KIRKALND, WA 98033
PHONE: (425)876-9390

C|P|H CONSULTANTS
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Landscape Architecture • Land Use Consulting
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PROJECT NO.
0054-18-028

DRAWING
C4.03

SHEET 48 OF 85

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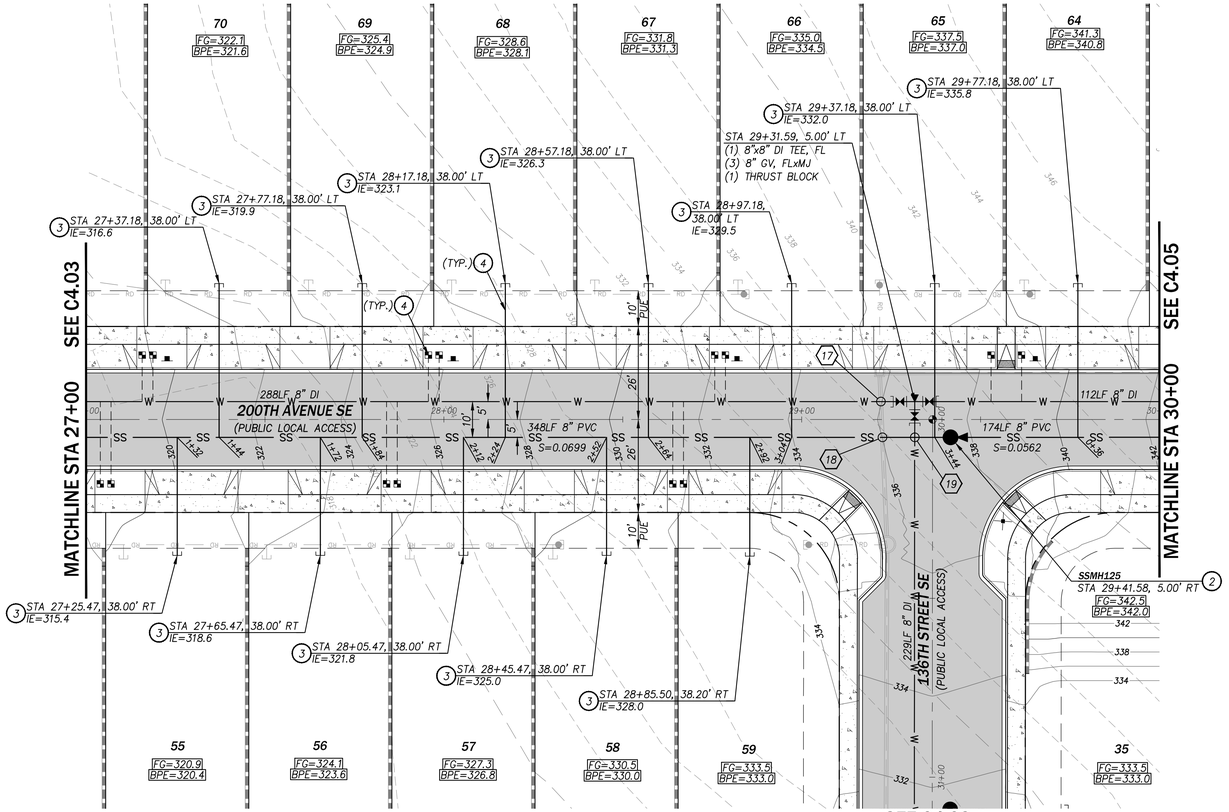
5/5/2022 10:15 AM PETER EVANS

OTOP541828
CGRD541828
CSIT541828
CUSD541828
CUWS541828
TBLOCK
OTRL541828
CNOT541828
KEYMAP

PTN. OF NW 1/4 OF SEC 31, TWP 28 N, R7E W.M.



UTILITY CROSSING DATA

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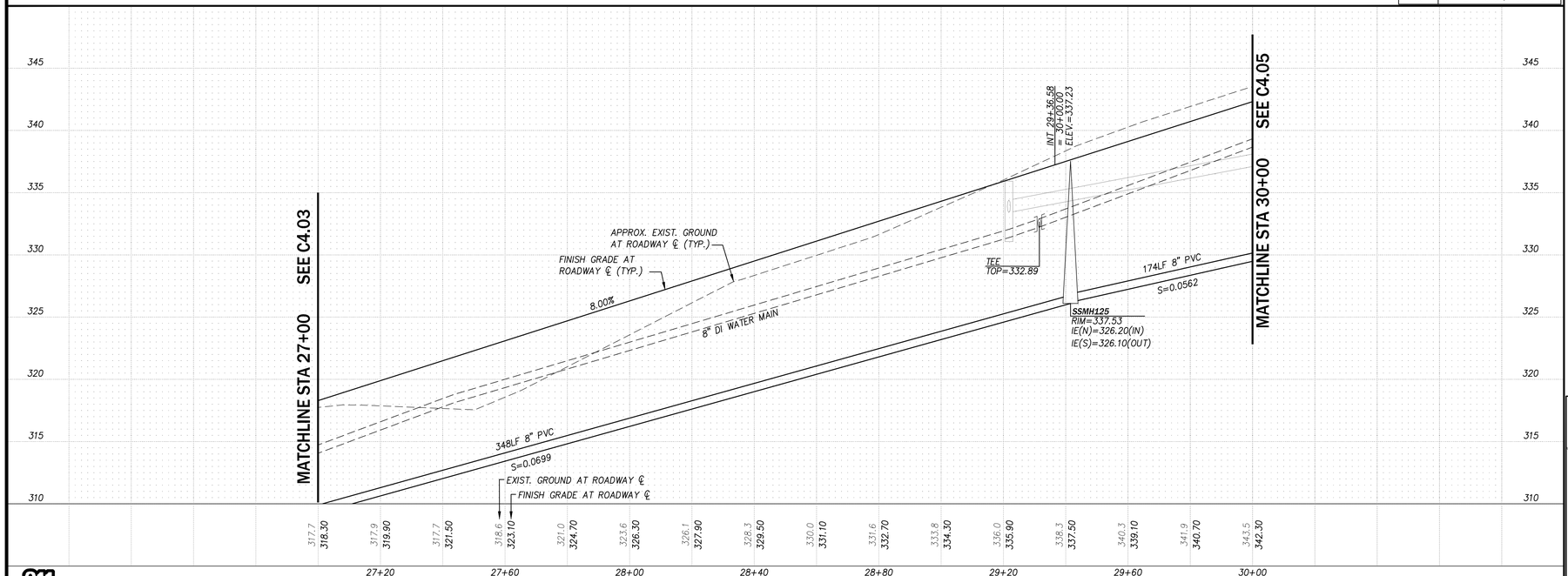
	TOP 8" WA=332.13
18	BOT 12" SD=332.02
	TOP 8" SS=325.46
19	BOT 8" WA=332.25
	TOP 8" SS=326.09

WATER METER TABLE

LOT	STATION, OFFSET
54	STA 27+03.97, 18.00' RT
55	STA 27+06.97, 18.00' RT
56	STA 27+83.97, 18.00' RT
57	STA 27+86.97, 18.00' RT
58	STA 28+63.97, 18.00' RT
59	STA 28+66.97, 18.00' RT
64	STA 29+61.44, 18.00' LT
65	STA 29+52.92, 18.00' LT
66	STA 28+78.68, 18.00' LT
67	STA 28+75.68, 18.00' LT
68	STA 27+98.68, 18.00' LT
69	STA 27+95.68, 18.00' LT
70	STA 27+18.68, 18.00' LT



CONSTRUCTION NOTES

1. 6" SIDE SEWER CONNECTION, 2% MIN. SLOPE PER COM STD. DET. 602
2. 48" SANITARY SEWER MANHOLE W/ MANHOLE RING AND COVER PER COM STD. DET. 604 AND 608
3. SANITARY SEWER SERVICE W/CAPPED END FOR FUTURE CONN., SEE NOTE 5 BELOW
4. ¾" x ⅝" WATER SERVICE PER COM STD. DET. 501
5. FIRE HYDRANT ASSEMBLY PER COM STD. DET. 506
6. 1" AIR AND VACUUM RELEASE VALVE PER COM STD. DET. 511
7. CONN. EXIST. 8" DI w/TAPPING TEE PER COM STD. DET. 513
8. 1" IRRIGATION WATER SERVICE PER COM STD. DET. 501 W/ DOUBLE CHECK VALVE ASSEMBLY PER COM STD. DET. 517S
9. 1" WATER SERVICE PER COM STD. DET. 501

NOTES:

1. THE INVERT ELEVATION FOR INDIVIDUAL SANITARY SEWER SERVICE CONNECTION STUBS SHALL BE SET A MIN. OF 4 FEET BELOW THE BEARING PAD ELEVATION (BPE).
2. PIPE BEDDING FOR SANITARY SEWER MAIN SHALL BE PER COM STD. DET. 611.
3. ALL SANITARY SEWER PIPE SHALL BE SDR-35 ASTM D3034. UNLESS OTHERWISE NOTED.
4. SEE REQUIRED WATER AND SEWER CONSTRUCTION NOTES ON DRAWING C0.01.
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NO.	DATE	REVISION	BY	CK.
1	5/4/22	CITY PERMIT SUBMITTAL	PCE	MJH

MATTHEW J. HOPKINS — STATE OF WASHINGTON — 22808 — REGISTERED PROFESSIONAL ENGINEER
5/5/2022

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0 5 10 VERT. IN FEET
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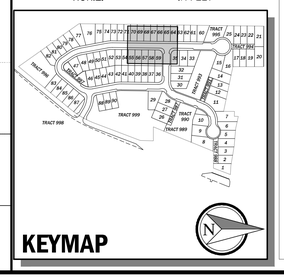

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CITY OF MONROE ENGINEERING

By _____ Date 05/12/2022

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UTILITY PLAN AND PROFILE

CITY OF MONROE — SNOHOMISH COUNTY, WA

CLIENT

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PROJECT NO.
0054-18-028

DRAWING
C4.04

SHEET 49 OF 85

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5/5/2022 10:06 AM PETER EVANS

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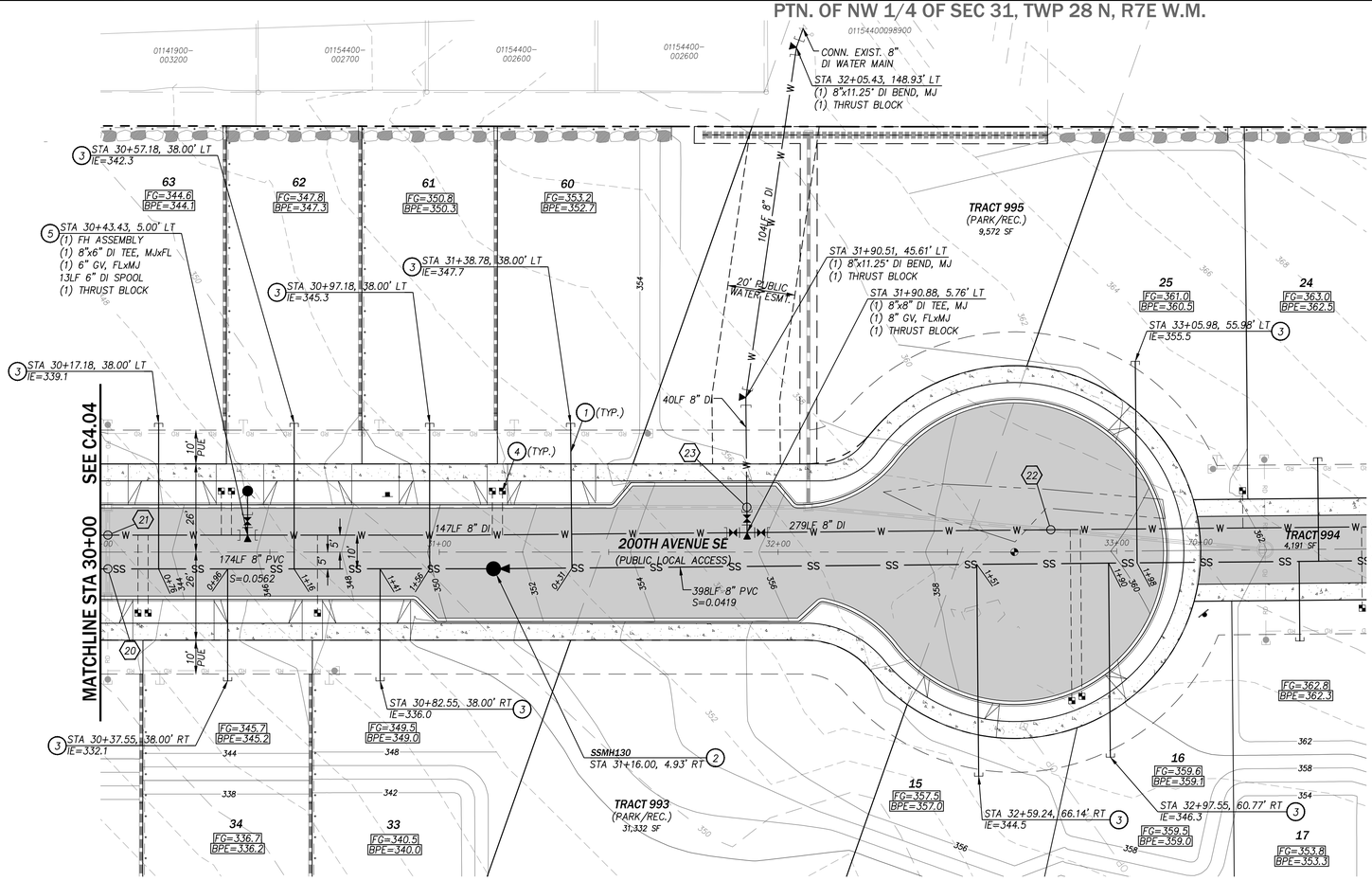
CGRD541828
CSIT541828
CUSD541828
CUWS541828
TBLOCK
OTRL541828
CNOT541828
KEYMAP

PTN. OF NW 1/4 OF SEC 31, TWP 28 N, R7E W.M.

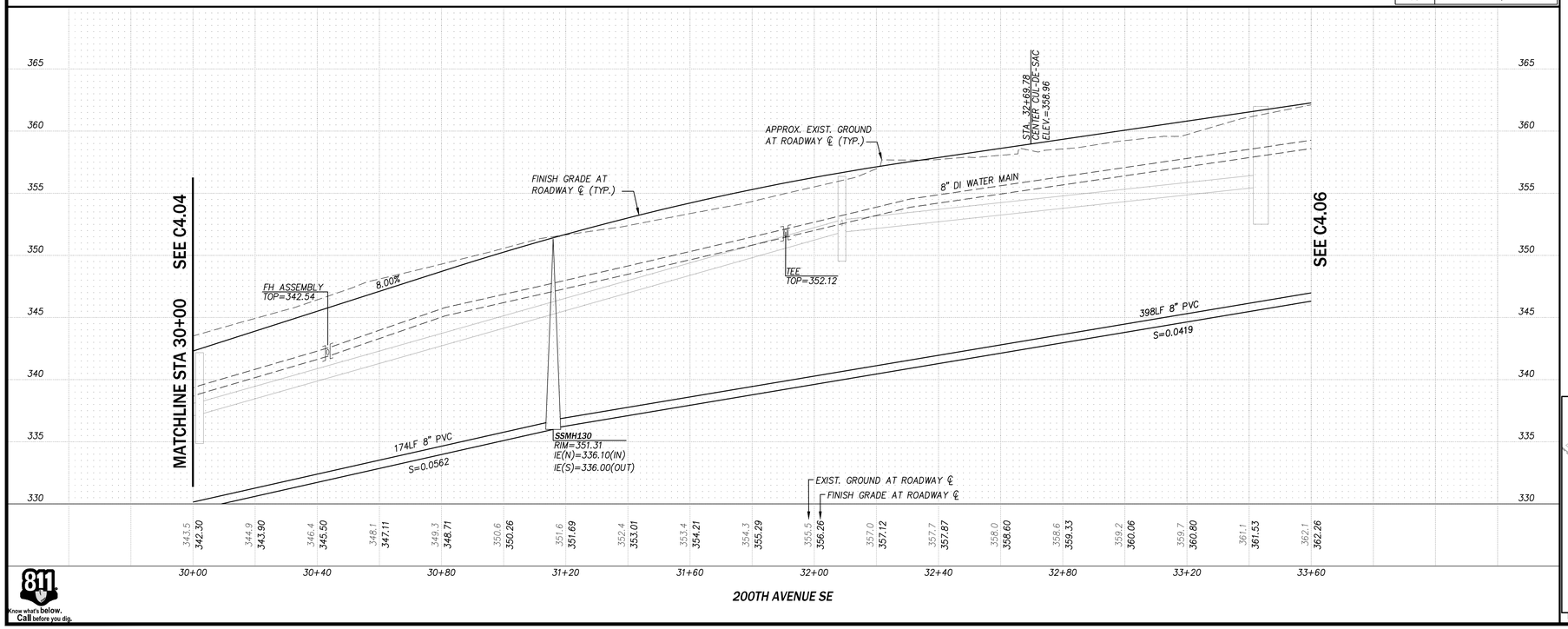


UTILITY CROSSING DATA

20	BOT 12" SD=337.04
	TOP 8" SS=330.29
21	BOT 8" WA=338.86
	TOP 12" SD=338.36
22	BOT 8" WA=335.63
	TOP 12" SD=354.89
23	BOT 12" SD=352.12
	TOP 8" WA=351.68

WATER METER TABLE

LOT	STATION, OFFSET
15	STA 32+86.31, 43.99' RT
16	STA 32+89.31, 42.75' RT
17	STA 70+47.51, 17.50' RT
25	STA 70+12.51, 17.50' LT
33	STA 30+64.07, 18.00' RT
34	STA 30+14.07, 18.00' RT
35	STA 30+11.07, 18.00' RT
60	STA 31+18.68, 18.00' LT
61	STA 31+15.68, 18.00' LT
62	STA 30+38.68, 18.00' LT
63	STA 30+35.68, 18.00' LT



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5/5/2022 10:08 AM PETER EVANS

CONSTRUCTION NOTES

1. 6" SIDE SEWER CONNECTION, 2% MIN. SLOPE PER COM STD. DET. 602
2. 48" SANITARY SEWER MANHOLE W/ MANHOLE RING AND COVER PER COM STD. DET. 604 AND 608
3. SANITARY SEWER SERVICE W/CAPPED END FOR FUTURE CONN., SEE NOTE 5 BELOW
4. ¾" x ⅝" WATER SERVICE PER COM STD. DET. 501
5. FIRE HYDRANT ASSEMBLY PER COM STD. DET. 506
6. 1" AIR AND VACUUM RELEASE VALVE PER COM STD. DET. 511
7. CONN. EXIST. 8" DI w/TAPPING TEE PER COM STD. DET. 513
8. 1" IRRIGATION WATER SERVICE PER COM STD. DET. 501 W/ DOUBLE CHECK VALVE ASSEMBLY PER COM STD. DET. 517S
9. 1" WATER SERVICE PER COM STD. DET. 501

NOTES:

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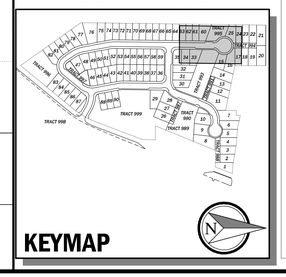

KEYMAP

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CITY OF MONROE ENGINEERING

By _____ Date 05/12/2022

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NO.	DATE	REVISION	BY	CK.
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5/5/2022

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UTILITY PLAN AND PROFILE

SNOHOMISH COUNTY, WA
CITY OF MONROE

CLIENT

Garibaldi Lake, LLC
1010 MARKET STREET
KIRKALND, WA 98033
PHONE: (425)876-9390

C|P|H CONSULTANTS
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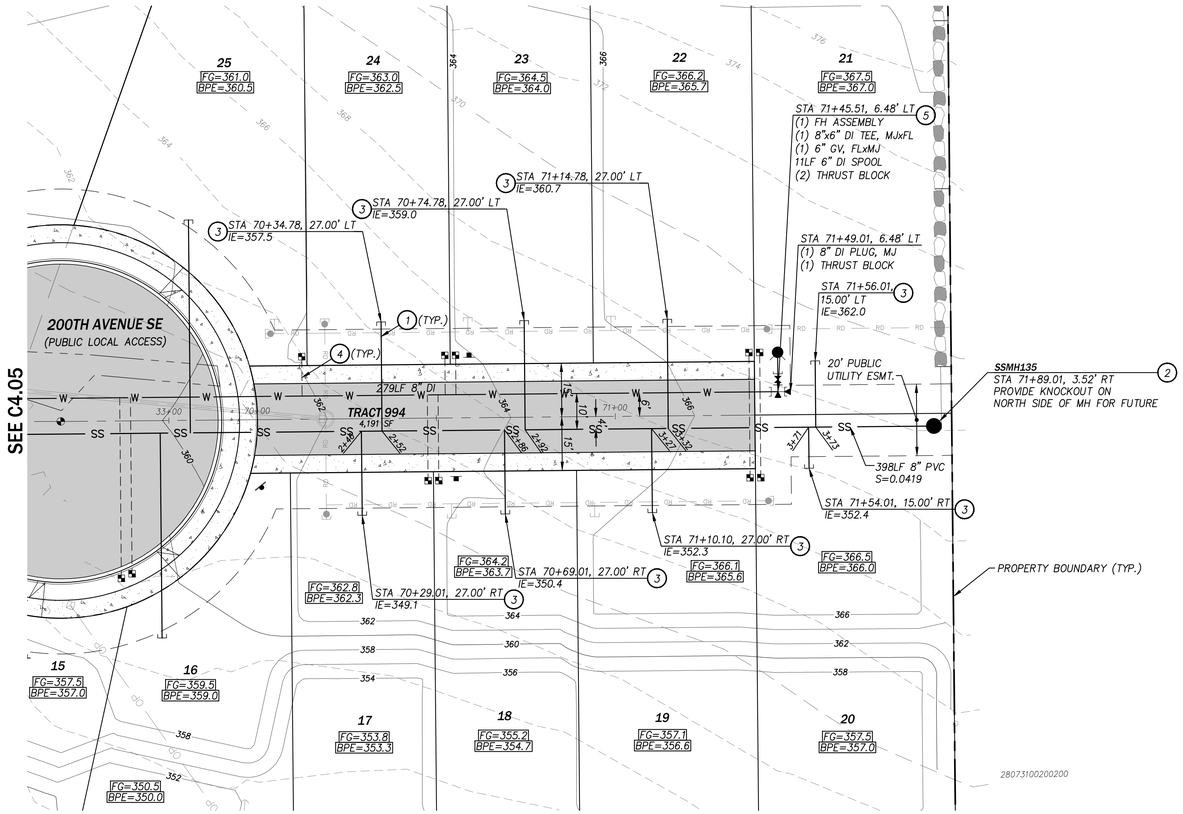
PROJECT NO.
0054-18-028

DRAWING
C4.05

SHEET 50 OF 85

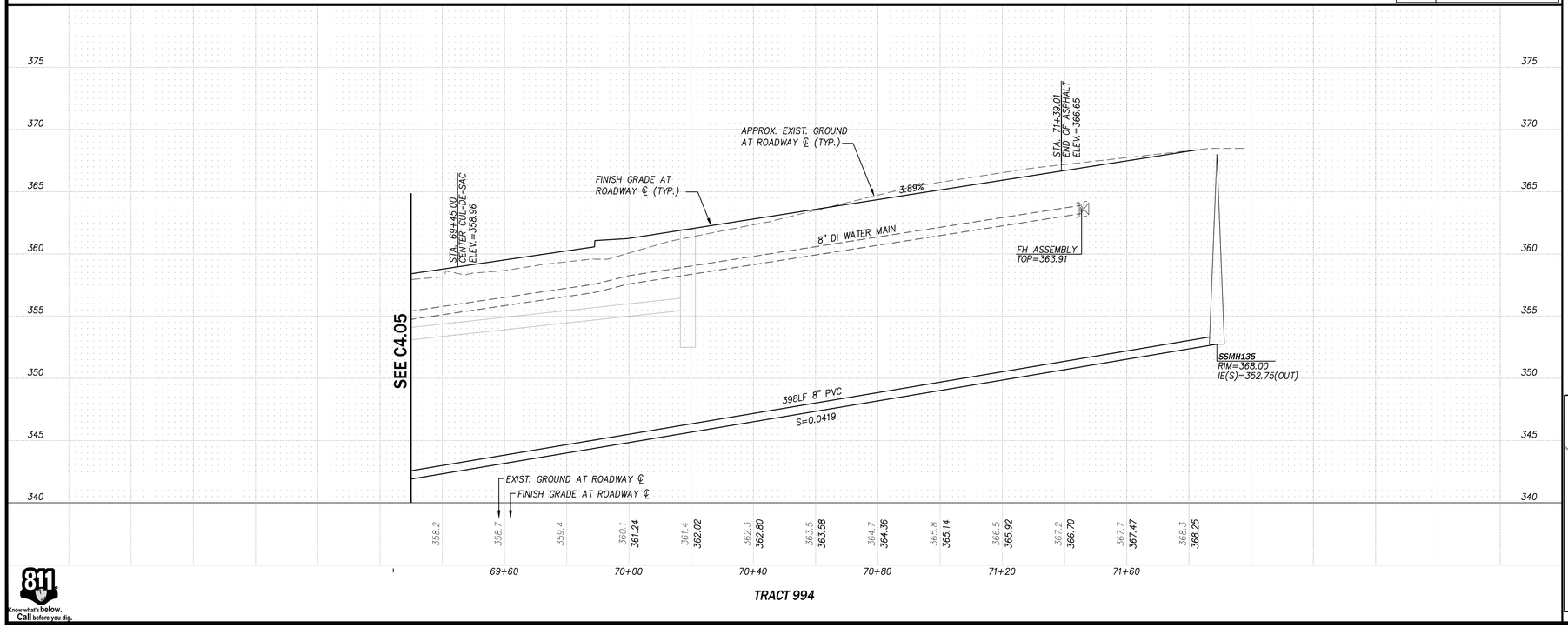
OTOP541828
CGRD541828
CSIT541828
CUSD541828
CUWS541828
TBLOCK
OTRL541828
CNOT541828
KEYMAP

PTN. OF NW 1/4 OF SEC 31, TWP 28 N, R7E W.M.



WATER METER TABLE

LOT	STATION, OFFSET
15	STA 32+86.31, 43.99' RT
16	STA 32+89.31, 42.75' RT
17	STA 70+47.51, 17.50' RT
18	STA 70+50.51, 17.50' RT
19	STA 71+37.51, 17.50' RT
20	STA 71+40.51, 17.50' RT
21	STA 71+40.51, 17.50' LT
22	STA 71+37.51, 17.50' LT
23	STA 70+55.51, 17.50' LT
24	STA 70+52.51, 17.50' LT
25	STA 70+12.51, 17.50' LT



CONSTRUCTION NOTES

1. 6" SIDE SEWER CONNECTION, 2% MIN. SLOPE PER COM STD. DET. 602
2. 48" SANITARY SEWER MANHOLE W/ MANHOLE RING AND COVER PER COM STD. DET. 604 AND 608
3. SANITARY SEWER SERVICE W/CAPPED END FOR FUTURE CONN., SEE NOTE 5 BELOW
4. ¾" x ⅝" WATER SERVICE PER COM STD. DET. 501
5. FIRE HYDRANT ASSEMBLY PER COM STD. DET. 506
6. 1" AIR AND VACUUM RELEASE VALVE PER COM STD. DET. 511
7. CONN. EXIST. 8" DI w/TAPPING TEE PER COM STD. DET. 513
8. 1" IRRIGATION WATER SERVICE PER COM STD. DET. 501 W/ DOUBLE CHECK VALVE ASSEMBLY PER COM STD. DET. 517S
9. 1" WATER SERVICE PER COM STD. DET. 501

NOTES:

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NO.	DATE	REVISION	BY	CK.
1	5/4/22	CITY PERMIT SUBMITTAL	PCE	MJH

MATTHEW J. HOPKINS — STATE OF WASHINGTON — 22400 — REGISTERED PROFESSIONAL ENGINEER
5/5/2022

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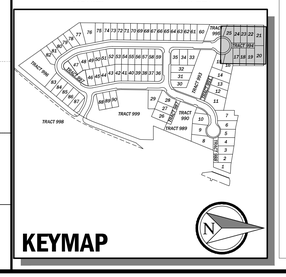

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CITY OF MONROE ENGINEERING

By _____ Date 05/12/2022

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UTILITY PLAN AND PROFILE

CITY OF MONROE — SNOHOMISH COUNTY, WA

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PROJECT NO.
0054-18-028

DRAWING
C4.06

SHEET 51 OF 85

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CSIT541828
CUSD541828
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TBLOCK
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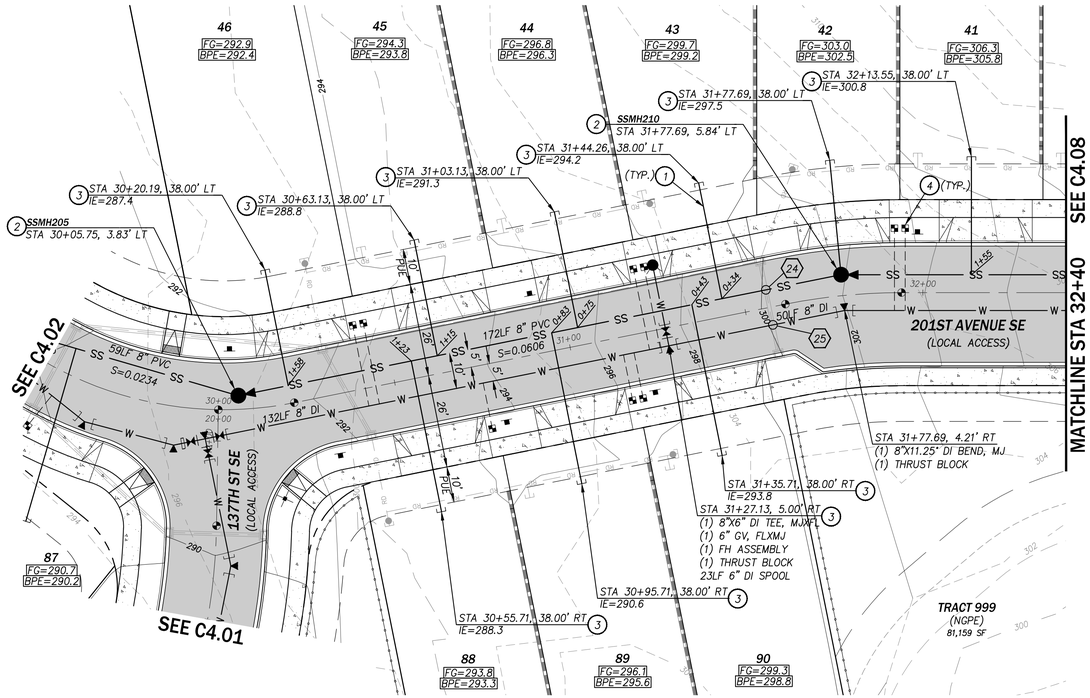
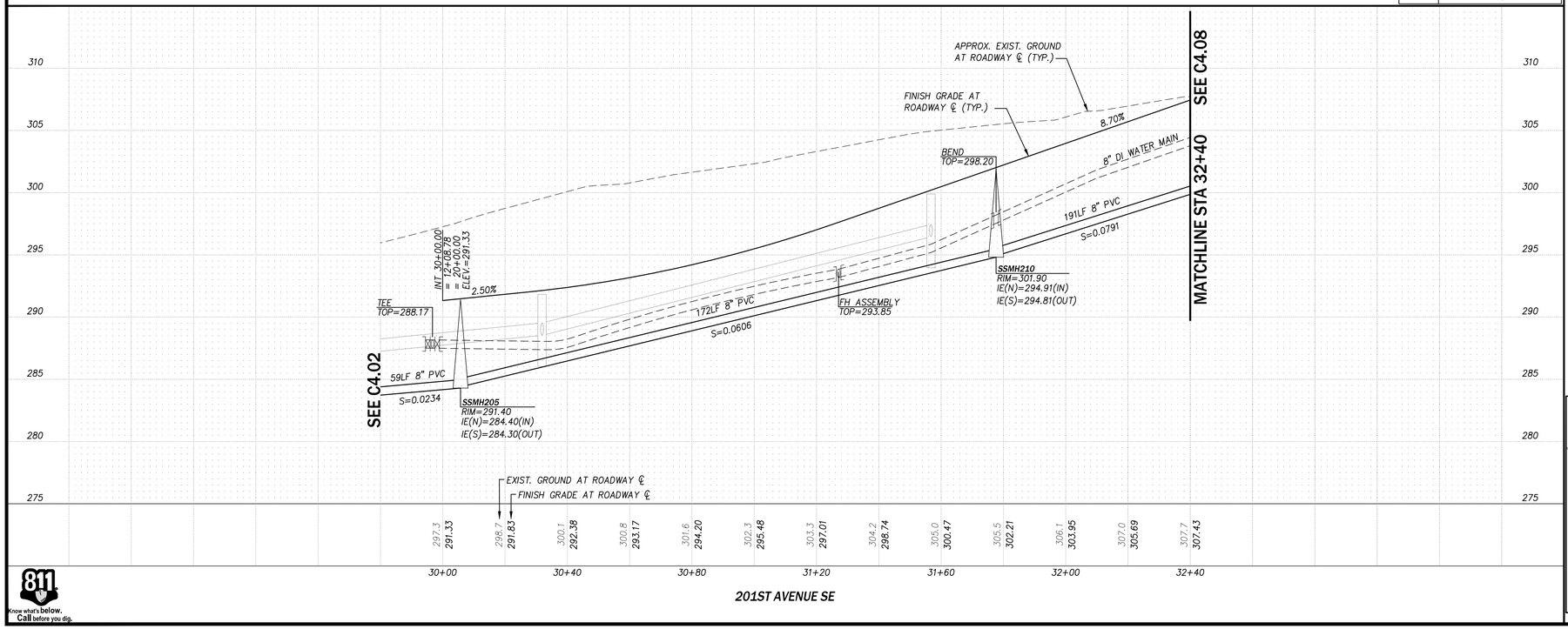
KEYMAP



UTILITY CROSSING DATA	
24	BOT 12" SD=296.39
	TOP 8" SS=294.25
25	BOT 12" SD=296.45
	TOP 8" WA=295.87

WATER METER TABLE	
LOT	*STATION, OFFSET*
41	STA 31+95.07, 17.99' LT
42	STA 31+92.26, 18.00' LT
43	STA 31+24.63, 18.00' LT
44	STA 31+21.63, 18.00' LT
45	STA 30+44.63, 18.00' LT
46	STA 30+41.63, 18.00' LT
87	STA 20+46.80, 18.00' LT
88	STA 30+74.21, 18.00' RT
89	STA 31+14.21, 18.00' RT
90	STA 31+17.21, 18.00' RT



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5/5/2022 10:12 AM PETER EVANS

CONSTRUCTION NOTES

1. 6" SIDE SEWER CONNECTION, 2% MIN. SLOPE PER COM STD. DET. 602
2. 48" SANITARY SEWER MANHOLE W/ MANHOLE RING AND COVER PER COM STD. DET. 604 AND 608
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NO.	DATE	REVISION	BY	CK.
1	5/4/22	CITY PERMIT SUBMITTAL	PCE	MJH

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5/5/2022

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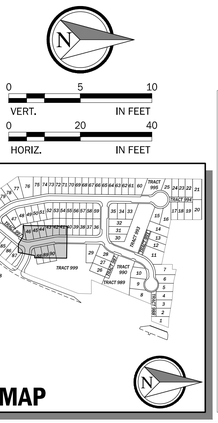
05/09/2022
CITY OF MONROE



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CITY OF MONROE ENGINEERING

By _____ Date 05/12/2022

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GARIBALDI PRD

ENGINEERING PERMIT PACKAGE

UTILITY PLAN AND PROFILE

CITY OF MONROE — SNOHOMISH COUNTY, WA

CLIENT
Garibaldi Lake, LLC
1010 MARKET STREET
KIRKALND, WA 98033
PHONE: (425)876-9390

C|P|H CONSULTANTS
Site Planning • Civil Engineering
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11321-A NE 120th Street
Kirkland, WA 98034 • (425) 285-2390
101 South Wenatchee Avenue, Suite C3
Wenatchee, WA 98801 • (509) 293-7731
www.cphconsultants.com

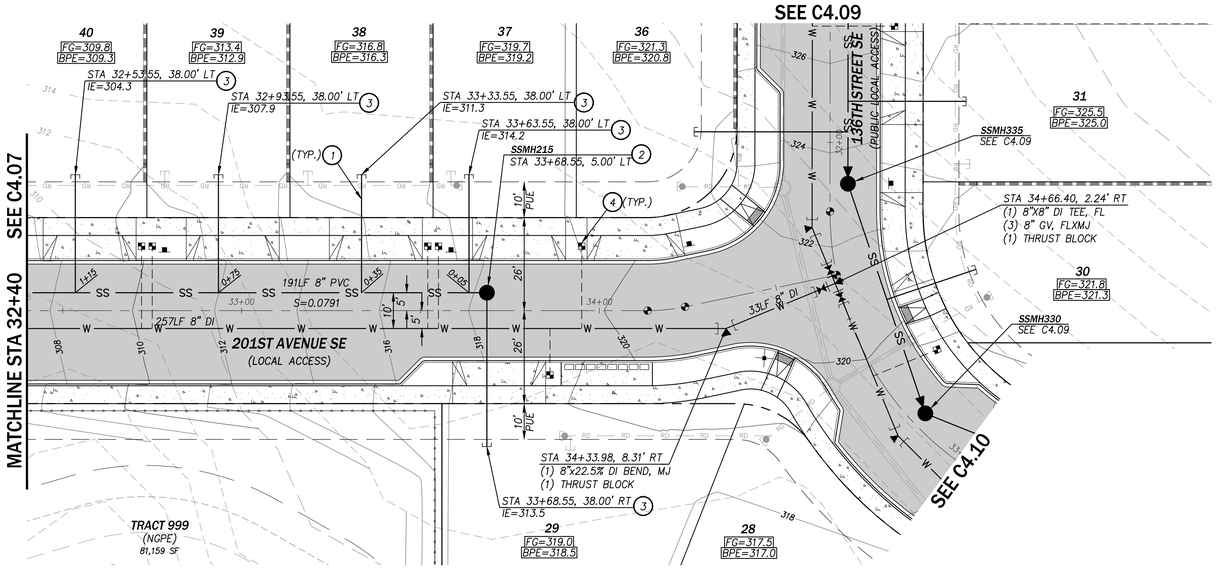
PROJECT NO.
0054-18-028

DRAWING
C4.07

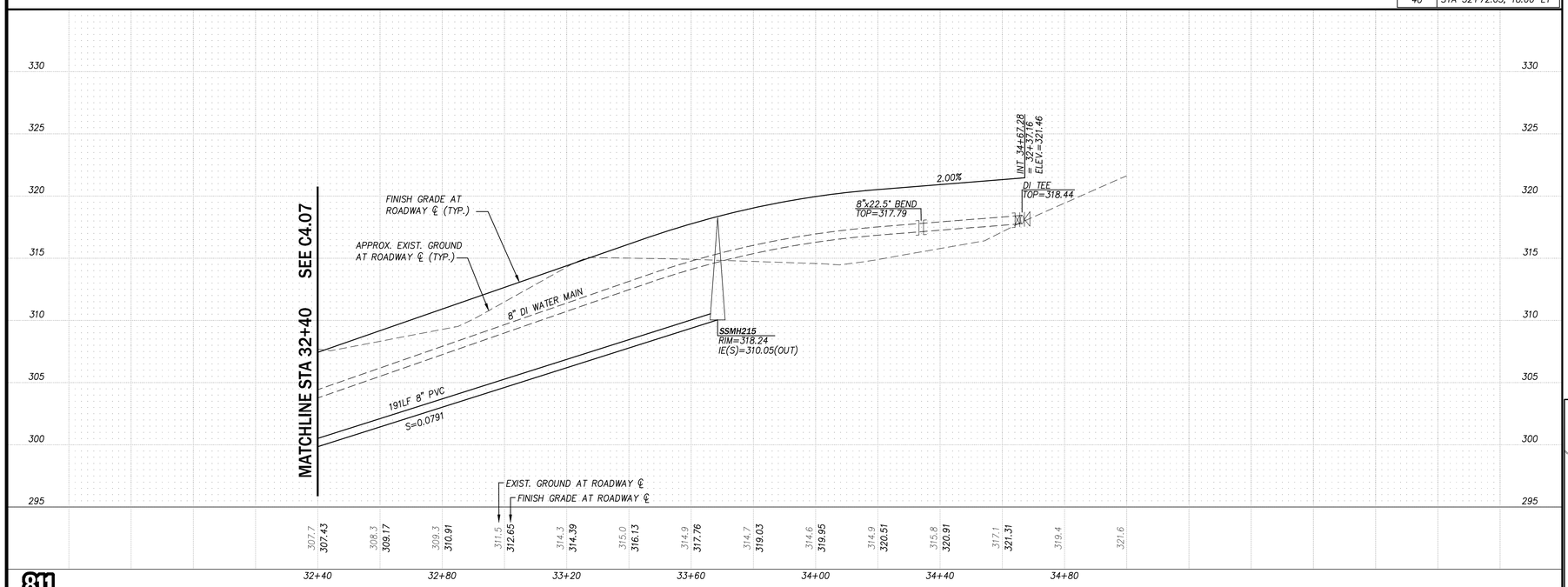
SHEET 52 OF 85

OTOP541828
CGRD541828
CSIT541828
CUSD541828
CUWS541828
TBLOCK
OTRL541828
CNOT541828
KEYMAP

PTN. OF NW 1/4 OF SEC 31, TWP 28 N, R7E W.M.



WATER METER TABLE	
LOT	STATION, OFFSET
29	STA 33+86.20, 18.00' RT
30	STA 32+71.15, 18.00' LT
31	STA 31+67.48, 18.00' LT
36	STA 33+95.05, 18.00' LT
37	STA 33+55.05, 18.00' LT
38	STA 33+52.05, 18.00' LT
39	STA 32+75.05, 18.00' LT
40	STA 32+72.05, 18.00' LT



CONSTRUCTION NOTES

1. 6" SIDE SEWER CONNECTION, 2% MIN. SLOPE PER COM STD. DET. 602
2. 48" SANITARY SEWER MANHOLE W/ MANHOLE RING AND COVER PER COM STD. DET. 604 AND 608
3. SANITARY SEWER SERVICE W/CAPPED END FOR FUTURE CONN., SEE NOTE 5 BELOW
4. ¾" x ⅝" WATER SERVICE PER COM STD. DET. 501
5. FIRE HYDRANT ASSEMBLY PER COM STD. DET. 506
6. 1" AIR AND VACUUM RELEASE VALVE PER COM STD. DET. 511
7. CONN. EXIST. 8" DI w/TAPPING TEE PER COM STD. DET. 513
8. 1" IRRIGATION WATER SERVICE PER COM STD. DET. 501 W/ DOUBLE CHECK VALVE ASSEMBLY PER COM STD. DET. 517S
9. 1" WATER SERVICE PER COM STD. DET. 501

NOTES:

1. THE INVERT ELEVATION FOR INDIVIDUAL SANITARY SEWER SERVICE CONNECTION STUBS SHALL BE SET A MIN. OF 4 FEET BELOW THE BEARING PAD ELEVATION (BPE).
2. PIPE BEDDING FOR SANITARY SEWER MAIN SHALL BE PER COM STD. DET. 611.
3. ALL SANITARY SEWER PIPE SHALL BE SDR-35 ASTM D3034. UNLESS OTHERWISE NOTED.
4. SEE REQUIRED WATER AND SEWER CONSTRUCTION NOTES ON DRAWING C0.01.
5. BUILDING SEWER SERVICES SHALL BE TERMINATED WITH A CAPPED END AS SHOWN FOR FUTURE CONNECTION AND EXTENSION WITH BUILDING CONSTRUCTION. A CLEANOUT SHALL BE INSTALLED WITH EACH SEWER SERVICE EXTENSION AT THE TIME OF BUILDING CONSTRUCTION.

NO.	DATE	REVISION	BY	CK.
1	5/4/22	CITY PERMIT SUBMITTAL	PCE	MJH

MATTHEW J. HOPKINS — STATE OF WASHINGTON — 22400 — REGISTERED PROFESSIONAL ENGINEER
5/5/2022

RECEIVED
05/09/2022
CITY OF MONROE

0 5 10
VERT. IN FEET
0 20 40
HORIZ. IN FEET

KEYMAP

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CITY OF MONROE ENGINEERING

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UTILITY PLAN AND PROFILE

SNOHOMISH COUNTY, WA
CITY OF MONROE

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PROJECT NO.
0054-18-028

DRAWING
C4.08

SHEET 53 OF 85

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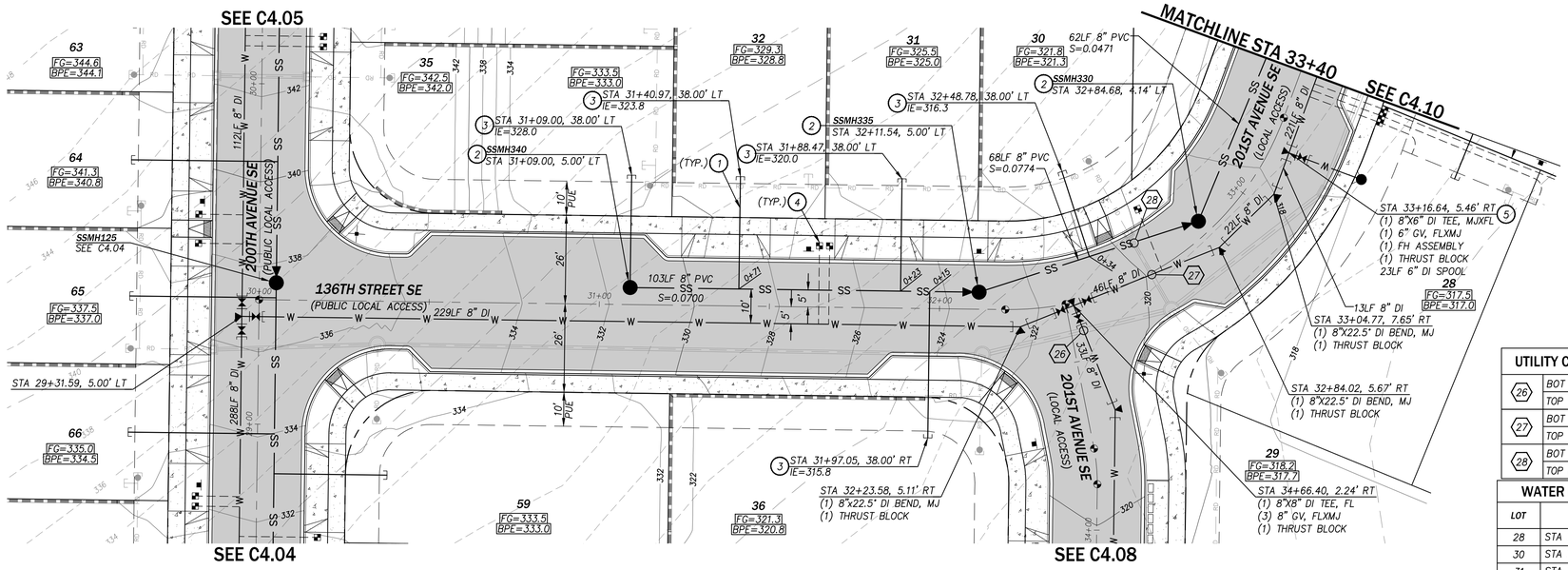
P:\project\0054\18028\dwg\Sheets\Final Engineering\C4.08.dwg
5/5/2022 10:14 AM PETER EVANS

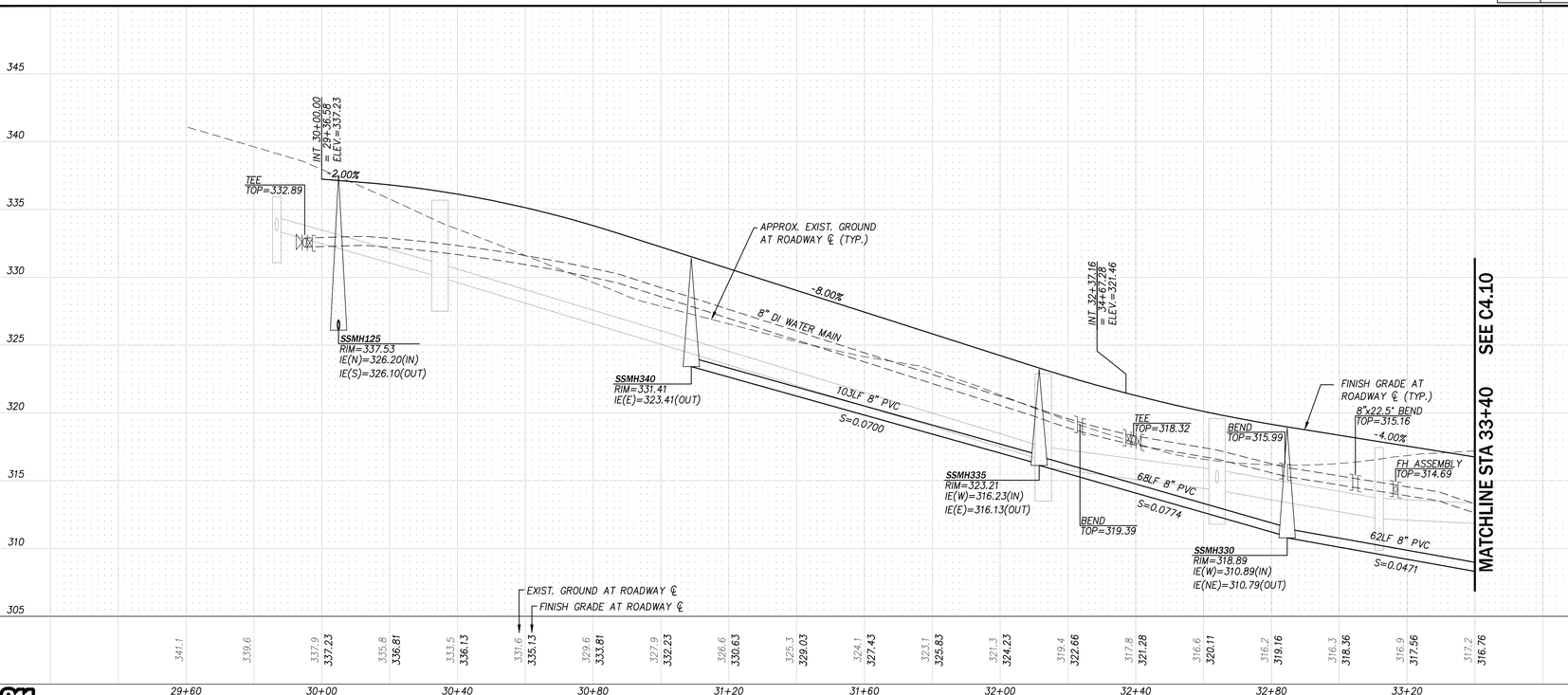
OTOP541828
CGRD541828
CSIT541828
CUSD541828
CUWS541828
TBLOCK
OTRL541828
CNOT541828
KEYMAP

PTN. OF NW 1/4 OF SEC 31, TWP 28 N, R7E W.M.



UTILITY CROSSING DATA	
26	BOT 8" WA=317.51
	TOP 18" SD=316.75
27	BOT 8" WA=315.50
	TOP 12" SD=316.0
28	BOT 12" SD=314.88
	TOP 8" SS=313.12

WATER METER TABLE	
LOT	STATION, OFFSET
28	STA 33+33.69, 27.00' RT
30	STA 32+71.15, 18.00' LT
31	STA 31+67.48, 18.00' LT
32	STA 31+64.48, 18.00' LT
35	STA 30+11.07, 18.00' RT
36	STA 33+95.05, 18.00' LT
59	STA 28+66.97, 18.00' RT
63	STA 30+35.68, 18.00' LT
64	STA 29+61.44, 18.00' LT
65	STA 29+52.92, 18.00' LT
66	STA 28+78.68, 18.00' LT



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P:\project\0054\18028\Dwg\Sheets\Final Engineering\C4.09.dwg
5/5/2022 10:16 AM PETER EVANS

CONSTRUCTION NOTES

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RECEIVED
05/09/2022
CITY OF MONROE

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0 5 10
VERT. IN FEET

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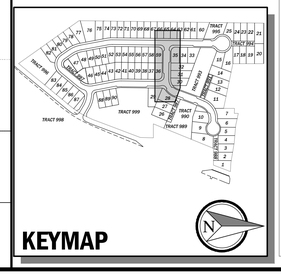
HORIZ. IN FEET



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NO.	DATE	REVISION	BY	CK.
1	5/4/22	CITY PERMIT SUBMITTAL	PCE	MJH

MATTHEW J. HOPKINS — STATE OF WASHINGTON — 22810 — REGISTERED PROFESSIONAL ENGINEER
5/5/2022

GARIBALDI PRD
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UTILITY PLAN AND PROFILE
CITY OF MONROE SNOHOMISH COUNTY, WA

CLIENT
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1010 MARKET STREET
KIRKALND, WA 98033
PHONE: (425)876-9390

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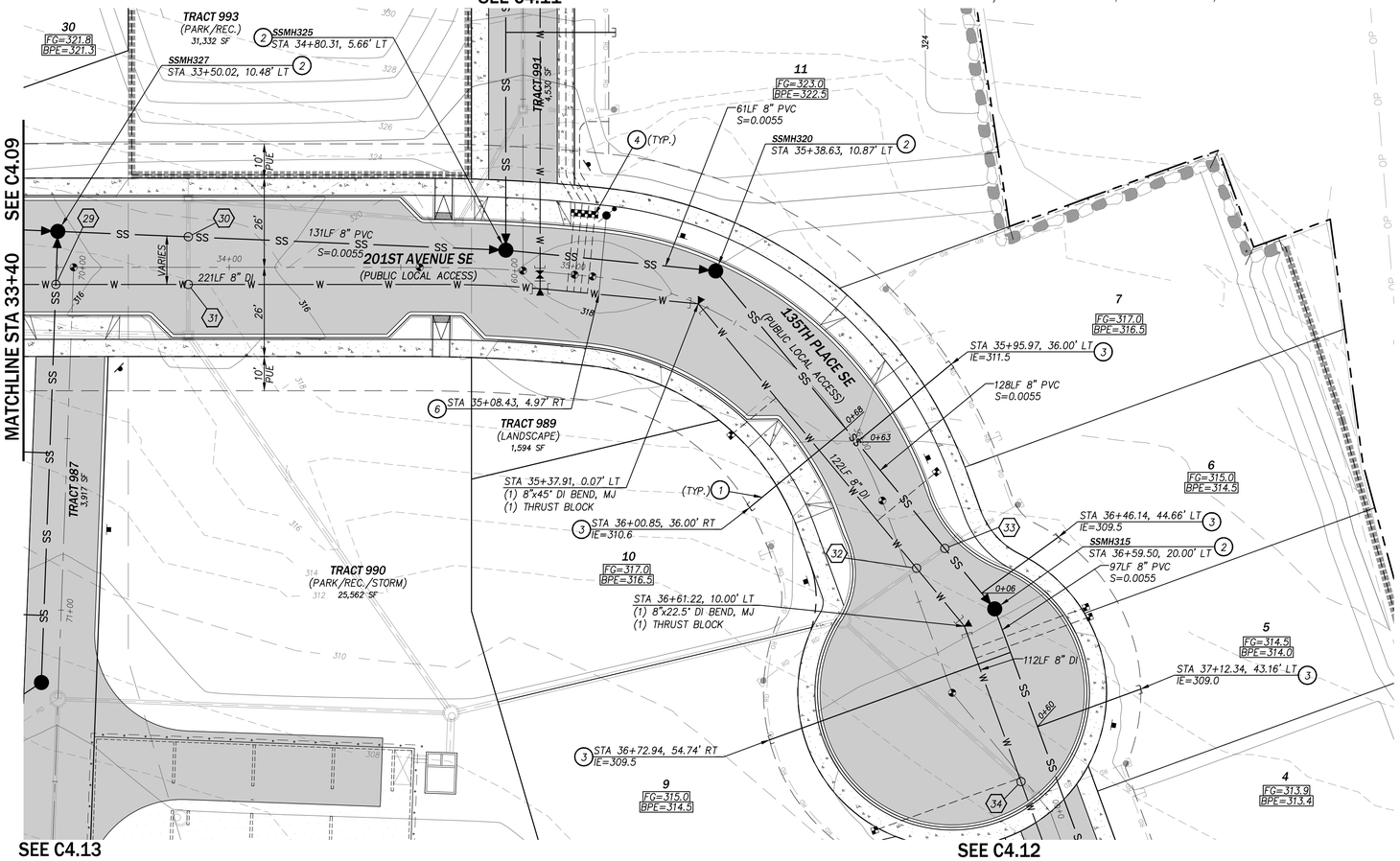
PROJECT NO.
0054-18-028

DRAWING
C4.09

SHEET 54 OF 85

OTOP541828
CGRD541828
CSIT541828
CUSD541828
CUWS541828
TBLOCK
OTRL541828
CNOT541828
KEYMAP

PTN. OF NW 1/4 OF SEC 31, TWP 28 N, R7E W.M.



UTILITY CROSSING DATA	
29	BOT 8" WA=311.93
	TOP 8" SS=308.66
30	BOT 12" SD=311.98
	TOP 8" SS=309.40
31	BOT 12" SD=311.82
	TOP 8" WA=311.25
32	BOT 8" WA=311.05
	TOP 12" SD=310.46
33	BOT 8" SD=309.46
	TOP 8" SS=306.64
34	BOT 12" SD=309.17
	TOP 8" WA=308.57

WATER METER TABLE	
LOT	STATION, OFFSET
5	STA 36+86.60, 44.97' LT
6	STA 36+68.14, 45.19' LT
7	STA 36+16.53, 17.75' LT
9	STA 36+94.85, 42.90' RT
10	STA 35+71.66, 27.00' RT
11	STA 35+04.94, 18.00' LT
12	STA 35+02.94, 18.00' LT
13	STA 35+00.94, 18.00' LT
14	STA 34+99.01, 18.00' LT

CONSTRUCTION NOTES

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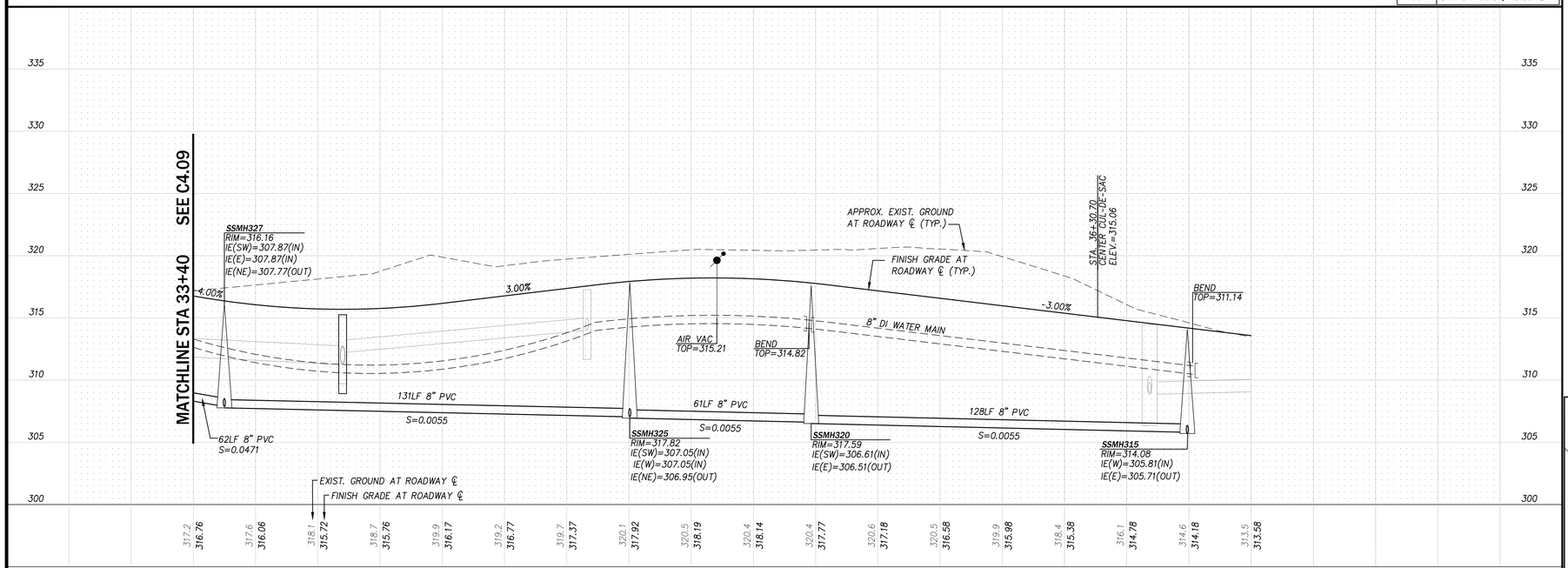

201ST AVENUE SE/135TH PLACE SE

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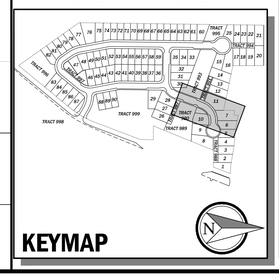
0 20 40
HORIZ. IN FEET



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NO.	DATE	REVISION	BY	CK.
1	5/4/22	CITY PERMIT SUBMITTAL	PCE	MJH

MATTHEW J. HOPKINS — STATE OF WASHINGTON — 21600 — REGISTERED PROFESSIONAL ENGINEER — 5/5/2022

GARIBALDI PRD

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UTILITY PLAN AND PROFILE

SNOHOMISH COUNTY, WA
CITY OF MONROE

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PROJECT NO.
0054-18-028

DRAWING
C4.10

SHEET 55 OF 85

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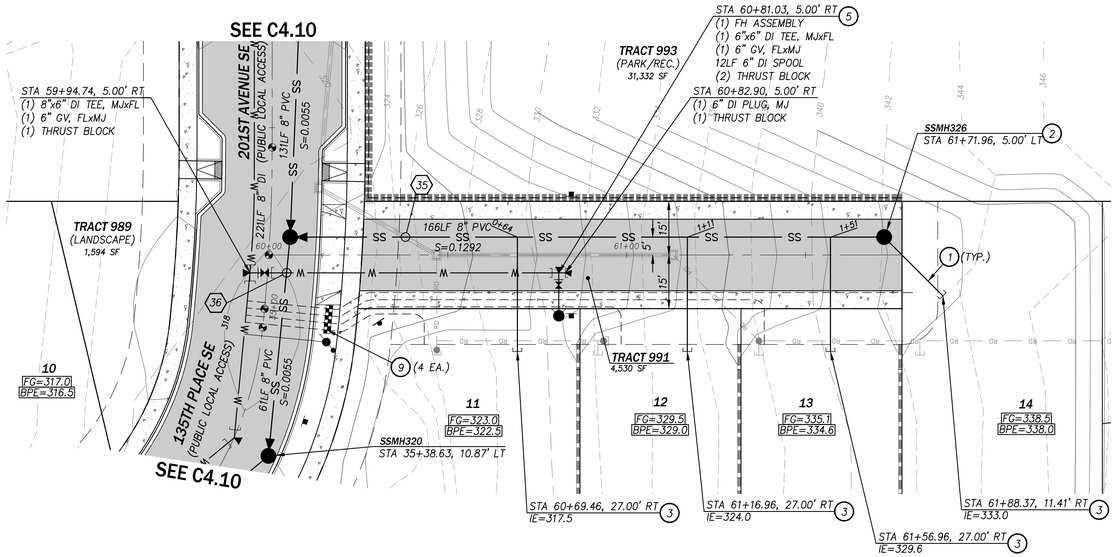
5/5/2022 10:18 AM PETER EVANS

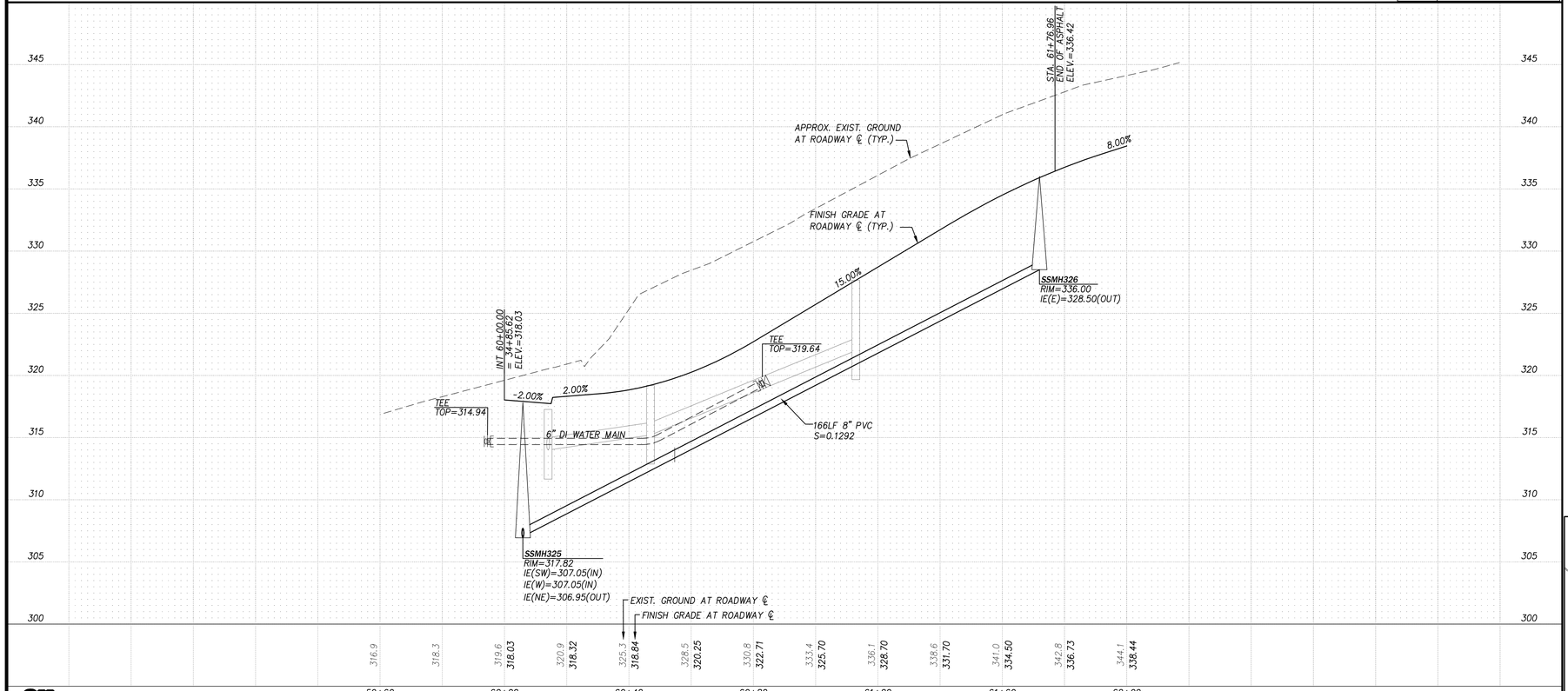
OTOP541828
CGRD541828
CSIT541828
CUSD541828
CUWS541828
TBLOCK
OTRL541828
CNOT541828
KEYMAP

PTN. OF NW 1/4 OF SEC 31, TWP 28 N, R7E W.M.



UTILITY CROSSING DATA	
35	BOT 12" SD=314.79
	TOP 8" SS=311.91
36	BOT 6" WA=314.44
	TOP 8" SS=307.60

WATER METER TABLE	
LOT	STATION, OFFSET
11	STA 35+04.94, 18.00' LT
12	STA 35+02.94, 18.00' LT
13	STA 35+00.94, 18.00' LT
14	STA 34+99.01, 18.00' LT



CONSTRUCTION NOTES

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4. ¾" x ⅝" WATER SERVICE PER COM STD. DET. 501
5. FIRE HYDRANT ASSEMBLY PER COM STD. DET. 506
6. 1" AIR AND VACUUM RELEASE VALVE PER COM STD. DET. 511
7. CONN. EXIST. 8" DI w/TAPPING TEE PER COM STD. DET. 513
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NO.	DATE	REVISION	BY
1	5/4/22	CITY PERMIT SUBMITTAL	PCE

MATTHEW JOHN HOPKINS
STATE OF WASHINGTON
21618
REGISTERED PROFESSIONAL ENGINEER
5/5/2022

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05/09/2022
CITY OF MONROE

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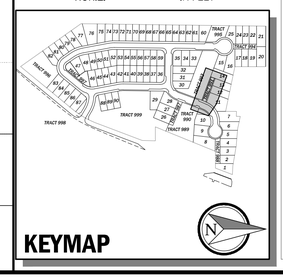

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PROJECT NO.
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DRAWING
C4.11

SHEET 56 OF 85

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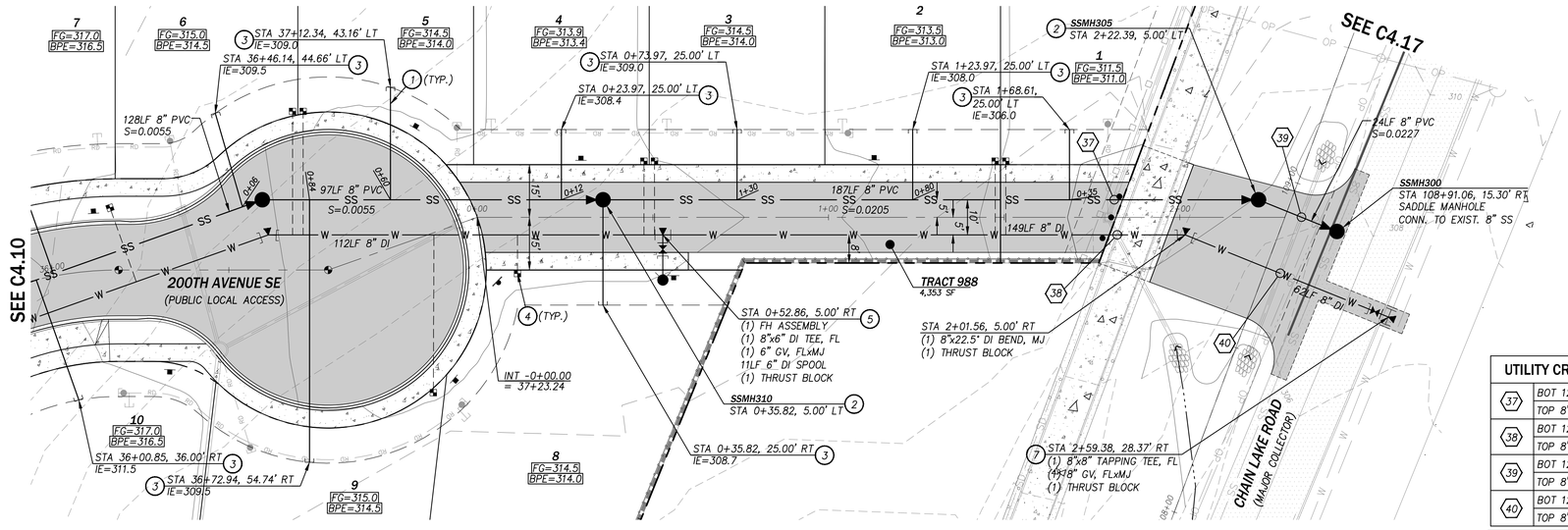

UTILITY CROSSING DATA

37	BOT 12" SD=307.37
	TOP 8" SS=302.80
38	BOT 12" SD=305.63
	TOP 8" WA=304.92
39	BOT 12" SD=304.12
	TOP 8" SS=301.55
40	BOT 12" SD=303.83
	TOP 8" WA=303.29

WATER METER TABLE

LOT	STATION, OFFSET
1	STA 1+50.47, 16.00' LT
2	STA 1+47.47, 16.00' LT
3	STA 0+50.47, 16.00' LT
4	STA 0+47.47, 16.00' LT
5	STA 36+86.60, 44.97' LT
6	STA 36+68.14, 45.19' LT
7	STA 36+16.53, 17.75' LT
8	STA 0+11.48, 16.00' RT
9	STA 36+94.85, 42.90' RT
10	STA 35+71.66, 27.00' RT

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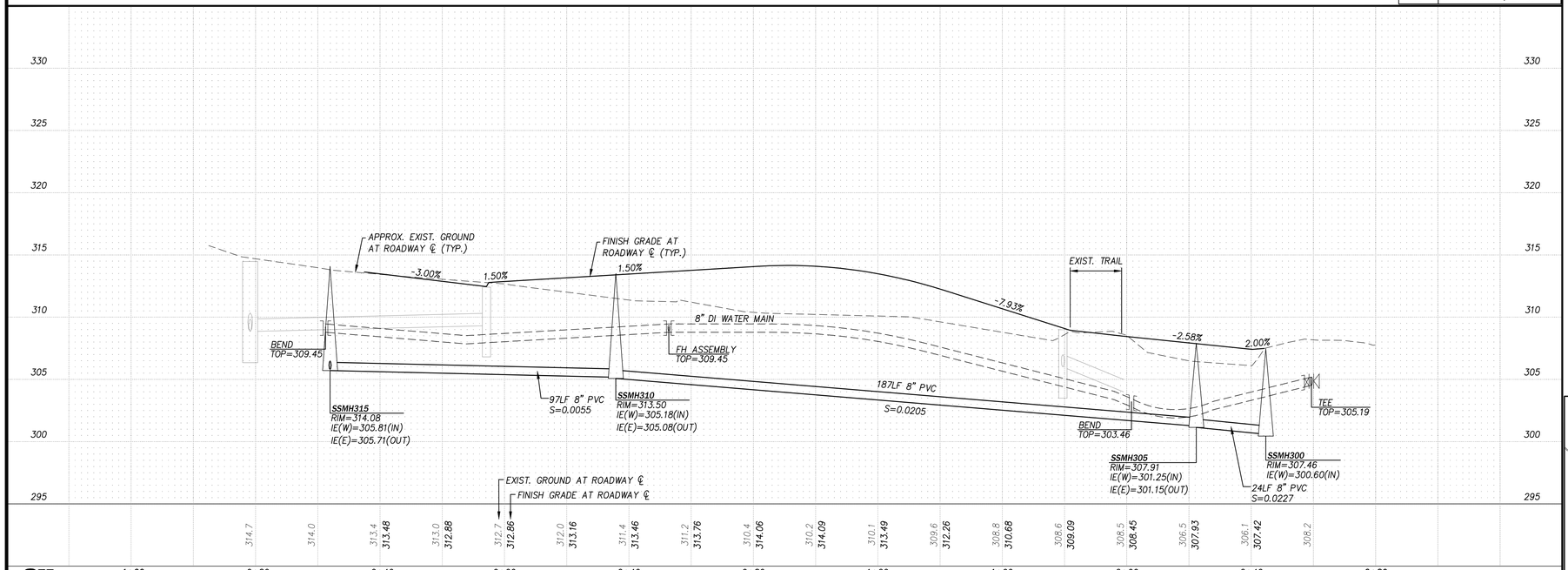
5. FIRE HYDRANT ASSEMBLY PER COM STD. DET. 506
6. 1" AIR AND VACUUM RELEASE VALVE PER COM STD. DET. 511
7. CONN. EXIST. 8" DI w/TAPPING TEE PER COM STD. DET. 513
8. 1" IRRIGATION WATER SERVICE PER COM STD. DET. 501 W/ DOUBLE CHECK VALVE ASSEMBLY PER COM STD. DET. 517S
9. 1" WATER SERVICE PER COM STD. DET. 501

NOTES:

1. THE INVERT ELEVATION FOR INDIVIDUAL SANITARY SEWER SERVICE CONNECTION STUBS SHALL BE SET A MIN. OF 4 FEET BELOW THE BEARING PAD ELEVATION (BPE).
2. PIPE BEDDING FOR SANITARY SEWER MAIN SHALL BE PER COM STD. DET. 611.
3. ALL SANITARY SEWER PIPE SHALL BE SDR-35 ASTM D3034. UNLESS OTHERWISE NOTED.
4. SEE REQUIRED WATER AND SEWER CONSTRUCTION NOTES ON DRAWING C0.01.
5. BUILDING SEWER SERVICES SHALL BE TERMINATED WITH A CAPPED END AS SHOWN FOR FUTURE CONNECTION AND EXTENSION WITH BUILDING CONSTRUCTION. A CLEANOUT SHALL BE INSTALLED WITH EACH SEWER SERVICE EXTENSION AT THE TIME OF BUILDING CONSTRUCTION.



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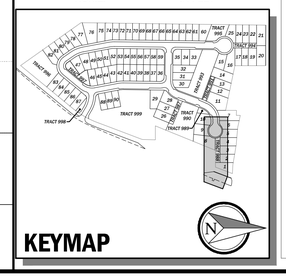

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CITY OF MONROE ENGINEERING

By _____ Date 05/12/2022

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NO.	DATE	REVISION	BY	CK.
2	5/4/22	CITY PERMIT SUBMITTAL	PCE	MJH

MATTHEW J. HOPKINS — STATE OF WASHINGTON — 22400 — REGISTERED PROFESSIONAL ENGINEER
5/5/2022

GARIBALDI PRD

ENGINEERING PERMIT PACKAGE

UTILITY PLAN AND PROFILE

SNOHOMISH COUNTY, WA

CITY OF MONROE

CLIENT

Garibaldi Lake, LLC
1010 MARKET STREET
KIRKALND, WA 98033
PHONE: (425)876-9390

C|P|H CONSULTANTS
Site Planning • Civil Engineering
Landscape Architecture • Land Use Consulting
11321-B NE 120th Street
Kirkland, WA 98034 • (425) 285-2390
101 South Wenatchee Avenue, Suite C3
Wenatchee, WA 98801 • (509) 293-7731
www.cphconsultants.com

PROJECT NO.
0054-18-028

DRAWING
C4.12

SHEET 57 OF 85

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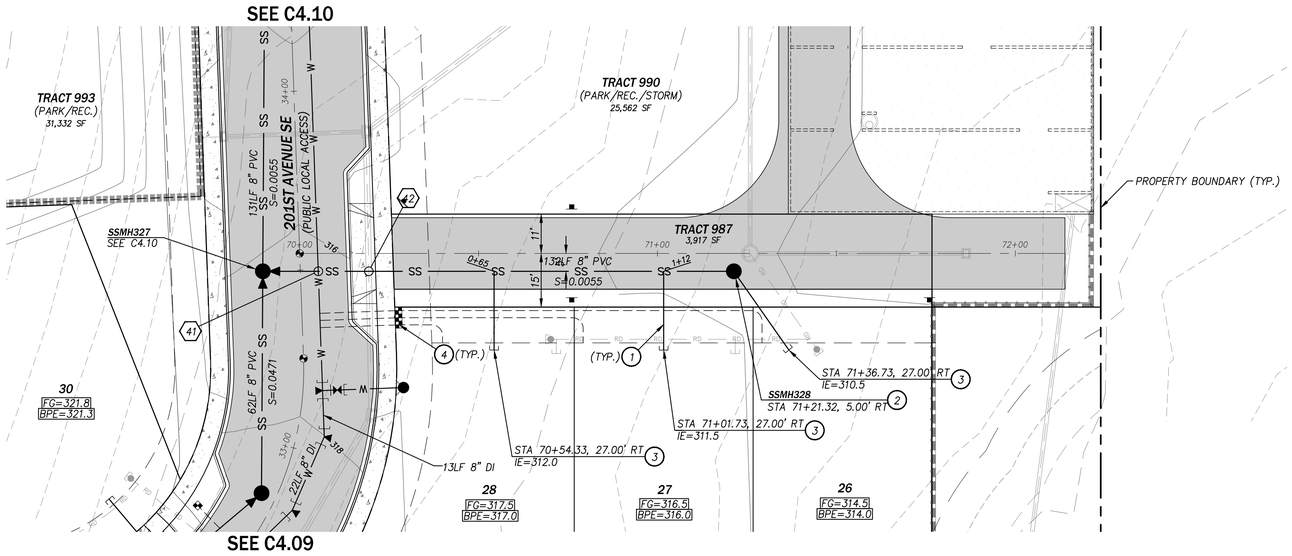
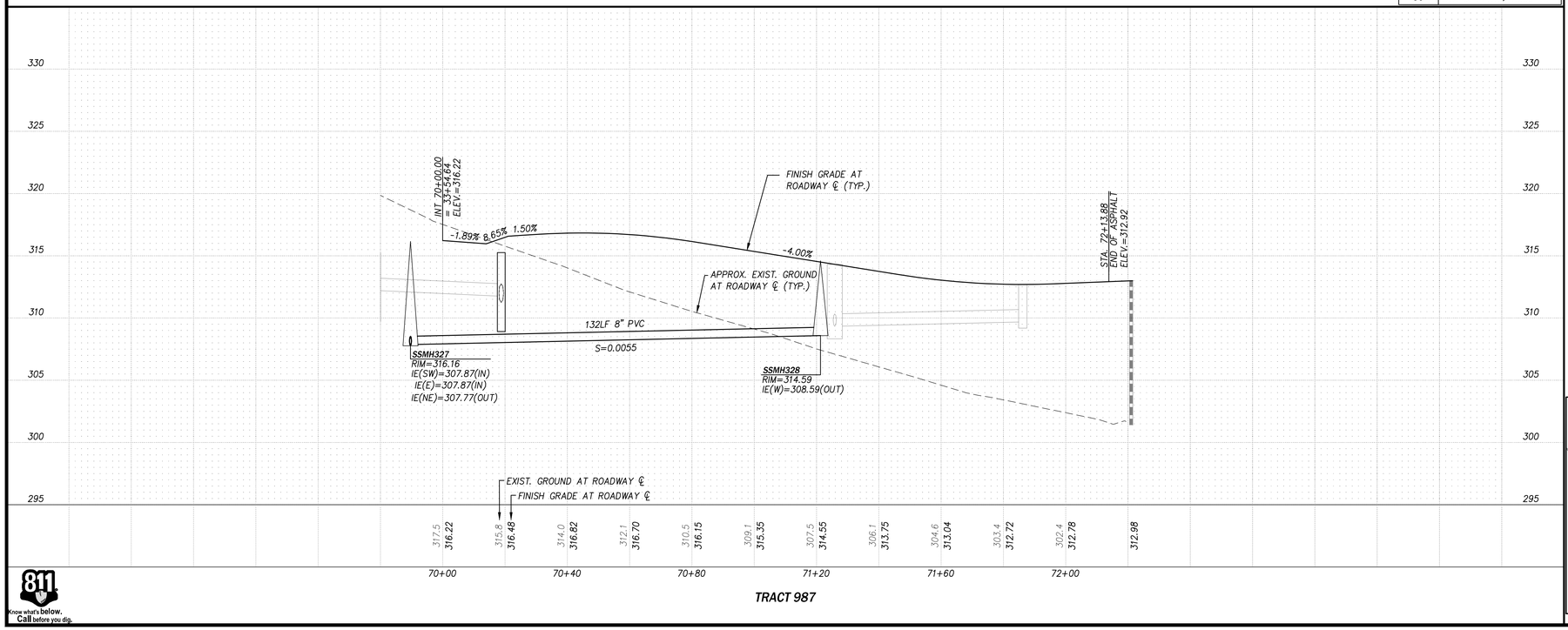
OTOP541828
CGRD541828
CSIT541828
CUSD541828
CUWS541828
TBLOCK
OTRL541828
CNOT541828
KEYMAP

PTN. OF NW 1/4 OF SEC 31, TWP 28 N, R7E W.M.





CONSTRUCTION NOTES

1. 6" SIDE SEWER CONNECTION, 2% MIN. SLOPE PER COM STD. DET. 602
2. 48" SANITARY SEWER MANHOLE W/ MANHOLE RING AND COVER PER COM STD. DET. 604 AND 608
3. SANITARY SEWER SERVICE W/CAPPED END FOR FUTURE CONN., SEE NOTE 5 BELOW
4. ¾" x ⅝" WATER SERVICE PER COM STD. DET. 501
5. FIRE HYDRANT ASSEMBLY PER COM STD. DET. 506
6. 1" AIR AND VACUUM RELEASE VALVE PER COM STD. DET. 511
7. CONN. EXIST. 8" DI w/TAPPING TEE PER COM STD. DET. 513
8. 1" IRRIGATION WATER SERVICE PER COM STD. DET. 501 W/ DOUBLE CHECK VALVE ASSEMBLY PER COM STD. DET. 517S
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UTILITY CROSSING DATA	
41	BOT 8" WA=311.93
	TOP 8" SS=308.66
42	BOT 18" SD=311.63
	TOP 8" SS=308.74

WATER METER TABLE	
LOT	STATION, OFFSET
26	STA 33+37.69, 27.00' RT
27	STA 33+35.69, 27.00' RT
28	STA 33+33.69, 27.00' RT
30	STA 32+71.15, 18.00' LT

NO.	DATE	REVISION	BY
1	5/4/22	CITY PERMIT SUBMITTAL	PCE
			MJH

MATTHEW J. HOPKINS
STATE OF WASHINGTON
21810
REGISTERED
PROFESSIONAL ENGINEER
5/5/2022

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KEYMAP

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UTILITY PLAN AND PROFILE

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PROJECT NO.
0054-18-028

DRAWING
C4.13

SHEET 58 OF 85

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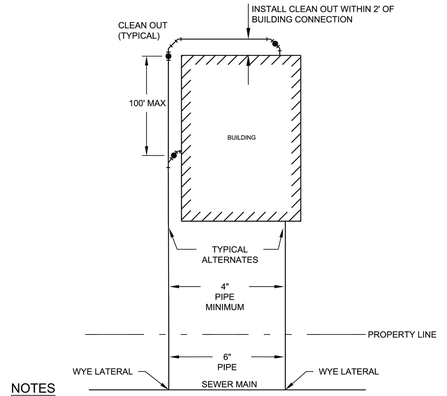
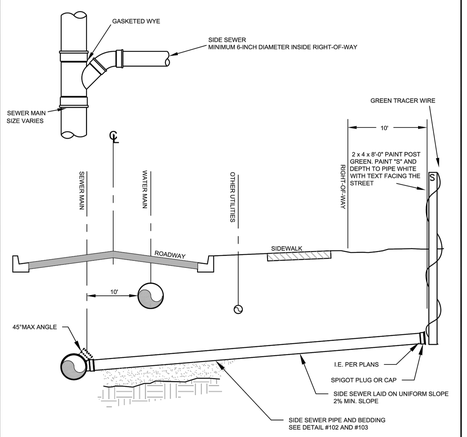


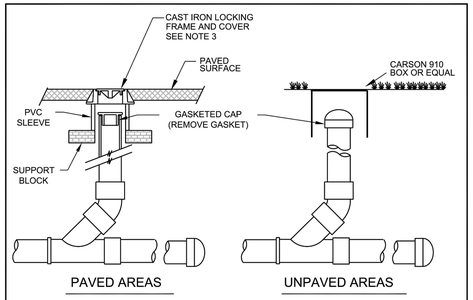
NOTES

1. INSTALL SEWER MAIN CONNECTION AND CLEANOUT PER STANDARD DRAWING 602 AND 603.
2. ALL TEE CONNECTIONS SHALL BE WITH WYES. STRAIGHT TEES ARE NOT PERMITTED.
3. ALLOWABLE GRADES ARE 2% (¼"/FT) MINIMUM TO 100% (FT/FT) MAXIMUM.
4. INSTALL 6" MINIMUM PIPE SIZE FROM THE MAIN LINE TAP TO THE PROPERTY LINE.
5. BED SIDE SEWERS WITH PEA GRAVEL.
6. FOR NEW DEVELOPMENT EXTEND SIDE SEWER STUB 10' ONTO PROPERTY.

DESCRIPTION	DESIGNATION
TYPICAL SIDE SEWER LAYOUT	601
SCALE: NOT TO SCALE	REVISED: FEB 1, 2021

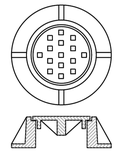


DESCRIPTION	DESIGNATION
GRAVITY SEWER SVC CONNECTION	602
SCALE: NOT TO SCALE	REVISED: NOV 10, 2021



NOTES

1. PIPE AND FITTINGS SHALL BE PVC ASTM 3034 (SDR 35).
2. A GASKETED WYE MUST BE INSTALLED. STRAIGHT TEES ARE NOT ACCEPTABLE.
3. CASTING SHALL BE 2" LARGER IN DIAMETER THAN CLEAN OUT PIPING.
4. CLEAN OUTS IN ALLEYWAYS SHALL HAVE A 2'X2'X6" ASPHALT OR CONCRETE PAD AROUND CLEAN OUT FRAME AND COVER.

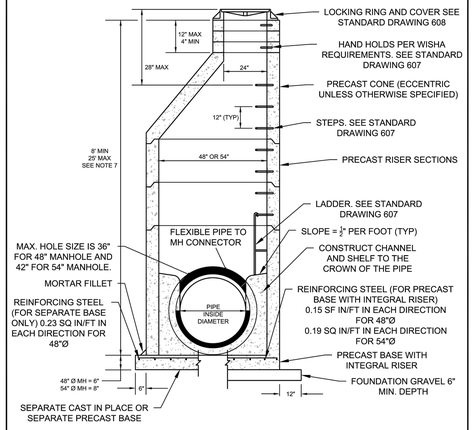


CAST IRON LOCKING FRAME AND COVER

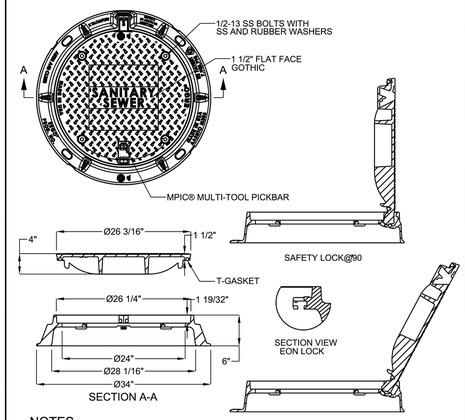
DESCRIPTION	DESIGNATION
SANITARY SEWER/STORM DRAIN CLEAN OUT	603
SCALE: NOT TO SCALE	REVISED: NOV 10, 2021

NOTES

1. CONSTRUCT IN ACCORDANCE WITH AASHTO M-199 (ASTM C-478).
2. ALL REINFORCED CAST IN PLACE CONCRETE SHALL BE CLASS 4000. NON-REINFORCED CONCRETE IN CHANNEL AND SHELF SHALL BE CLASS 3000. ALL PRECAST CONCRETE SHALL BE CLASS 4000.
3. PRECAST BASES SHALL BE FURNISHED WITH CUTOUTS. FLEXIBLE PIPE TO MANHOLE CONNECTORS (ASTM C923) ARE REQUIRED. CUTOUT DIAMETERS MUST MEET THE FLEXIBLE CONNECTOR'S MANUFACTURERS SPECIFICATIONS.
4. ALL BASE REINFORCING STEEL SHALL HAVE A MINIMUM YIELD STRENGTH OF 60,000 PSI AND BE PLACED IN THE UPPER HALF OF THE BASE WITH 1" MINIMUM CLEARANCE.
5. MINIMUM DISTANCE BETWEEN HOLES IS 8"(MEASURED ON THE INSIDE OF THE MANHOLE)
6. MANHOLE SIZE DEPENDS ON SIZE, LOCATION, AND NUMBER OF HOLES FOR PIPES. MANHOLE DESIGN AND SIZE SHALL BE APPROVEDAND WARRANTED BY THE MANHOLE SUPPLIER.
7. FOR HEIGHTS OVER 25' MANHOLE BASE SLAB SHALL BE DESIGNED BY A STRUCTURAL ENGINEER.
8. PIPE CONNECTIONS, MANHOLE SECTIONS, AND MANHOLE RISERS SHALL ALL BE WATER TIGHT.
9. MANHOLE CASTINGS AND LIDS SHALL BE POSITIONED OUT OF VEHICULAR WHEEL PATH AS MUCH AS PRACTICABLE.



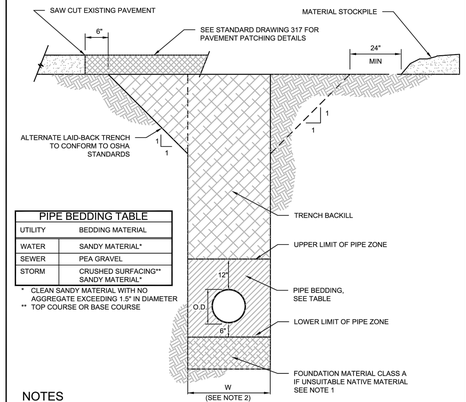
DESCRIPTION	DESIGNATION
TYPE I MANHOLE 48" & 54"	604
SCALE: NOT TO SCALE	REVISED: NOV 10, 2021



NOTES

1. MANHOLE RINGS SHALL BE GRAY IRON CONFORMING TO THE REQUIREMENTS OF AASHTO M 105, CL35B.
2. MANHOLE COVER TO BE DUCTILE IRON CONFORMING TO ASTM A536, GR 80-55-06.
3. LOCKING COVER TO BE USED AT ALL LOCATIONS. THE LID SHALL BE LOCKED DOWN WITH 4 1/2-13 STAINLESS STEEL BOLTS.
4. ALL UNDER CASTINGS TO BE GROUTED TO THE RISER SECTION AND ALSO EXTERNALLY TO HOLD CASTINGS SECURELY IN PLACE.
5. MANHOLE RING AND COVER SHALL BE EAST JORDAN PRODUCT 00104049L02.

DESCRIPTION	DESIGNATION
MANHOLE RING AND COVER	608
SCALE: NOT TO SCALE	REVISED: NOV 10, 2021



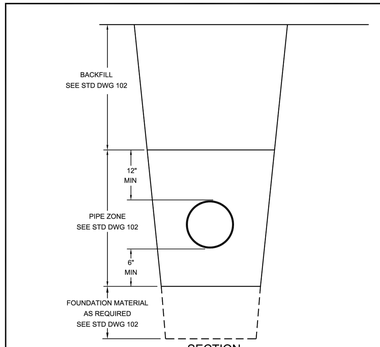
PIPE BEDDING TABLE	
UTILITY	BEDDING MATERIAL
WATER	SANDY MATERIAL*
SEWER	PEA GRAVEL
STORM	CRUSHED SURFACING** SANDY MATERIAL*

* CLEAN SANDY MATERIAL WITH NO AGGREGATE EXCEEDING 1.5" IN DIAMETER
** TOP COURSE OR BASE COURSE

NOTES

1. FOUNDATION AND BEDDING AND GRAVEL BORROW MATERIAL SHALL CONFORM TO THE CURRENT EDITION OF THE STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION WSDOT/APWA.
2. W = MAXIMUM WIDTH OF TRENCH. FOR PIPES 15" OR LESS W=40". FOR PIPES GREATER THAN 15", W=1-1/2 X I.D. +18".
3. TRENCH CROSSINGS SHALL BE BACKFILLED WITH CDF HAVING A COMPRESSIVE STRENGTH OF 50 PSI TO 100 PSI AT 28-DAY COMPRESSIVE STRENGTH.
4. PAVED AREAS TO BE BACKFILLED WITH CRUSHED SURFACING TOP COURSE OR CRUSHED SURFACING BASE COURSE COMPACTED TO 95% MODIFIED PROCTOR DENSITY.
5. UNPAVED AREAS TO BE BACKFILLED WITH SUITABLE NATIVE MATERIAL OR CRUSHED ROCK TO 90% MODIFIED PROCTOR DENSITY.

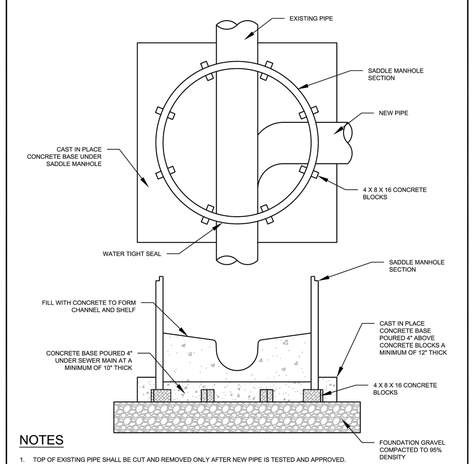
DESCRIPTION	DESIGNATION
TRENCH BACKFILL	102
SCALE: NOT TO SCALE	REVISED: 11/10/2021



NOTES

1. ALL BACKFILL MATERIAL SHALL BE PLACED IN LIFTS NOT TO EXCEED 12 INCHES.
2. MECHANICAL COMPACTION OF BACKFILL SHALL BEGIN EIGHTEEN INCHES ABOVE THE TOP OF PIPE.
3. EACH LIFT SHALL BE MECHANICALLY COMPACTED TO THE REQUIRED DENSITY PRIOR TO PLACING SUCCEEDING LIFTS OF BACKFILL MATERIAL.
4. COMPACTION TESTS SHALL BE AS REQUIRED BY THE CITY ENGINEER BUT IN NO CASE LESS THAN 2 TESTS EVERY 200 FEET OF TRENCH (ONE AT SUBGRADE AND ONE AT 50% OF TRENCH DEPTH)
5. IN PLACE DENSITY WILL BE DETERMINED BY ONE OR MORE OF THE FOLLOWING METHODS:
   5.1. ASTM D1556; TEST FOR DENSITY OF SOIL IN PLACE BY THE SAND CONE METHOD
   5.2. ASTM D2167; RUBBER BALLOON METHOD
   5.3. ASTM D2922; NUCLEAR METHOD
6. LABORATORY DENSITY WILL BE DETERMINED BY ASTM D693, MOISTURE DENSITY RELATIONS OF SOILS AND SOIL AGGREGATE MIXTURES.
7. PAVED AREAS TO BE BACKFILLED WITH CRUSHED SURFACING TOP COURSE OR CRUSHED SURFACING BASE COURSE COMPACTED TO 95% MODIFIED PROCTOR DENSITY.
8. UNPAVED AREAS TO BE BACKFILLED WITH SUITABLE NATIVE MATERIAL OR CRUSHED ROCK TO 90% MODIFIED PROCTOR DENSITY.

DESCRIPTION	DESIGNATION
TRENCH COMPACTION	103
SCALE: NOT TO SCALE	REVISED: 11/10/2021



NOTES

1. TOP OF EXISTING PIPE SHALL BE CUT AND REMOVED ONLY AFTER NEW PIPE IS TESTED AND APPROVED.
2. EXISTING PIPE SHALL BE SUPPORTED AT ALL TIMES.
3. NO WEIGHT OF THE PRECAST MANHOLE UNIT SHALL BEAR ON THE EXITING PIPE.
4. CAST IN PLACE BASE SHALL BE COMMERCIAL CONCRETE.
5. THE CAST IN PLACE MANHOLE SHALL NOT BE INSTALLED OVER A BELL SECTION OR JOINT OF THE SEWER MAIN. THE MINIMUM DISTANCE FROM THE OUTSIDE WALL OF THE MANHOLE AND A BELL SECTION OR JOINT SHALL BE 2'.
6. THE UPPER HALF OF THE EXISTING PIPE SHALL BE REMOVED WHILE THE BOTTOM SHALL REMAIN AS THE CHANNEL OF THE NEW MANHOLE. IF PVC THE OUTSIDE OF THE PVC PIPE SHALL BE MADE ABRASIVE USING PRIMER AND SAND.
7. THE PRECAST BASE SHALL SIT ON EIGHT (8) 4"(W) X 8"(H) X 16"(L) CONCRETE BLOCKS PLACED ON COMPACTED SUB-GRADE.

DESCRIPTION	DESIGNATION
SADDLE MANHOLE	612
SCALE: NOT TO SCALE	REVISED: NOV 10, 2021

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By _____ Date 05/12/2022

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MATTHEW J. HOMOLA — STATE OF WASHINGTON — 22818 — REGISTERED PROFESSIONAL ENGINEER — 5/5/2022

GARIBALDI PRD
ENGINEERING PERMIT PACKAGE
SANITARY SEWER DETAILS
CITY OF MONROE — SNOHOMISH COUNTY, WA

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PHONE: (425)876-9390

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PROJECT NO.
0054-18-028

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SHEET 59 OF 85

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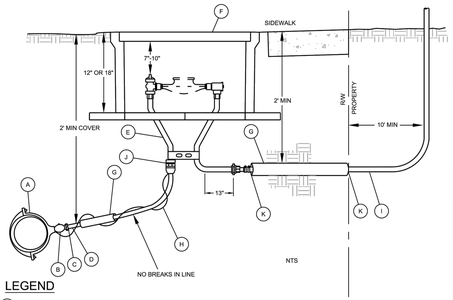
PTN. OF NW 1/4 OF SEC 31, TWP 28 N, R7E W.M.



LEGEND

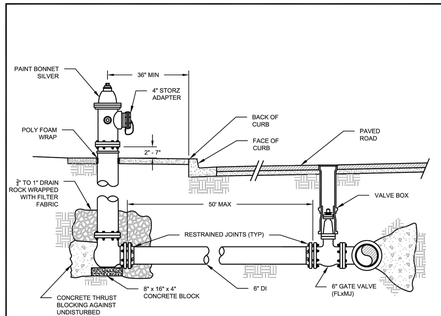
- (A) WIDE BAND STAINLESS STEEL SERVICE SADDLE WITH IRON PIPE THREADS. FORD STYLE FS101 OR EQUAL. WHEN WATER MAIN MATERIAL IS C900 PVC PIPE THERE SHALL BE A MINIMUM OF 3 FEET BETWEEN TAPS AND STAGGER TAPS A MAXIMUM OF 45 DEGREES VERTICALLY. WITH ALL OTHER PIPES MATERIALS THERE SHALL BE A MINIMUM OF 2 FEET BETWEEN TAPS.
- (B) 1" - A.Y. MCDONALD IPS BALL CORPORATION STOP - 300 PSI
- (C) A.Y. MCDONALD COMPRESSION FITTING. FEMALE IRON PIPE THREAD BY FEMALE COPPER TUBE SIZE.
- (D) 1 INCH (MINIMUM) COPPER TUBE SIZE REHAU MUNICIPEX PEXa (200 PSI) OR COPPER TYPE K. SAND BEDDING FOR SERVICE LINE IS REQUIRED.
- (E) METER SETTERS SHALL BE A.Y. MCDONALD SETTERS. 3/4" X 5/8" COPPER METER SETTER SHALL BE 76Z,212WDPP 33X15 12" OR APPROVED EQUAL. 1" COPPER METER SETTER SHALL BE 76Z,415WDPP 44X15 12" OR APPROVED EQUAL. SETTERS SHALL HAVE COMPRESSION VERTICAL INLET WITH PADLOCK WINGS , DUAL CHECK VALVE AND HORIZONTAL TAIL UNION OUTLET.
- (F) METER BOXES IN NON TRAFFIC AREAS SHALL BE OLD CASTLE CARSON METER BOX 1220 WITH OLD CASTLE BLACK T COVER #12204079

  METER BOXES IN TRAFFIC AREAS SHALL BE OLD CASTLE CARSON 1527 X 18 WITH OLD CASTLE LID #02001407 (LID, FL 1527P BLACK) TRAFFIC BOXES ARE TO BE SUPPORTED BY 4X8X16 SOLID CEMENT BLOCKS.

  METER BOXES ARE TO BE FIRMLY SUPPORTED WITH SETTER CENTERED IN BOX AND BACKFILLED WITH 2" MINUS CRUSHED ROCK TO WITHIN 4" BELOW FINISHED GRADE. BOXES ARE TO BE SET NO LOWER THAN SIDEWALK OR FINISHED GRADE WHICHEVER IS HIGHER.

  METERS SHALL BE PLACED AT LEAST 10' AWAY FROM TREES.
- (G) 2 OR 3 INCH SCHEDULE 40 WHITE PVC CASING UNDER PAVEMENT AND SIDEWALK.
- (H) 10 GAUGE INSULATED LOCATOR WIRE. USE WIRE NUT (OR EQUAL) TO CONNECT TO MAIN LINE WIRE.
- (I) IRON PIPE SIZE HIGH DENSITY WEIGHT POLYETHYLENE (200 PSI), 1" COPPER PIPE TYPE K, OR PEXa FOR DIRECT BURIAL =>200PSI. FOR NEW CONSTRUCTION EXTEND TEN FEET INTO PROPERTY. CUSTOMER SIDE SHALL BE BRASS TO POLY.
- (J) 3/4" FEMALE IPS BRASS COUPLER TO 3/4" MALE 1PS X 1" C110 COMPRESSION FITTING. NO TWO PIECE UNIONS ALLOWED ON CITY SIDE, UNIONS ALLOWED ON CUSTOMER TAIL SIDE ONLY.
- (K) FOAM BLOCKING (12" MIN LENGTH) TO FILL THE ANNULAR GAP BETWEEN CASING PIPE AND SERVICE LINE.

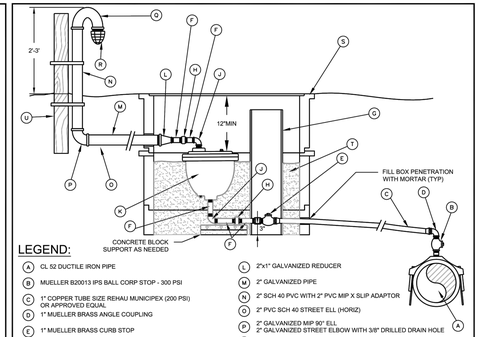
DESCRIPTION	DESIGNATION
3/4" X 5/8" & 1" WATER SERVICE	501
SCALE: NOT TO SCALE	REVISED: NOV 10, 2021



NOTES:

1. HYDRANTS AND ALL MATERIALS TO BE APWA OR AWWA APPROVED.
2. FIRE HYDRANT SHALL BE MUELLER CENTURION, WATEROUS PACER OR EAST JORDAN 5CD250 NORTHWEST EDITION WITH 5-1/4" VALVE. TWO 2 1/2" NST HOSE PORTS, AND ONE NST 4" STORZ FITTING ON 4 1/2" STEAMER PORT FACING STREET, OR AS OTHERWISE DIRECTED. 1-1/4" OPERATING NUT AND CAP NUT FOR 2-1/2" PORTS. BREAK-OFF HYDRANT BASE FLANGE. WHERE MORE THAN ONE BELL JOINT IS USED A FIELD LOCK GASKET SHALL BE INSTALLED.
3. 4 " THICK 4' X 4' CONCRETE PAD WITH POLY WRAP FOAM AROUND HYDRANT BARREL. HYDRANT SHALL SIT IN THE CENTER OF THE PAD. CONCRETE SHALL BE CLASS 3000.
4. PROVIDE FOR VEHICULAR TRAFFIC PROTECTION WHEN NECESSARY PER STD. PLAN 507
5. BREAK-OFF FLANGE TO BE 2" - 7" ABOVE GROUND LEVEL.
6. 1/2 CY DRAIN ROCK WRAPPED WITH 6 MIL. POLYETHYLENE SHEETING.
7. FIRE HYDRANT BODY SHALL BE PAINTED WITH TWO COATS OF SAFETY RED SHERWIN WILLIAMS INDUSTRIAL ENAMEL B54R28. FIRE HYDRANT CAPS AND BONNET SHALL BE PAINTED WITH SHERWIN WILLIAMS COROTHANE(1) M10-ALUMINUM B65S14.
8. LANDSCAPING SHALL BE PLANTED AND MAINTAINED IN A MANNER SO AS TO PROVIDE 3' CLEARANCE FROM THE CIRCUMFERENCE OF THE HYDRANT.
9. THERE SHALL BE AT LEAST 1' OF CLEARANCE BETWEEN HYDRANT & SIDEWALK.
10. PAINT 30' FEET OF CURB SAFETY RED IN FRONT OF AND CENTERED ON HYDRANT.
11. VALVES INSTALLED IN UNPAVED AREAS SHALL HAVE A 2'X2' CONCRETE OR ASPHALT AREA INSTALLED AROUND THE VALVE BOX.

DESCRIPTION	DESIGNATION
FIRE HYDRANT ASSEMBLY	506
SCALE: NOT TO SCALE	REVISED: NOV 10, 2021



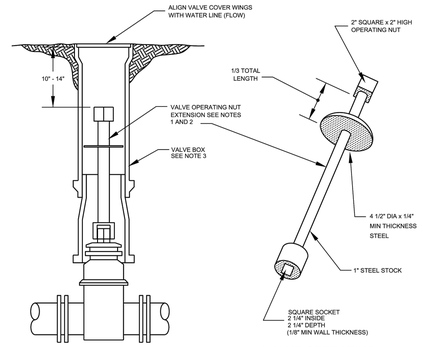
LEGEND:

- (A) CL 52 DUCTILE IRON PIPE
- (B) MUELLER B20013 IPS BALL CORP STOP - 300 PSI
- (C) 1" COPPER TUBE SIZE REHAU MUNICIPEX (200 PSI) OR APPROVED EQUAL
- (D) 1" MUELLER BRASS ANGLE COUPLING
- (E) 1" MUELLER BRASS CURB STOP
- (F) 1" MUELLER BRASS NIPPLE
- (G) 6" PVC PIPE WITH NON GASKETED CAP
- (H) 1" MUELLER BRASS UNION
- (J) 1" BRASS 90° ELL
- (K) 1" COMBINATION AIR AND VACUUM RELIEF VALVE SHALL BE CRISPIN CRVL-10 OR 20 OR APPROVED EQUAL
- (L) 2"x1" GALVANIZED REDUCER
- (M) 2" GALVANIZED PIPE
- (N) 2" SCH 40 PVC WITH 2" PVC MIP X SLIP ADAPTOR
- (O) 2" PVC SCH 40 STREET ELL (HORIZ)
- (P) 2" GALVANIZED MIP 90° ELL
  2" GALVANIZED STREET ELBOW WITH 3/8" DRILLED DRAIN HOLE
- (Q) 2" PVC SCH 40 RETURN BEND
- (R) GALV BEEHIVE STRAINER GREENBURG P-24-06, FOR 2" PIPE OR EQUAL
- (S) UTILITY BOX CARSON 1730-18"
- (T) BACKFILL WITH CEDAR CHIPS TO BONNET.
- (U) 4" x 6" x 6' PRESSURE TREATED POST, ATTACH PIPE TO POST WITH STAINLESS STEEL STRAPS

NOTES:

1. AIR-VAC UNIT AND BOX TO BE INSTALLED IN NON-TRAFFIC AREA.
2. USE MUELLER DOUBLE STRAP SERVICE CLAMP OR APPROVED EQUAL ON ALL MAINS GREATER THAN 8" IN DIAMETER.
3. ALL PIPE FITTINGS BETWEEN MAIN AND UNION. AFTER AIR/VACUUM RELIEF SHALL BE BRASS.
4. INSTALLATIONS FOR OTHER SIZE AIR/VACUUM RELIEF VALVES SHALL BE INDIVIDUALLY DESIGNED AND WILL REQUIRE APPROVAL BY THE UTILITIES DIVISION.
5. PAINT METER BOX LID AND RISER ASSEMBLY (2) COATS GLOSS TRUE BLUE ENAMEL. SUBMIT BLUE PAINT SAMPLE TO CITY ENGINEER FOR APPROVAL PRIOR TO INSTALLATION. STENCIL RISER ASSEMBLY WITH "AV" AND SIZE OF AIR/VAC ASSEMBLY ON SIDE FACING ROADWAY IN 2" BLACK LETTERS.
6. AIR/VAC RELEASE VALVE ASSEMBLY SHALL BE INSTALLED AT HIGH POINT ON LINE. IF HIGH POINT FALLS IN LOCATION WHERE ASSEMBLY CANNOT BE INSTALLED ADJUST PIPE DEPTH TO CREATE A NEW HIGH POINT.

DESCRIPTION	DESIGNATION
1" AIR AND VACUUM RELEASE VALVE	511
SCALE: NOT TO SCALE	REVISED: NOV 10, 2021



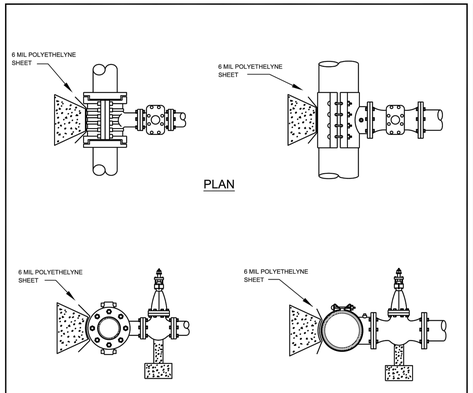
VALVE BOX AND EXTENSION

VALVE OPERATING NUT EXTENSION

NOTES:

1. VALVE OPERATING NUT EXTENSIONS ARE REQUIRED WHEN THE VALVE NUT IS MORE THAN THREE (3) FEET BELOW FINISHED GRADE. EXTENSIONS ARE TO BE A MINIMUM OF ONE (1) FOOT LONG. ONLY ONE EXTENSION WILL BE ALLOWED PER VALVE.
2. ALL VALVE OPERATING NUT EXTENSIONS ARE TO BE MADE OF STEEL, SIZED AS NOTED AND PAINTED WITH TWO (2) COATS OF METAL RUST RESISTANT PAINT.
3. VALVE BOXES SHALL BE CAST IRON, TWO PIECE UNITS, DESIGNED WITH LUGS ON COVER, EQUAL TO EJ VALVE BOX (855570161/85557010) AND VALVE BOX COVER (06800001U).
4. ALL VALVES IN UNPAVED AREAS SHALL HAVE A 2'X2'X4" THICK CONCRETE OR ASPHALT PAD AROUND COVER. PAD SUBGRADE SHALL BE COMPACTED TO 95% DENSITY.

DESCRIPTION	DESIGNATION
VALVE BOX & EXTENSION	512
SCALE: NOT TO SCALE	REVISED: NOV 10, 2021

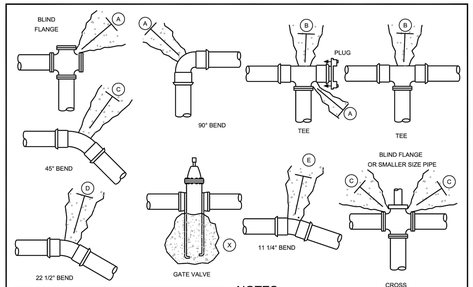


STAINLESS STEEL TAPPING TEES

NOTES:

1. STAINLESS STEEL TAPPING TEES SHALL HAVE FULL CIRCLE SEAL.
2. ALL TEES AND VALVES TO BE WATER TESTED BEFORE TAP.

DESCRIPTION	DESIGNATION
TAPPING TEES	513
SCALE: NOT TO SCALE	REVISED: NOV 10, 2021



THRUST BLOCK - TABLE

MIN. BEARING AREA AGAINST UNDISTURBED SOIL

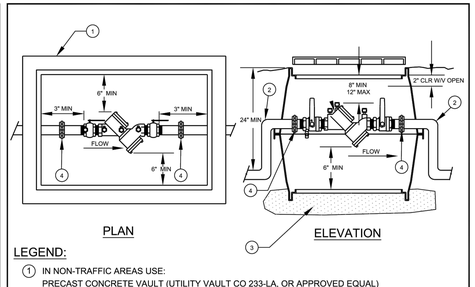
SQUARE FEET

PIPE SIZE	(A) FT 2	(B) FT 2	(C) FT 2	(D) FT 2	(E) FT 2	(X) FT 2
4"	3	1	1	1	1	NONE
6"	4	4	2	1	1	NONE
8"	7	6	4	2	1	4
10"	11	10	6	3	2	6
12"	16	14	9	5	3	9
14"	22	19	12	6	3	12
16"	29	25	16	8	4	16
18"	36	31	20	10	5	20
20"	45	39	24	13	6	24
22"	54	47	29	15	8	29
24"	64	56	35	18	9	35
28"	87	76	48	24	12	48
30"	101	87	55	28	14	55
36"	175	125	78	40	20	78
42"	197	171	107	55	27	107
48"	257	223	140	71	36	140

NOTES:

1. BEARING AREA OF CONCRETE THRUST-BLOCK BASED ON 200 PSI PRESSURE AND SAFE SOIL-BEARING LOAD OF 2,000 POUNDS PER SQUARE FOOT.
2. AREAS MUST BE ADJUSTED FOR OTHER PIPE SIZES, PRESSURES, AND SOIL CONDITIONS.
3. CONCRETE BLOCKING (CLASS 3000) SHALL BE CAST IN PLACE AND HAVE A MINIMUM OF 1/4 SQUARE FOOT BEARING AGAINST THE FITTING.
4. BLOCK SHALL BEAR AGAINST FITTINGS ONLY AND SHALL BE CLEAR OF JOINTS TO PERMIT TAKING UP OR DISMANTLING OF JOINT.
5. CONTRACTOR SHALL INSTALL BLOCKING ADEQUATE TO WITHSTAND FULL TEST PRESSURE UNDER ALL CONDITIONS OF SERVICE.
6. MINIMUM ROD DIAMETER SHALL BE 3/4" ASTM A-307 WITH 36KSI YIELD STRENGTH.
7. SHEET PLASTIC OVER NUTS AND BOLTS PRIOR TO CONCRETE POUR.

DESCRIPTION	DESIGNATION
HORIZONTAL THRUST BLOCKS	514
SCALE: NOT TO SCALE	REVISED: NOV 10, 2021



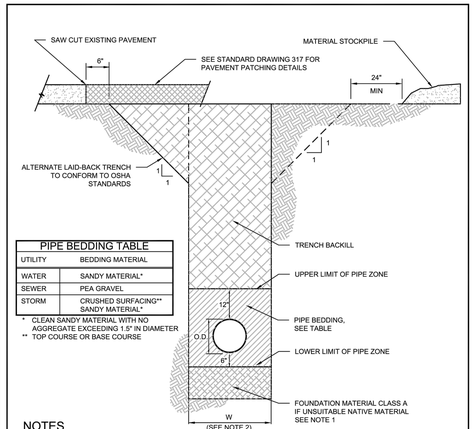
LEGEND:

1. IN NON-TRAFFIC AREAS USE:
   PRECAST CONCRETE VAULT (UTILITY VAULT CO 233-LA, OR APPROVED EQUAL) OR PLASTIC VALVE BOX (UTILITY VALULT CO 1324-12L OR APPROVED EQUAL) IN TRAFFIC AREAS.
   A TRAFFIC LOADED BOX MUST BE USED AND LOCATION APPROVED BY THE THE CITY OF MONROE PRIOR TO INSTALLATION.
2. PIPE BENDS SHALL BE OUTSIDE OF THE BOX
3. PROVIDE FREE DRAINING GRAVEL (6" MIN).
4. INSTALL UNIONS

NOTES:

1. A PLUMBING PERMIT IS REQUIRED. OBTAIN PERMIT FROM CITY OF MONROE.
2. THOROUGHLY FLUSH LINES PRIOR TO INSTALLATION OF BACKFLOW PREVENTER.
3. DEVICE MUST BE PROTECTED FROM FREEZING CONDITIONS.
4. THE BACKFLOW ASSEMBLY SHALL BE A MODEL APPROVED BY THE STATE.
5. ALL TEST COCKS ARE REQUIRED TO BE CAPPED.
6. MAXIMUM HEIGHT OF INDOOR ASSEMBLIES SHALL BE FIVE FEET UNLESS AN APPROVED PLATFORM IS PROVIDED.
7. DEVICE MUST BE TESTED AFTER INSTALLATION AND ANNUALLY THEREAFTER BY A WASHINGTON STATE CERTIFIED BACKFLOW TESTER. TEST RESULTS SHALL BE SENT TO THE CITY OF MONROE PUBLIC WORKS DEPARTMENT.

DESCRIPTION	DESIGNATION
DCVA 2" AND SMALLER	517S
SCALE: NOT TO SCALE	REVISED: NOV 10, 2021



PIPE BEDDING TABLE	
UTILITY	BEDDING MATERIAL
WATER	SANDY MATERIAL*
SEWER	PEA GRAVEL
STORM	CRUSHED SURFACING** SANDY MATERIAL*

* CLEAN SANDY MATERIAL WITH NO AGGREGATE EXCEEDING 1.5" IN DIAMETER
** TOP COURSE OR BASE COURSE

NOTES

1. FOUNDATION AND BEDDING AND GRAVEL BORROW MATERIAL SHALL CONFORM TO THE CURRENT EDITION OF THE STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION WSDOT/APWA.
2. W = MAXIMUM WIDTH OF TRENCH.
   FOR PIPES 15" OR LESS W=40".
   FOR PIPES GREATER THAN 15", W=1-1/2 X I.D. +18".
3. TRENCH CROSSINGS SHALL BE BACKFILLED WITH CDF HAVING A COMPRESSIVE STRENGTH OF 50 PSI TO 100 PSI AT 28-DAY COMPRESSIVE STRENGTH.
4. PAVED AREAS TO BE BACKFILLED WITH CRUSHED SURFACING TOP COURSE OR CRUSHED SURFACING BASE COURSE COMPACTED TO 95% MODIFIED PROCTOR DENSITY.
5. UNPAVED AREAS TO BE BACKFILLED WITH SUITABLE NATIVE MATERIAL OR CRUSHED ROCK TO 90% MODIFIED PROCTOR DENSITY.

TRENCH BACKFILL	102
NOT TO SCALE	11/10/2021

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MATTHEW J. HOREJSI — STATE OF WASHINGTON — 21603 — REGISTERED PROFESSIONAL ENGINEER — 5/5/2022

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These plans have been reviewed for compliance with the City of Monroe Public Works Design and Construction Standards and required conditions regarding water, sanitary sewer, storm water management, and streets only. Prior to beginning construction additional approvals may be required from other city departments or state or federal agencies.

☒ Approved ☐ Approved as corrected

The granting of this approval does not presume to give authority to violate or cancel the provisions of any law, conditions or regulation regarding this development activity or the performance of construction. Subject to field inspection and correction. No changes authorized unless approved by the City Engineer.

CITY OF MONROE ENGINEERING

By _____ Date 05/12/2022

GARIBALDI PRD

ENGINEERING PERMIT PACKAGE

WATER DETAILS

CITY OF MONROE — SNOHOMISH COUNTY, WA

CLIENT

Garibaldi Lake, LLC
1010 MARKET STREET
KIRKALND, WA 98033
PHONE: (425)876-9390

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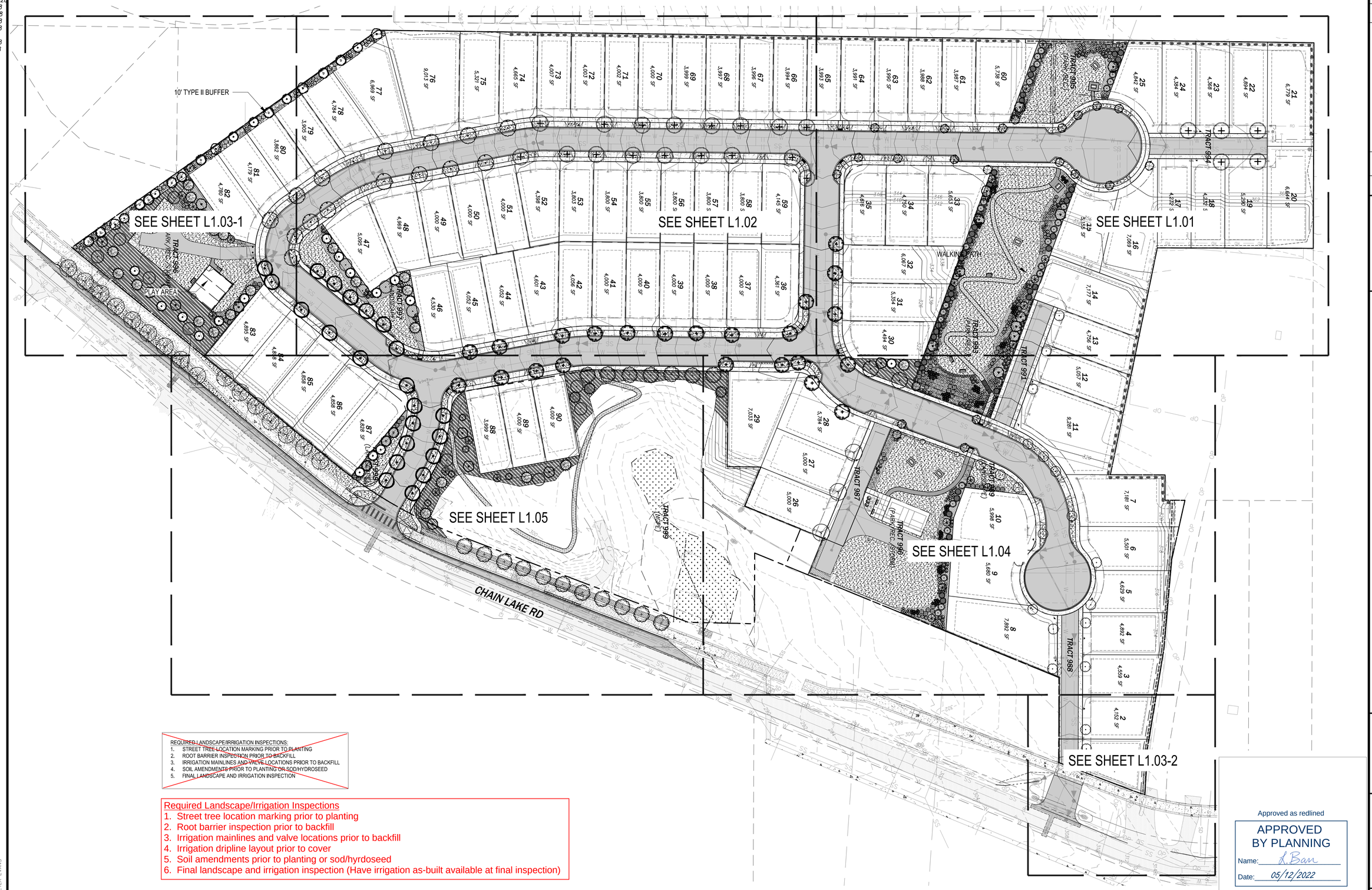

~~REQUIRED LANDSCAPE/IRRIGATION INSPECTIONS:~~
1. ~~STREET TREE LOCATION MARKING PRIOR TO PLANTING~~
2. ~~ROOT BARRIER INSPECTION PRIOR TO BACKFILL~~
3. ~~IRRIGATION MAINLINES AND VALVE LOCATIONS PRIOR TO BACKFILL~~
4. ~~SOIL AMENDMENTS PRIOR TO PLANTING OR SOD/HYDROSEED~~
5. ~~FINAL LANDSCAPE AND IRRIGATION INSPECTION~~

Required Landscape/Irrigation Inspections
1. Street tree location marking prior to planting
2. Root barrier inspection prior to backfill
3. Irrigation mainlines and valve locations prior to backfill
4. Irrigation dripline layout prior to cover
5. Soil amendments prior to planting or sod/hyrdoseed
6. Final landscape and irrigation inspection (Have irrigation as-built available at final inspection)

Approved as redlined

APPROVED BY PLANNING
Name: L.Ban
Date: 05/12/2022

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1 OVERALL LANDSCAPE PLAN
SCALE: 1" = 50'-0"

0 50 100
PLAN IN FEET

N

NOTE: FOR PLANTING LEGEND, NOTES AN DETAILS SEE SHEET L1.10

NO.	DATE	REVISION	BY	CK.
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DAVID STUART ANDREWS
CERTIFICATE NO. 439

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PTN. OF NW 1/4 OF SEC 31, TWP 28 N, R7E W.M.

65 3,993 SF
64 3,991 SF
63 3,990 SF
62 3,988 SF
61 3,987 SF
60 5,738 SF
TRACT 995 (PARK/ REC.)
25 4,842 SF
24 4,334 SF
23 4,958 SF
22 4,894 SF
21 6,779 SF
20 6,644 SF
19 5,240 SF
18 4,232 SF
17 4,232 SF
16 7,069 SF
15 5,159 SF
14 7,177 SF
13 4,756 SF
TRACT 994
35 4,616 SF
34 4,750 SF
33 5,683 SF
32 6,087 SF
31 5,354 SF
30 4,494 SF
TRACT 993 (PARK/ REC.)
TRACT

4 L1.11 PICNIC TABLE, TYP.
7 L1.11 ASPHALT TRAIL
MAX. 2% SLOPE AT PICNIC TABLE
5 L1.11 BENCH, TYP.
1 L1.11 SOFT SURFACE TRAIL

MATCHLINE - SEE SHEET L1.02
MATCHLINE - SEE SHEET L1.04

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Name: L.Ban
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1 LANDSCAPE ENLARGEMENT PLAN
SCALE: 1" = 20'-0"

0 20 40
PLAN IN FEET

N

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CERTIFICATE NO. 439

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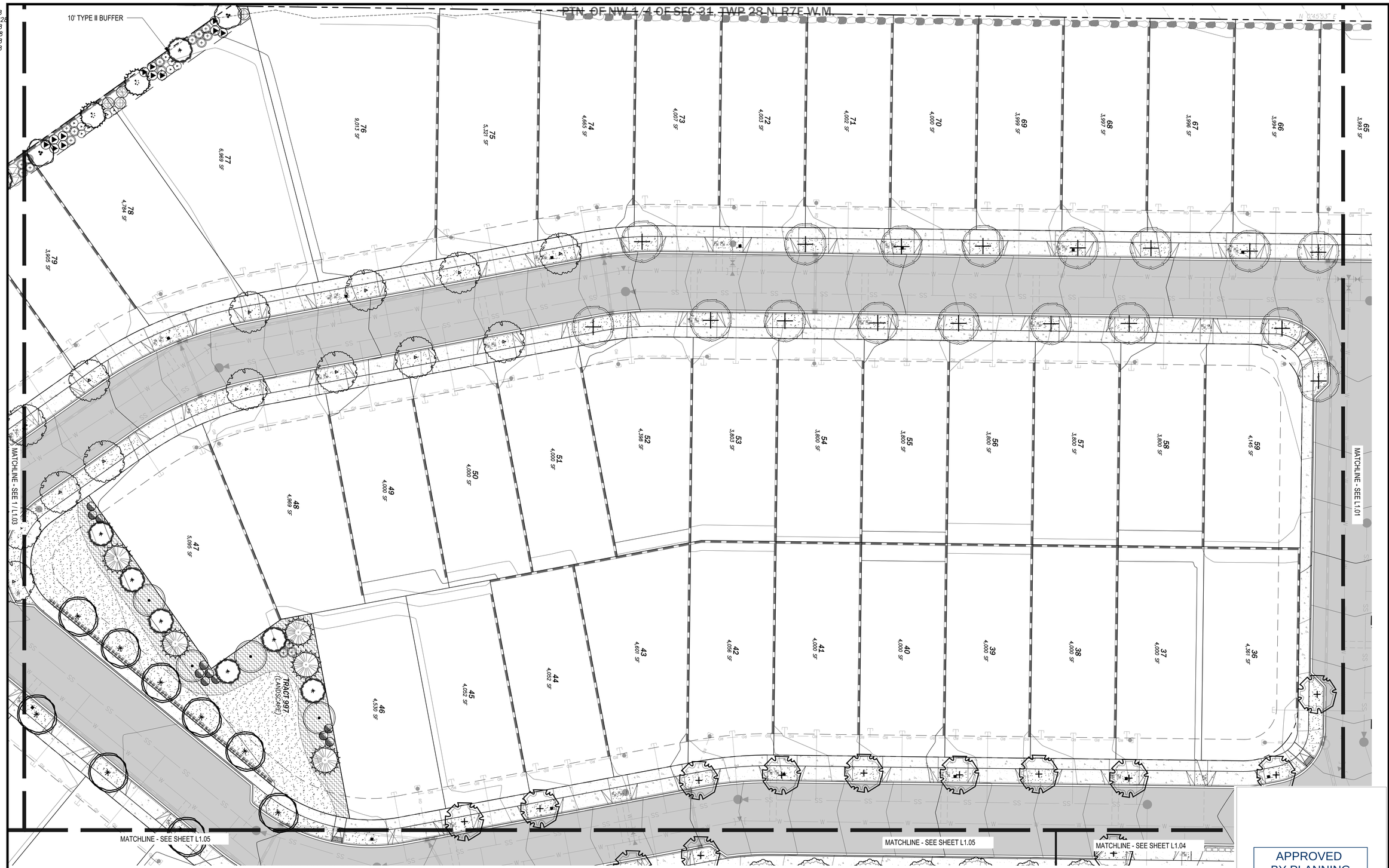

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1 LANDSCAPE ENLARGEMENT PLAN
SCALE: 1" = 20'-0"

0 20 40
PLAN IN FEET

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APPROVED BY PLANNING
Name: L Barr
Date: 05/12/2022

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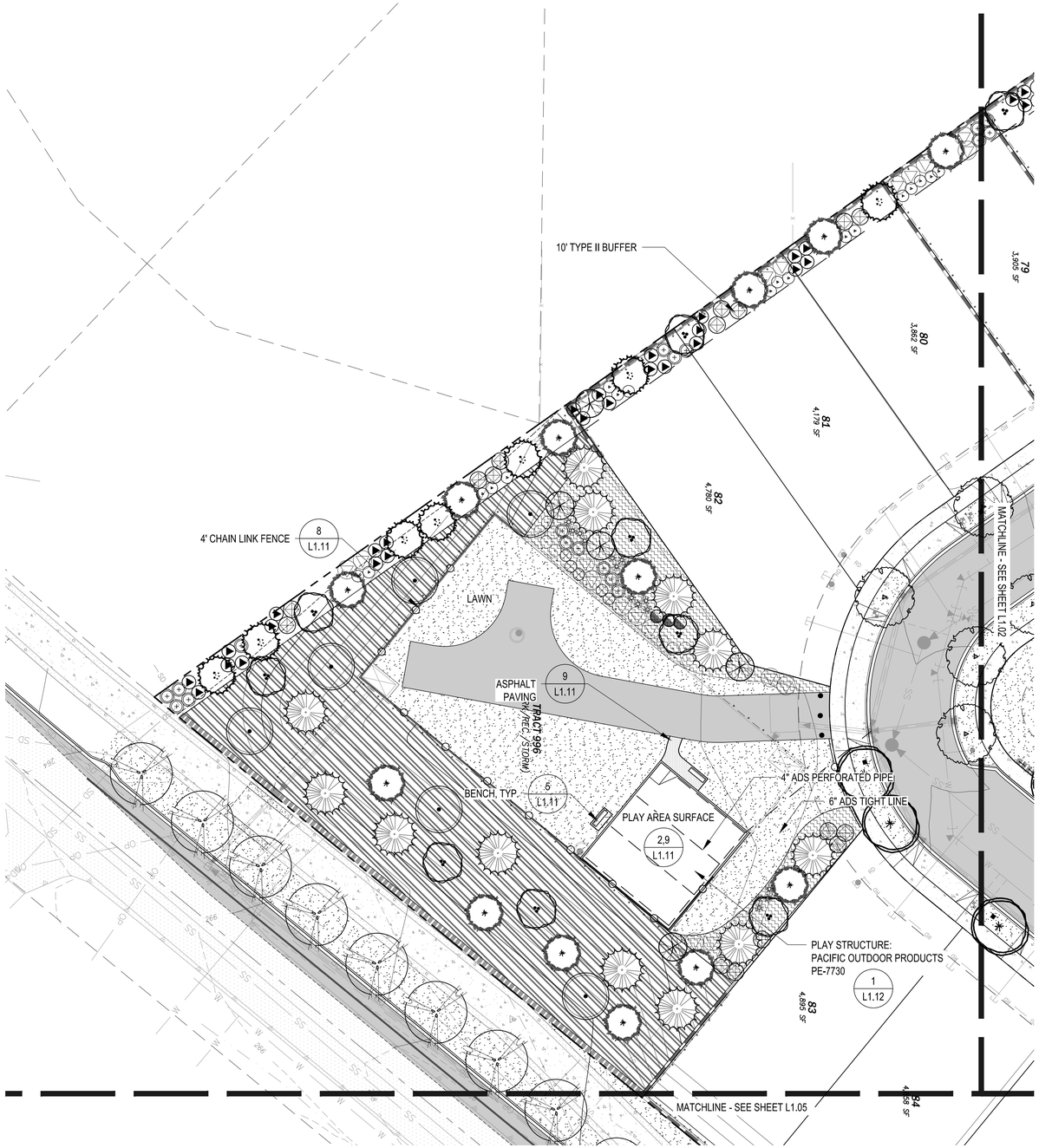
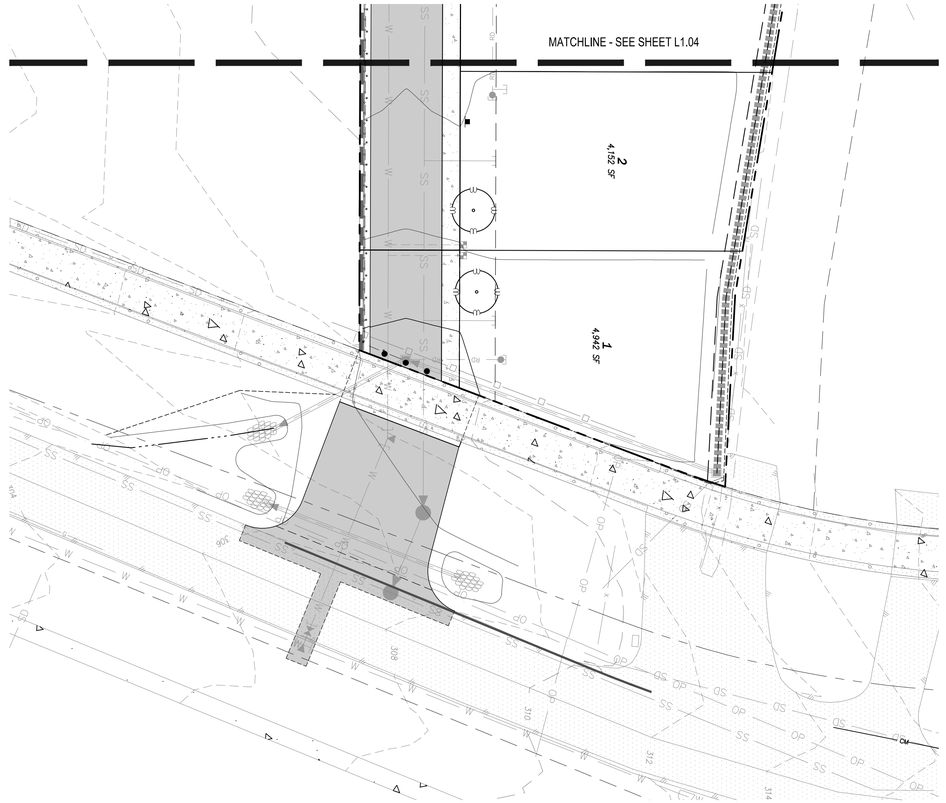


1 ENLARGEMENT PLAN
SCALE: 1" = 20'-0"

0 20 40
PLAN IN FEET



2 ENLARGEMENT PLAN
SCALE: 1" = 20'-0"

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PLAN IN FEET

NOTE: FOR PLANTING LEGEND, NOTES AN DETAILS SEE SHEET L1.10

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DAVID STUART ANDREWS
CERTIFICATE NO. 439

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Name: L.Barr
Date: 05/12/2022

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MATCHLINE - SEE SHEET L1.02

MATCHLINE - SEE SHEET L1.01

MATCHLINE - SEE SHEET L1.05

MATCHLINE - SEE 2/L1.03

TRACT 991

TRACT 987

TRACT 990 (PARK/ REC./ STORM)

TRACT 989 (LANDSCAPE)

TRACT 988

BENCH, TYP.

CONCRETE STAIR W/ RAILING
TS 29.0
BS 20.0
3 / L1.12

SOFT SURFACE PATH 1 / L1.11

4 / L1.11 PICNIC TABLE, TYP.

CHAINLINK FENCE 8 / L1.11

CONCRETE PAVEMENT

5 / L1.11 BENCH, TYP.

7 / L1.11 ASPHALT PATH

6,7 / L1.11 ASPHALT SPORT COURT

100' PSE FUTURE TRANSMISSION ESMT.

12 5,057 SF
11 9,281 SF
29 7,033 SF
28 5,784 SF
27 5,000 SF
26 5,000 SF
10 5,998 SF
9 5,680 SF
8 7,682 SF
7 7,181 SF
6 5,501 SF
5 4,629 SF
4 4,682 SF
3 4,559 SF

NOTE:
1. RECREATION STRUCTURES SHOWN WITHIN THE EXISTING PSE FUTURE TRANSMISSION EASEMENT AREA MAY BE SUBJECT TO PSE APPROVAL.
2. FOR PLANTING LEGEND, NOTES AN DETAILS SEE SHEET L1.10
2. FOR WETLAND BUFFER MITIGATION PLANTING PLAN SEE SHEET L4.00.

1 LANDSCAPE ENLARGEMENT PLAN
SCALE: 1" = 20'-0"

0 20 40
PLAN IN FEET

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1	5/4/22	CITY PERMIT SUBMITTAL	PCE	MJH

STATE OF WASHINGTON
REGISTERED
LANDSCAPE ARCHITECT
DAVID STUART ANDREWS
CERTIFICATE NO. 439

RECEIVED
05/09/2022
CITY OF MONROE

APPROVED
BY PLANNING
Name: L.Ban
Date: 05/12/2022

GARIBALDI PRD
ENGINEERING PERMIT PACKAGE
LANDSCAPE ENLARGEMENT PLAN
CITY OF MONROE
SNOHOMISH COUNTY, WA

CLIENT
Garibaldi Lake, LLC
1010 MARKET STREET
KIRKALND, WA 98033
PHONE: (425)876-9390

C|P|H CONSULTANTS
Site Planning • Civil Engineering
Landscape Architecture • Land Use Consulting
11321-B NE 120th Street
Kirkland, WA 98034 • (425) 285-2390
101 South Wenatchee Avenue, Suite C3
Wenatchee, WA 98801 • (509) 293-7731
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PROJECT NO.
0054-18-028

DRAWING
L1.04

SHEET 65 OF 85

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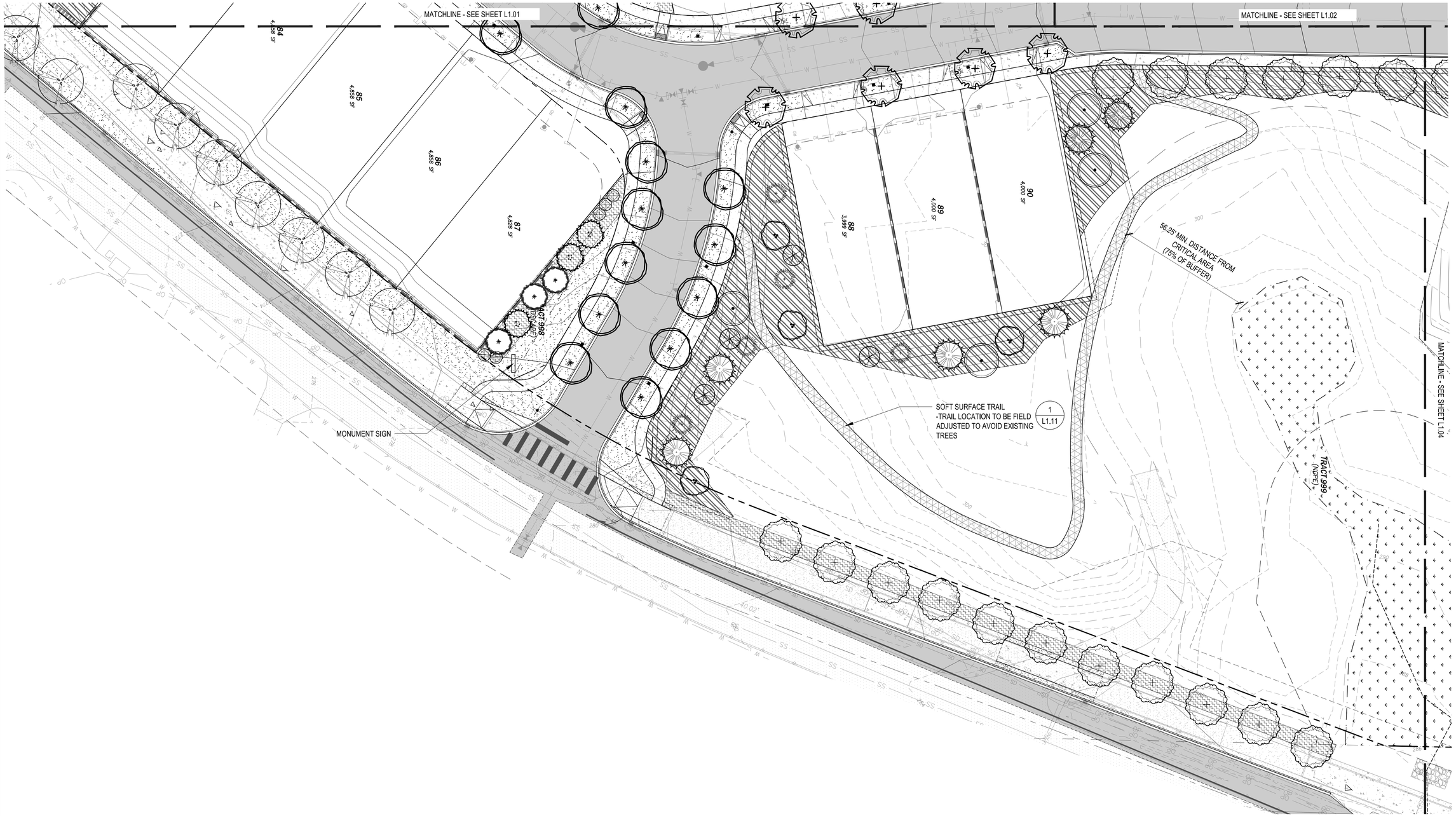
TBLOCK
LSIT-541828
LPLNT-541828
CGRD541828
CUWS541828
CUSD541828
OTOP541828
CSIT541828
OTRL541828

PTN. OF NW 1/4 OF SEC 31, TWP 28 N, R7E W.M.



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STATE OF WASHINGTON REGISTERED LANDSCAPE ARCHITECT
DAVID STUART ANDREWS
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GARIBALDI PRD

ENGINEERING PERMIT PACKAGE

LANDSCAPE ENLARGEMENT PLAN

CITY OF MONROE
SNOHOMISH COUNTY, WA

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L1.05

SHEET 66 OF 85

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1 LANDSCAPE PLAN
SCALE: 1" = 20'-0"

0 20 40
PLAN IN FEET

N

NOTE:
1. FOR PLANTING LEGEND, NOTES AN DETAILS SEE SHEET L1.10.
2. FOR WETLAND BUFFER MITIGATION PLANTING PLAN SEE SHEET L4.00.

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PTN. OF NW 1/4 OF SEC 31, TWP 28 N, R7E W.M.

PLANTING LEGEND

SYMBOL		BOTANICAL NAME	COMMON NAME	QTY	SIZE	SPACING	NOTES
STREET TREES							
		Parrotia persica	*Persian Parrotia*	17	2-1/2" cal.	25' o.c. avg, 40' o.c. max.	
		Stewartia pseudocamellia	*Japanese Stewartia*	19	2-1/2" cal.	25' o.c. avg, 40' o.c. max.	
		Acer platanoides 'Crimson Sentry'	*Crimson Sentry Maple*	21	2-1/2" cal.	25' o.c. avg, 40' o.c. max.	
	*	Persia parrotica	*Persian Parrotia*	22	2-1/2" cal.	25' o.c. avg, 40' o.c. max.	
		Gleditisa triacanthos 'Shademaster'	*Shademaster Honeylocust*	22	2-1/2" cal.	25' o.c. avg, 40' o.c. max.	
		Quercus palustris	*Pin Oak*	23	2-1/2" cal.	25' o.c. avg, 40' o.c. max.	
		Carpinus japonicus	*Japanese Hornbeam*	22	2-1/2" cal.	25' o.c. avg, 40' o.c. max.	
		Nyssa sylvatica	*Black Tupelo*	18	2-1/2" cal.	25' o.c. avg, 40' o.c. max.	
DECIDUOUS TREES							
	*	Acer circinatum	*Vine Maple*	26	8-10' ht. Multi-stem, 3 canes min.		
		Acer macrophyllum	*Bigleaf Maple*	14	2" cal.		
	*	Amelanchier alnifolia	*Serviceberry*	25	8-10' ht. Multi-stem, 3 canes min.		
EVERGREEN TREES							
		Pseudotsuga menziesii	*Douglas Fir*	25	8'-10' ht.		
		Tsuga mertensiana	*Mountain Hemlock*	12	8'-10' ht.		
		Thuja plicata 'Hogan'	*Hogan's Western Redcedar*	24	8'-10' ht.		
	*	Chamaecyparis obtusa	*Hinoki Cypress*	40	8'-10' ht.		
	*	Pinus densiflora 'Umbraculifera'	*Tanyosho Pine*	33	8-10' ht.		
SHRUBS							
	*	Myrica californica	*Pacific Wax Myrtle*		5 gal.	As Shown	Evergreen
	*	Mahonia aquifolium	*Oregon Grape*		5 gal.	As Shown	Evergreen
	*	Polystichum munitum	*Sword Fern*		2 gal.	As Shown	Herbaceous
	*	Vaccinium ovatum	*Evergreen Huckleberry*		2 gal.	As Shown	Evergreen
	*	Ribes sanguineum	*Red Flowering Currant*		5 gal.	As Shown	Deciduous
	*	Symphoricarpos albus	*Snowberry*		5 gal.	As Shown	Deciduous
	*	Rosa rugosa	*Rugosa Rose*		5 gal.	As Shown	Deciduous
	*	Choisya ternata 'Sundance'	Mexican Orange		5 gal.	As Shown	Evergreen
	*	Berberis darwinii	*Darwin's Barberry*		5 gal.	As Shown	Deciduous
	*	Viburnum tinus 'Spring Bouquet'	*Laurustinus*		5 gal.	As Shown	Evergreen
	*	Ceanothus 'Puget Blue'	*California Lilac*		5 gal.	As Shown	Evergreen
		NATIVE PLANT AREA	¼ Sword Fern, ¼ Salal, ¼ Snowberry, ¼ Oregon Grape		2 gal.	3' o.c., planted in groups of 12-15	
GROUNDCOVERS							
		SEEDED LAWN					
		Arctostaphylos uva ursi	*Kinnikinnick*		1 gal.	18" O.C. TRIANGULAR SPACING	

* Plants allowed in C Zone of 230 kv transition border zones per PSE Energy Landscaping Guide.

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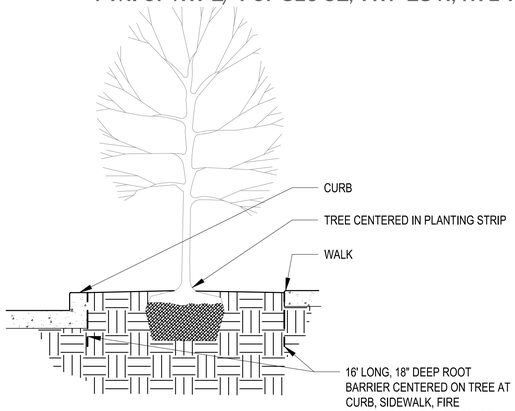
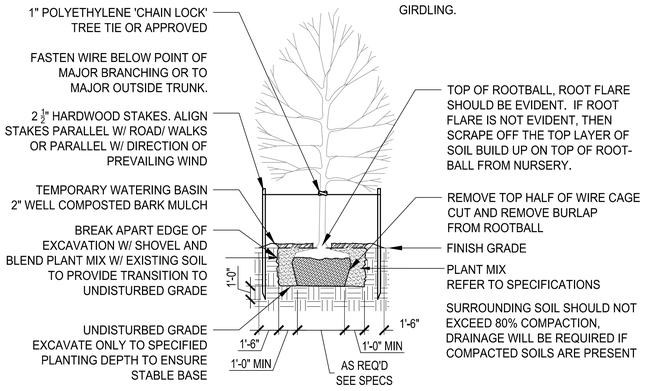


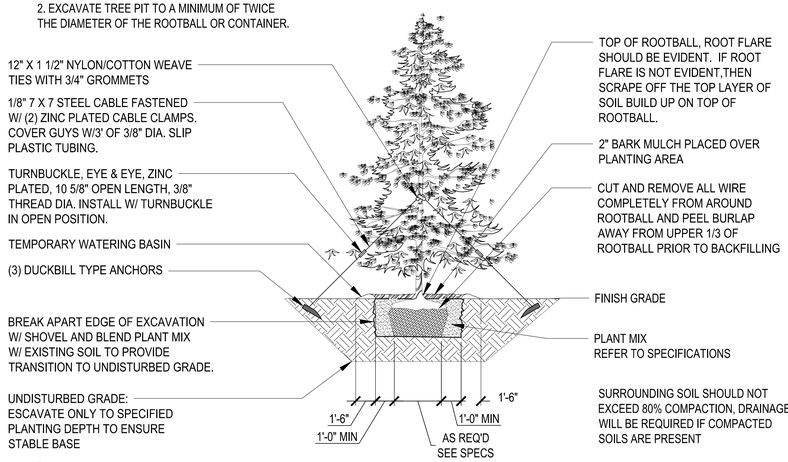
1 ROOT BARRIER
SCALE: NTS

NOTE: EXAMINE ENTIRE TREE AND REMOVE ALL NURSERY TAGS, ROPE, STRING, OR SURVEYORS TAPE TO PREVENT FUTURE GIRDLING.

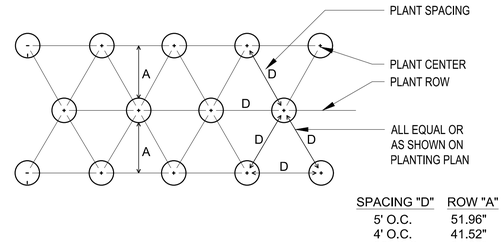


2 DECIDUOUS TREE PLANTING
SCALE: NTS

NOTES:
1.EXAMINE ENTIRE TREE AND REMOVE ALL NURSERY TAGS, ROPE, STRING, OR SURVEYORS TAPE TO PREVENT FUTURE GIRDLING.
2. EXCAVATE TREE PIT TO A MINIMUM OF TWICE THE DIAMETER OF THE ROOTBALL OR CONTAINER.

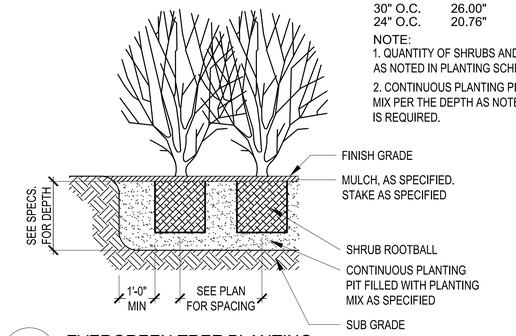


3 EVERGREEN TREE PLANTING
SCALE: NTS



SPACING "D"	ROW "A"	NUMBER OF PLANTS/SQ. FT.
5' O.C.	51.96"	0.04
4' O.C.	41.52"	0.07
36" O.C.	31.20"	0.12
30" O.C.	26.00"	0.18
24" O.C.	20.76"	0.28

NOTE:
1. QUANTITY OF SHRUBS AND SPACING AS NOTED IN PLANTING SCHEDULE.
2. CONTINUOUS PLANTING PITS FILLED WITH PLANTING MIX PER THE DEPTH AS NOTED IN THE SPECIFICATIONS IS REQUIRED.



4 EVERGREEN TREE PLANTING
SCALE: NTS

PLANTING NOTES

1. ALL PLANT MATERIAL SHALL BE INSTALLED AS PER THE CONTRACT DOCUMENTS AND SPECIFICATIONS, AND PER CITY OF MONROE STANDARDS.
2. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE GENERAL CONTRACTOR AND IF NECESSARY OTHER SUB CONTRACTORS AS REQUIRED TO ACCOMPLISH PLANT MATERIAL INSTALLATION.
3. THE LANDSCAPE CONTRACTOR IS RESPONSIBLE TO LOCATE ALL UNDERGROUND UTILITIES PRIOR TO STARTING WORK.
4. ALL PLANT MATERIAL SHALL CONFORM TO THE GUIDELINES ESTABLISHED BY THE CURRENT AMERICAN STANDARD FOR NURSERY STOCK, PUBLISHED BY AMERICANHORT. ALL TREES AND SHRUBS OF THE SAME SPECIES AND SIZE SHALL HAVE MATCHING HEIGHT AND FORM UNLESS OTHERWISE NOTED ON THE PLANS.
5. CONTRACTOR SHALL SUPPLY ALL PLANT MATERIAL IN QUANTITIES SUFFICIENT TO COMPLETE THE PLANTINGS SHOWN IN THE CONTRACT DOCUMENTS. DISCREPANCIES IN QUANTITIES SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER IMMEDIATELY.
6. CONTRACTOR SHALL FURNISH PLANT MATERIAL FREE OF PESTS OR PLANT DISEASES. PRESELECTED OR "TAGGED" MATERIAL MUST BE INSPECTED BY THE CONTRACTOR AND CERTIFIED PEST AND DISEASE FREE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO WARRANTY ALL PLANT MATERIAL BASED ON THE CONTRACT DOCUMENTS AND SPECIFICATIONS.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACEMENT OF ANY EXISTING HARDSCAPE OR SOFTSCAPE MATERIALS DAMAGED DURING PLANTING OPERATIONS.
8. ALL LANDSCAPE AREAS SHALL RECEIVE 2" SETTLED DEPTH OF ORGANIC BARK MULCH THROUGHOUT. HAND DETAIL BY REMOVING EXCESS OR ACCUMULATED MULCH FROM AROUND THE BASE OF ALL PLANTS.
10. ALL NEW LANDSCAPE AREAS TO RECEIVE IMPORT TOPSOIL (PACIFIC TOPSOILS WINTER MIX OR APPROVED). LAWN AREAS -- 6" COMPACTED DEPTH, SHRUB/GROUNDCOVER AREAS 4" COMPACTED DEPTH. TILL SUBGRADE TO 4" DEPTH PRIOR TO PLACING IMPORT TOPSOIL.
11. SOIL TO BE 8-13% ORGANIC CONTENT BY WEIGHT, pH 5.5-7.5.
12. ALL LANDSCAPE AREAS SHALL CONFORM TO CITY OF MONROE REQUIREMENTS.
13. STREET TREES SELECTED FROM CITY OF MONROE STREET TREE LIST.
14. PROVIDE ROOT BARRIER FOR ALL STREET TREES AND TREES PLANTED WITHIN 10' OF PUBLIC WALKWAYS. 'DEEP ROOT' ROOT BARRIER OR APPROVED EQUAL. ROOT BARRIER TO BE 16 FEET LONG AND AT LEAST 18 INCHES DEEP ADJACENT TO PROPOSED CURB AND SIDEWALK WITH STREET TREE CENTERED ALONG THIS LENGTH. IF A STREET IS WITHIN 10' OF A FIRE HYDRANT, WATER METER, OR DRIVEWAY APPROACH, ROOT BARRIER TO BE INSTALLED PERPENDICULAR TO THE CURB AND SIDEWALK AS WELL AS ALONG THE BACK OF CURB AND FRONT OF SIDEWALK TO FORM A CONTINUOUS BARRIER TO PREVENT ROOT INTRUSION INTO OR UNDERNEATH THESE FACILITIES. ROOT BARRIER ADJACENT TO A WATER METER SHOULD BE INSTALLED 24" BACK FROM METER BOX TO ALLOW MAINTENANCE ACCESS.

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05/09/2022
CITY OF MONROE

APPROVED BY PLANNING
Name: L.Barr
Date: 05/12/2022

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2	5/4/22	CITY PERMIT SUBMITTAL	PCE	MJH

STATE OF WASHINGTON REGISTERED LANDSCAPE ARCHITECT
DAVID STUART ANDREWS CERTIFICATE NO. 439

GARIBALDI PRD
ENGINEERING PERMIT PACKAGE
PLANTING LEGEND, NOTES AND DETAILS
CITY OF MONROE — SNOHOMISH COUNTY, WA

CLIENT
Garibaldi Lake, LLC
1010 MARKET STREET
KIRKALND, WA 98033
PHONE: (425)876-9390

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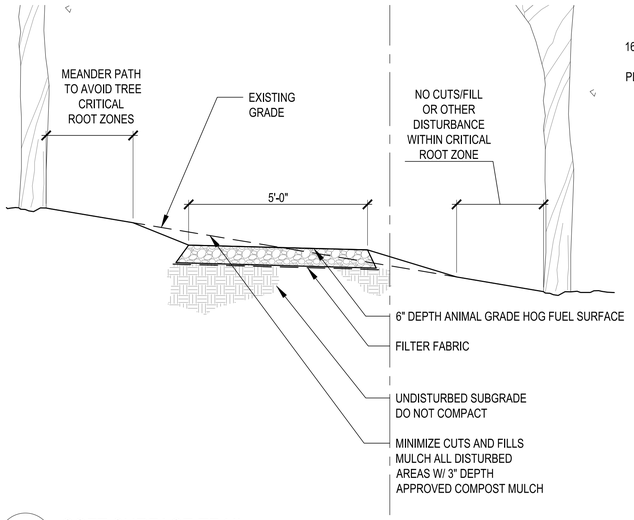
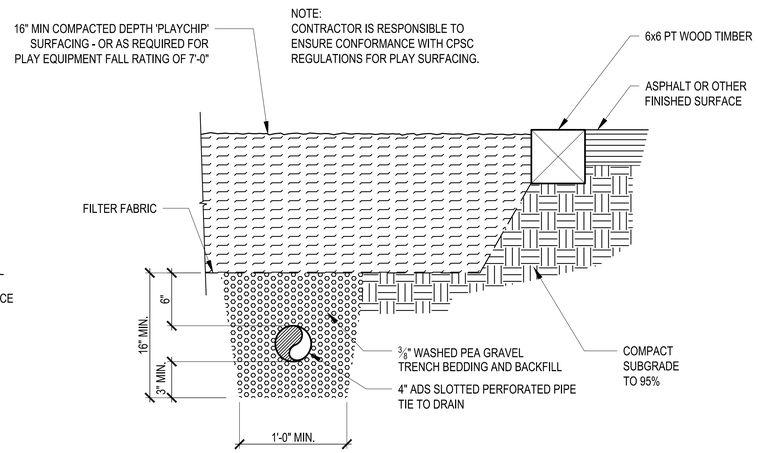
L1.10

SHEET 67 OF 85



1 SOFT SURFACE TRAIL
SCALE: 1/2" = 1'-0"



2 CURB AND PLAY SURFACE @ PLAY AREA
SCALE: 1-1/2" = 1'-0"



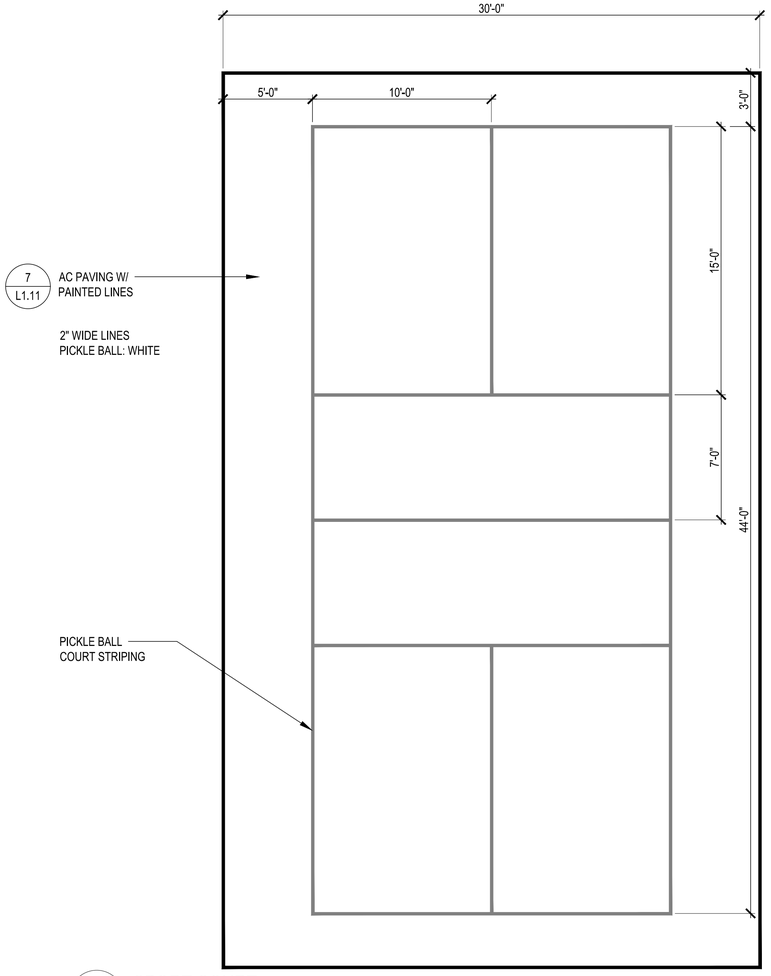
PACIFIC OUTDOOR PRODUCTS
SE-5350
6' TABLE, IN-GROUND MOUNT

4 PICNIC TABLE
SCALE: NTS

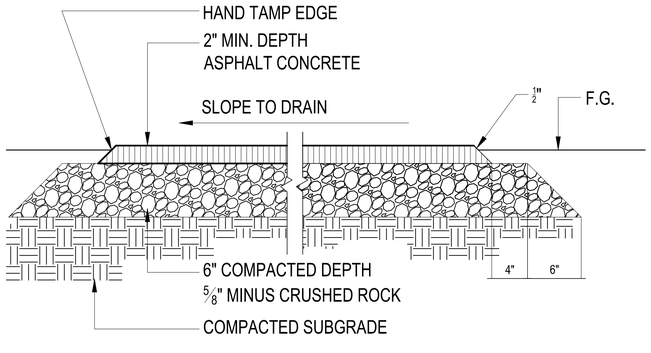


PACIFIC OUTDOOR PRODUCTS
SE-5165
6' BENCH, IN-GROUND MOUNT

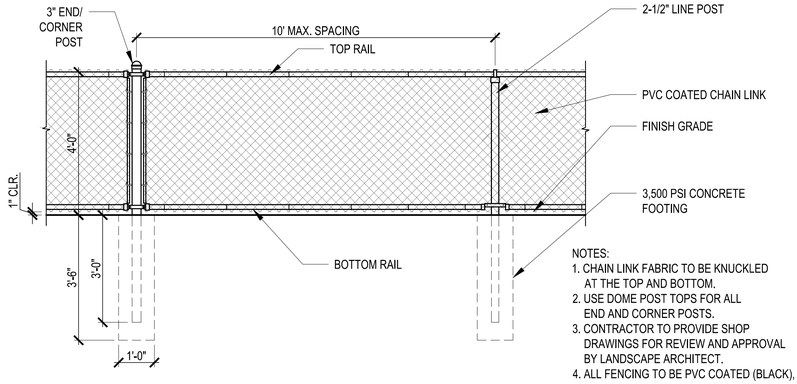
5 BENCH
SCALE: NTS



6 SPORT COURT
SCALE: 1/2" = 1'-0"

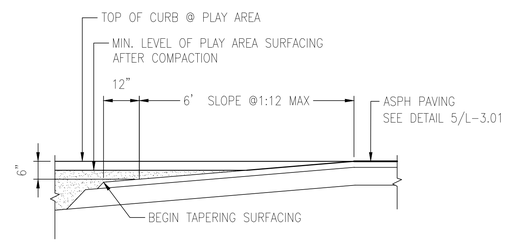


7 ASPHALT PAVEMENT
SCALE: 1-1/2" = 1'-0"



NOTES:
1. CHAIN LINK FABRIC TO BE KNUCKLED AT THE TOP AND BOTTOM.
2. USE DOME POST TOPS FOR ALL END AND CORNER POSTS.
3. CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR REVIEW AND APPROVAL BY LANDSCAPE ARCHITECT.
4. ALL FENCING TO BE PVC COATED (BLACK), ALL COMPONENTS TO BE PAINTED TO MATCH.

8 CHAIN LINK FENCE
SCALE: 1-1/2" = 1'-0"



9 ADA ACCESS RAMP @ PLAY AREA
SCALE: 1/2" = 1'-0"

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SHEET 68 OF 85

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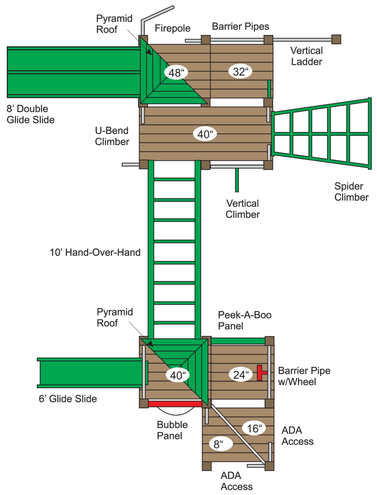
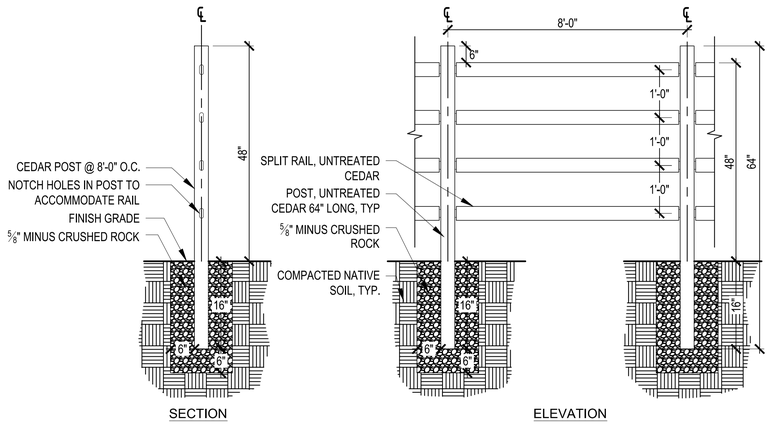
PACIFIC OUTDOOR PRODUCTS, INC.

PE-7730
Area needed: 34' x 40'
Ages 5-12 years
Capacity 44-52
Activities 11

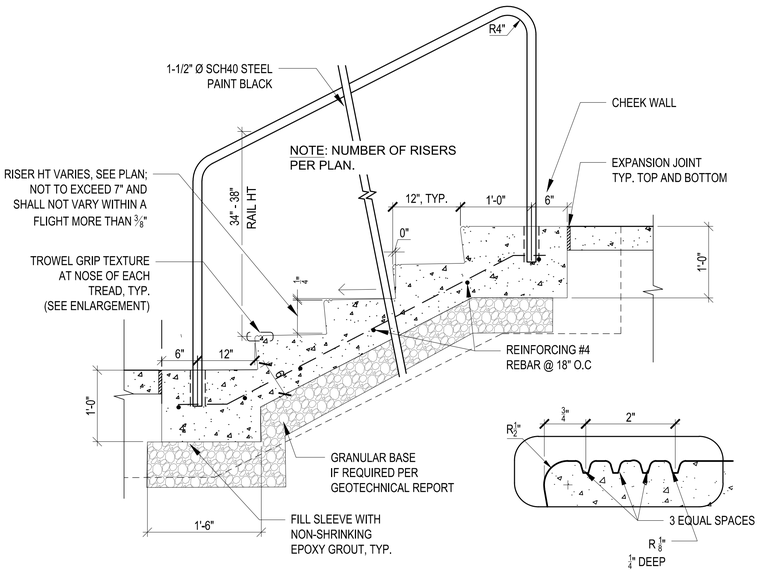


1 PLAY EQUIPMENT
SCALE: NTS

SEPARATE BUILDING PERMIT REQUIRED FOR PLAYGROUND STRUCTURE.



2 SPLIT RAIL FENCE
SCALE: 3/4" = 1'-0"



3 CONCRETE STAIR
SCALE: 1" = 1'-0"

SEPARATE BUILDING PERMIT REQUIRED FOR CONCRETE STAIRS.

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Date: 05/12/2022

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CUWS541828
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CSIT541828
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OTRL541828

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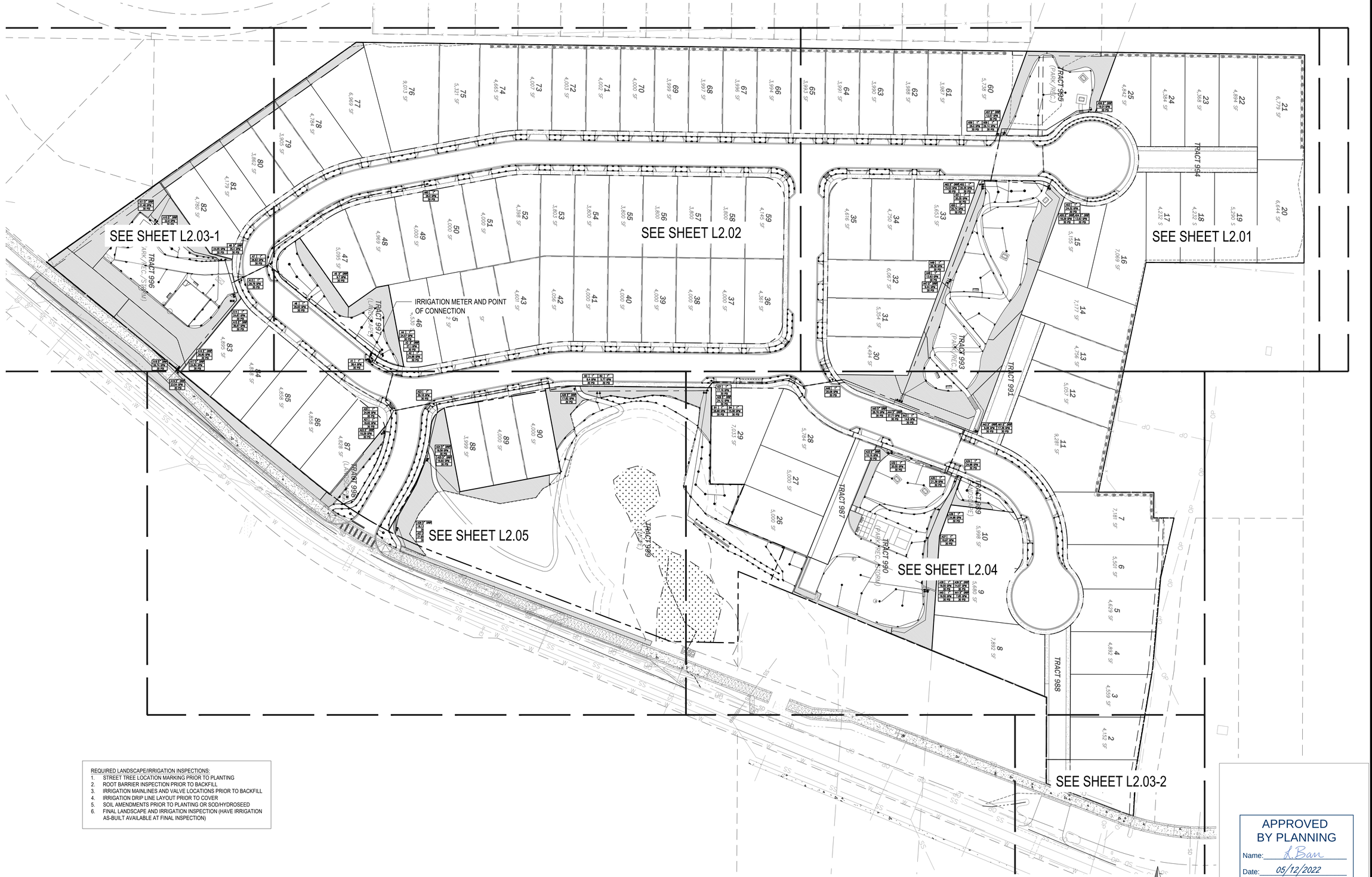

REQUIRED LANDSCAPE/IRRIGATION INSPECTIONS:

1. STREET TREE LOCATION MARKING PRIOR TO PLANTING
2. ROOT BARRIER INSPECTION PRIOR TO BACKFILL
3. IRRIGATION MAINLINES AND VALVE LOCATIONS PRIOR TO BACKFILL
4. IRRIGATION DRIP LINE LAYOUT PRIOR TO COVER
5. SOIL AMENDMENTS PRIOR TO PLANTING OR SOD/HYDROSEED
6. FINAL LANDSCAPE AND IRRIGATION INSPECTION (HAVE IRRIGATION AS-BUILT AVAILABLE AT FINAL INSPECTION)

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Date: 05/12/2022

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OVERALL IRRIGATION PLAN

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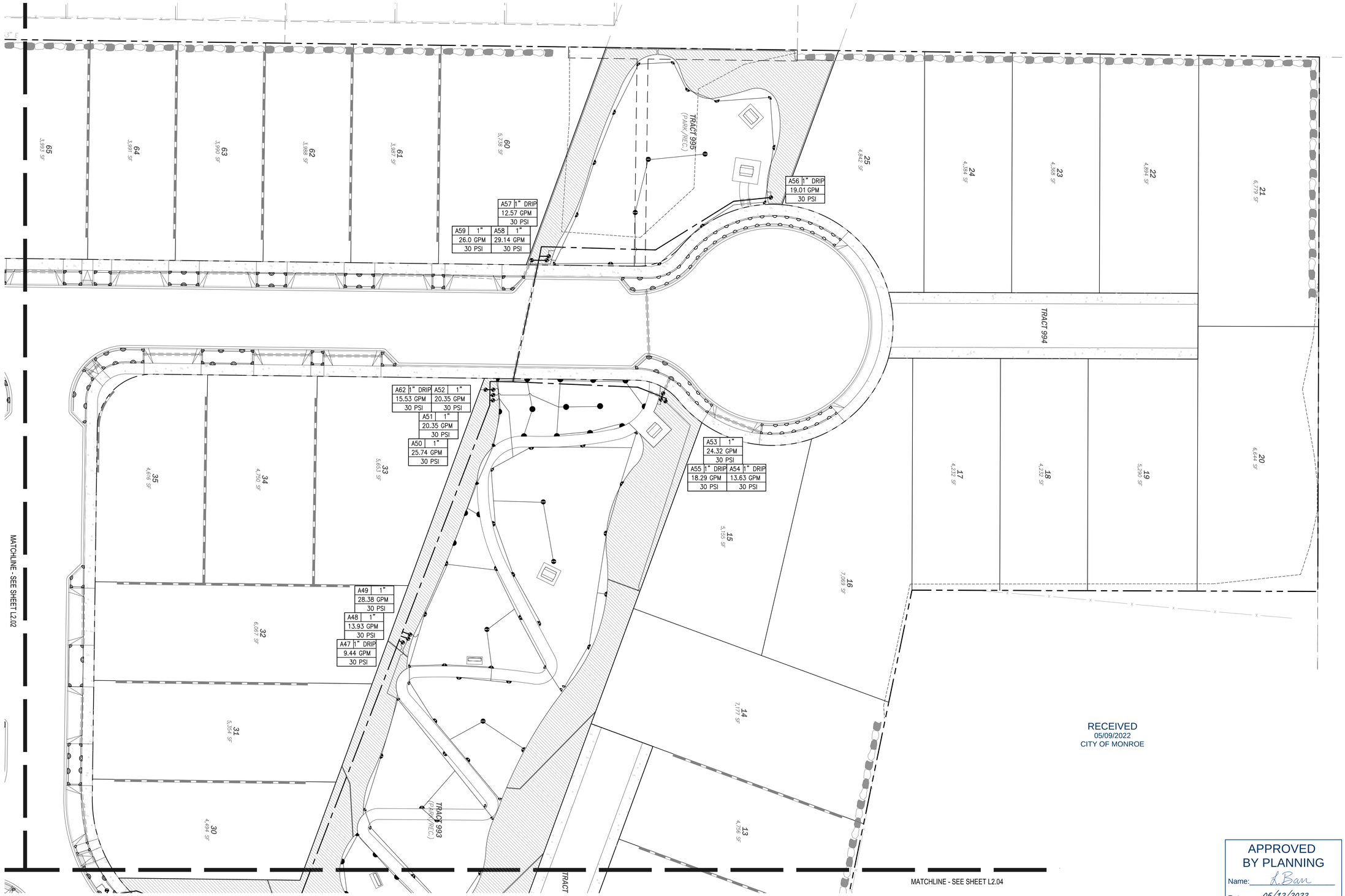

1 IRRIGATION ENLARGEMENT PLAN
SCALE: 1" = 20'-0"

0 20 40
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OTRL541828

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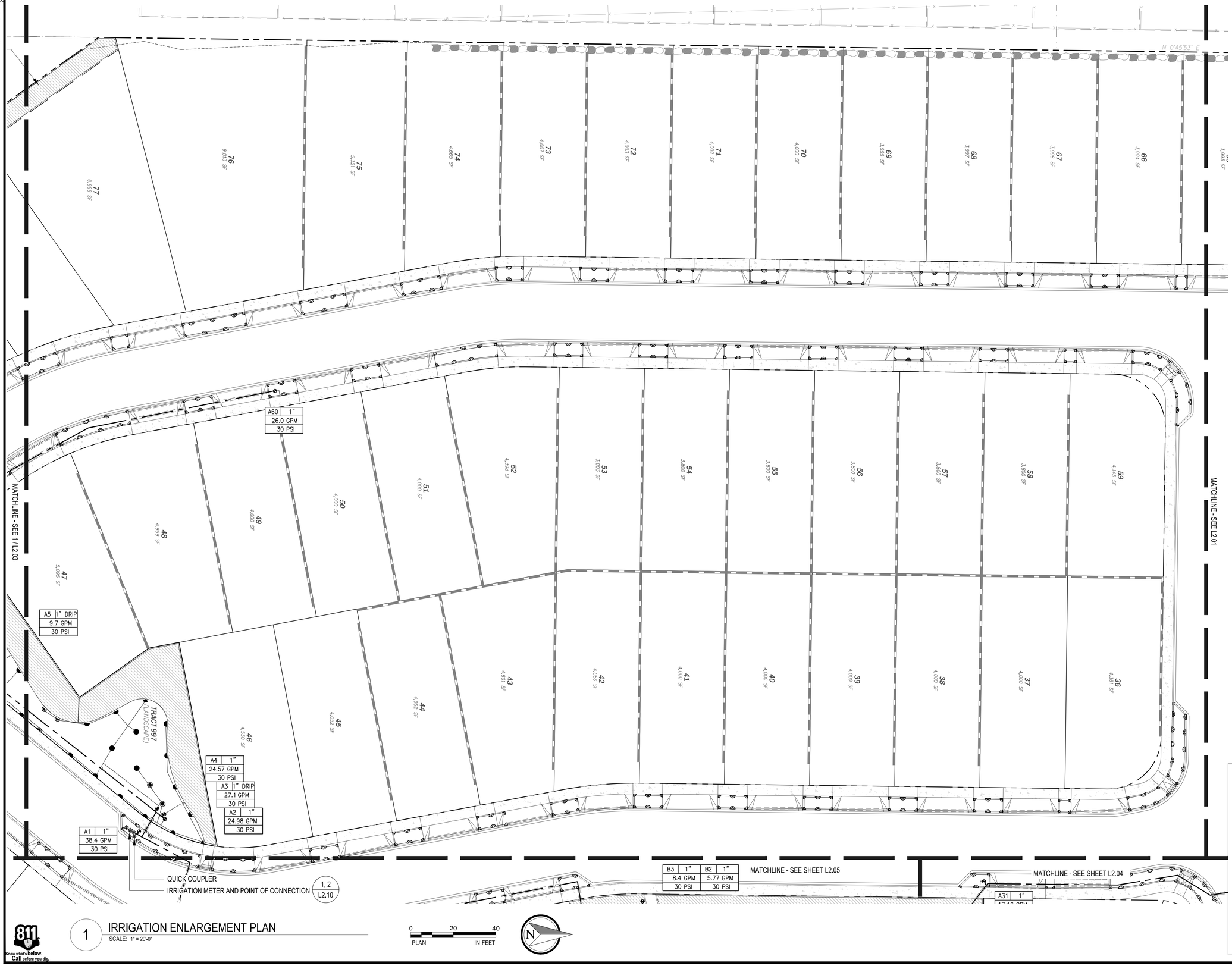

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PLAN IN FEET

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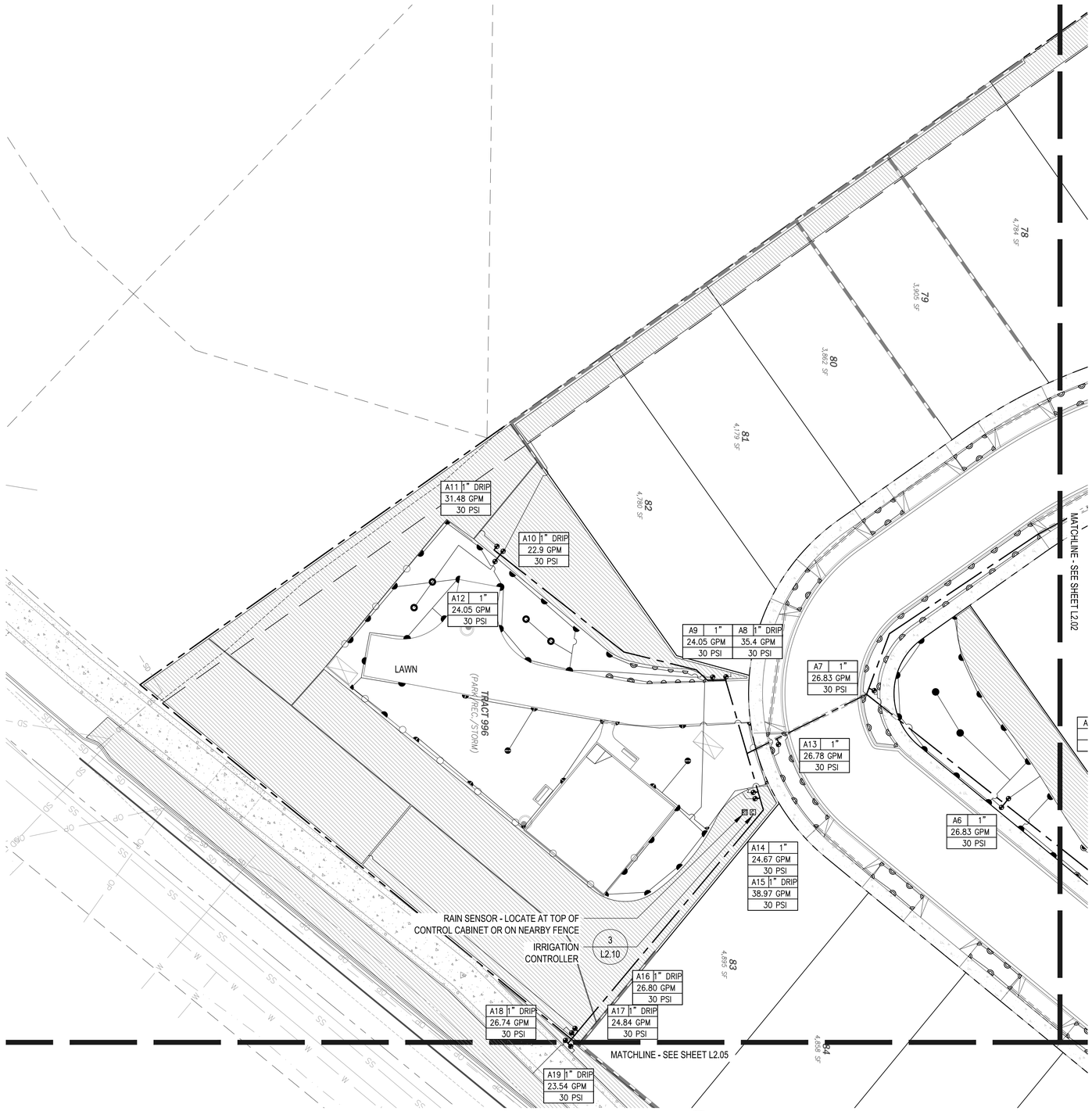
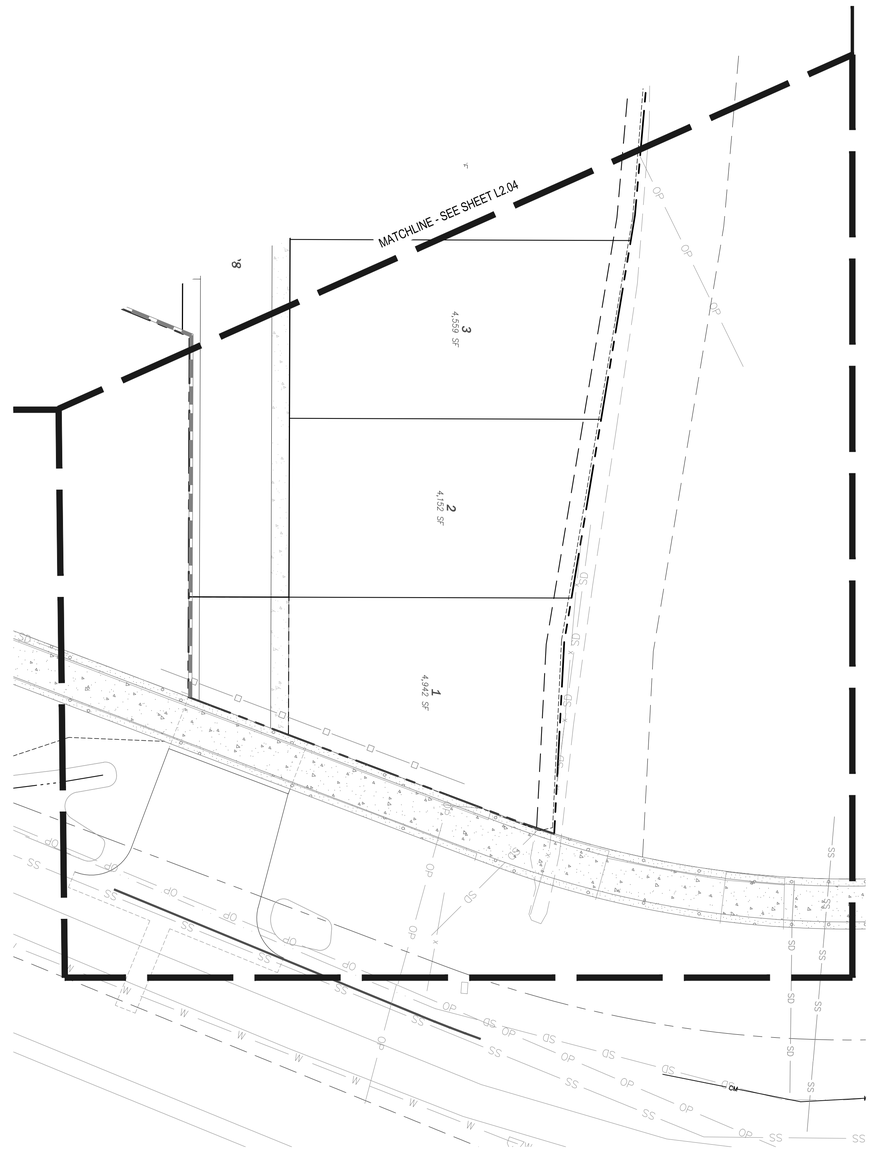


1 IRRIGATION ENLARGEMENT PLAN
SCALE: 1" = 20'-0"

0 20 40
PLAN IN FEET



2 IRRIGATION ENLARGEMENT PLAN
SCALE: 1" = 20'-0"

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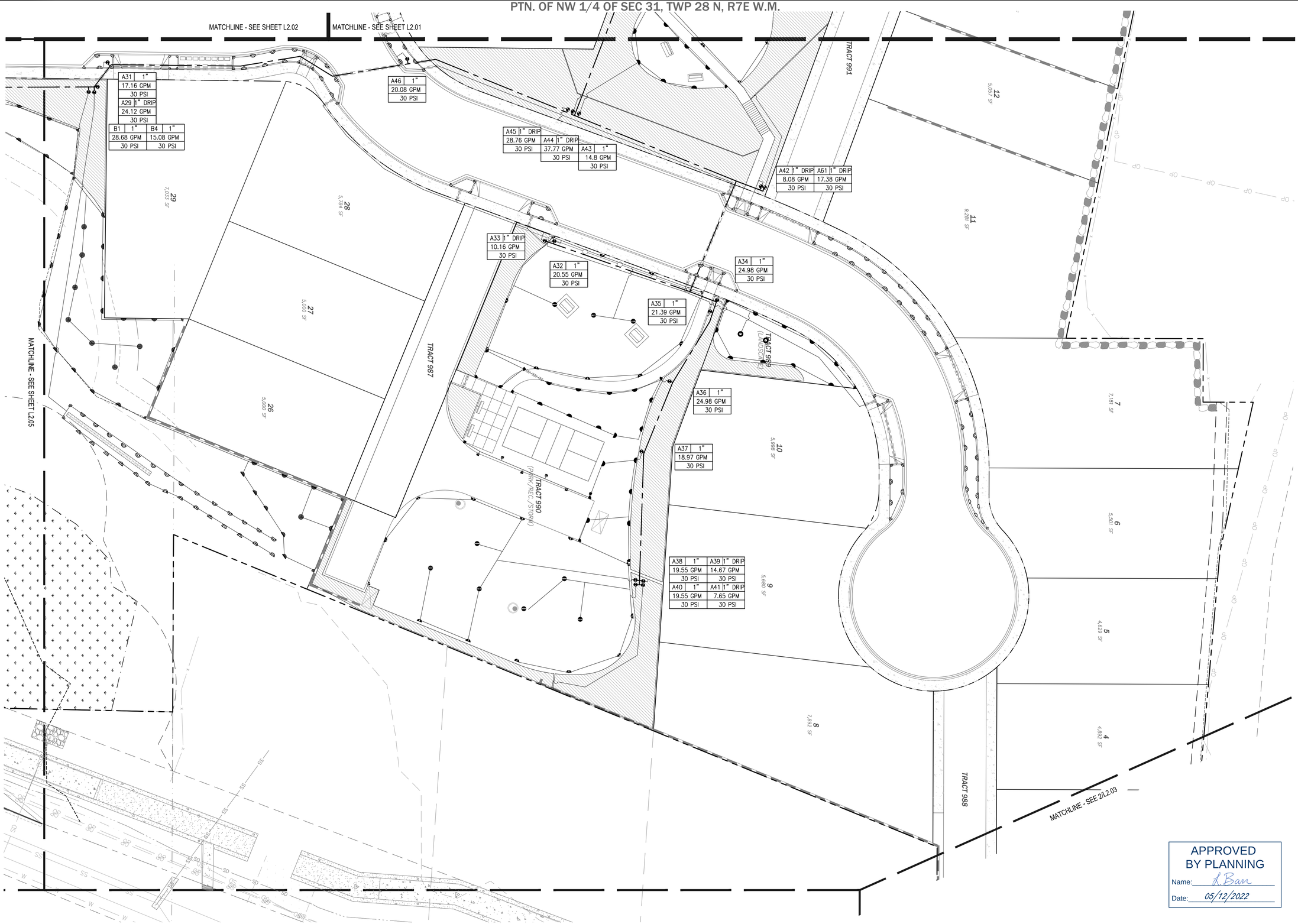

1 IRRIGATION ENLARGEMENT PLAN
SCALE: 1" = 20'-0"

0 20 40
PLAN IN FEET

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NOTE: RECREATION STRUCTURES SHOWN WITHIN THE EXISTING PSE FUTURE TRANSMISSION EASEMENT AREA MAY BE SUBJECT TO PSE APPROVAL.

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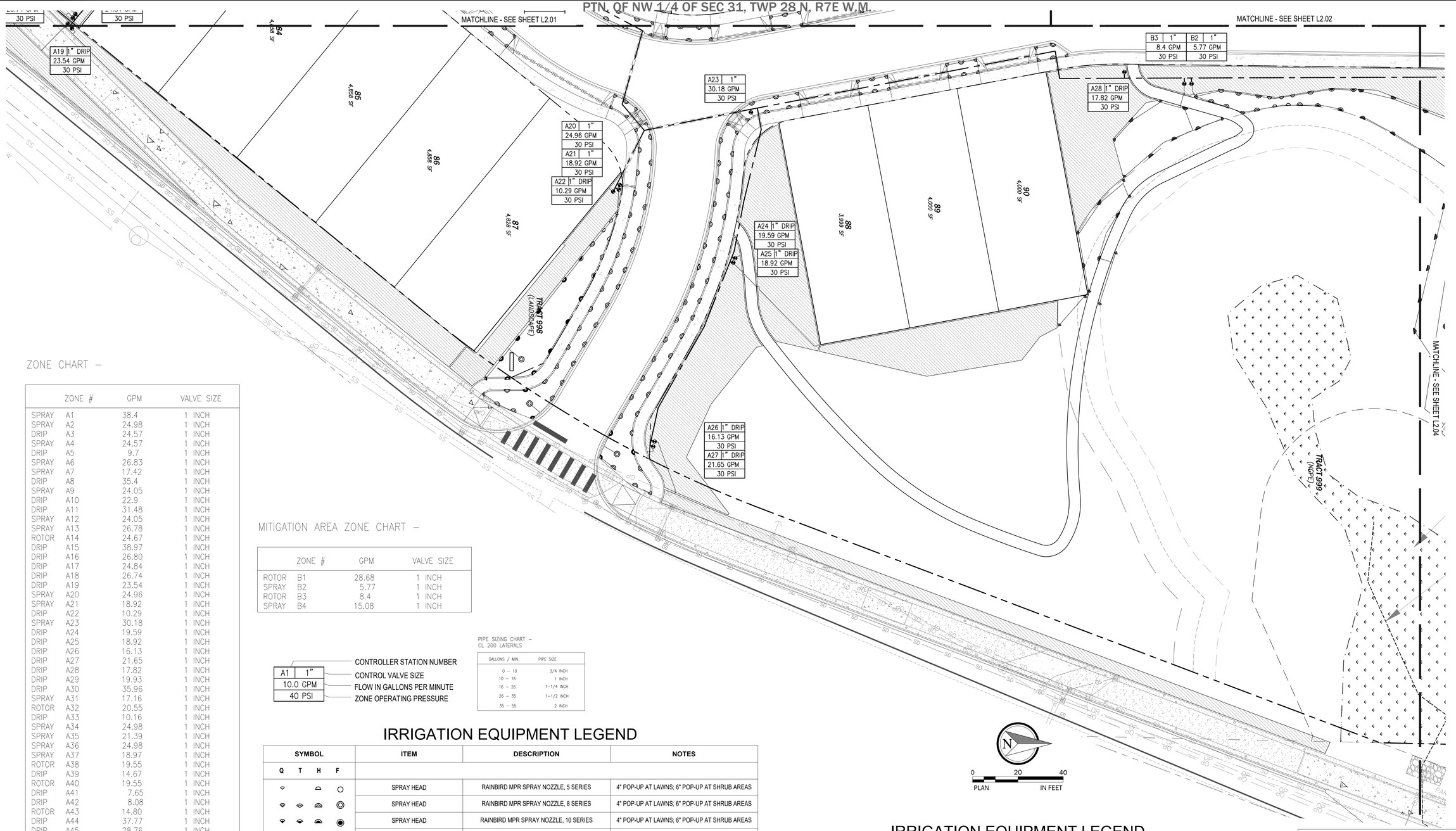

ZONE CHART –

	ZONE #	GPM	VALVE SIZE
SPRAY	A1	38.4	1 INCH
SPRAY	A2	24.98	1 INCH
DRIP	A3	24.57	1 INCH
SPRAY	A4	24.57	1 INCH
DRIP	A5	9.7	1 INCH
SPRAY	A6	26.83	1 INCH
SPRAY	A7	17.42	1 INCH
DRIP	A8	35.4	1 INCH
SPRAY	A9	24.05	1 INCH
DRIP	A10	22.9	1 INCH
DRIP	A11	31.48	1 INCH
SPRAY	A12	24.05	1 INCH
SPRAY	A13	26.78	1 INCH
ROTOR	A14	24.67	1 INCH
DRIP	A15	38.97	1 INCH
DRIP	A16	26.80	1 INCH
DRIP	A17	24.84	1 INCH
DRIP	A18	26.74	1 INCH
DRIP	A19	23.54	1 INCH
SPRAY	A20	24.96	1 INCH
SPRAY	A21	18.92	1 INCH
DRIP	A22	10.29	1 INCH
SPRAY	A23	30.18	1 INCH
DRIP	A24	19.59	1 INCH
DRIP	A25	18.92	1 INCH
DRIP	A26	16.13	1 INCH
DRIP	A27	21.65	1 INCH
DRIP	A28	17.82	1 INCH
DRIP	A29	19.93	1 INCH
DRIP	A30	35.96	1 INCH
SPRAY	A31	17.16	1 INCH
ROTOR	A32	20.55	1 INCH
DRIP	A33	10.16	1 INCH
SPRAY	A34	24.98	1 INCH
SPRAY	A35	21.39	1 INCH
SPRAY	A36	24.98	1 INCH
SPRAY	A37	18.97	1 INCH
ROTOR	A38	19.55	1 INCH
DRIP	A39	14.67	1 INCH
ROTOR	A40	19.55	1 INCH
DRIP	A41	7.65	1 INCH
DRIP	A42	8.08	1 INCH
ROTOR	A43	14.80	1 INCH
DRIP	A44	37.77	1 INCH
DRIP	A45	28.76	1 INCH
SPRAY	A46	20.08	1 INCH
DRIP	A47	9.44	1 INCH
ROTOR	A48	13.93	1 INCH
ROTOR	A49	28.38	1 INCH
ROTOR	A50	25.74	1 INCH
ROTOR	A51	20.35	1 INCH
SPRAY	A52	20.35	1 INCH
SPRAY	A53	24.32	1 INCH
DRIP	A54	13.63	1 INCH
DRIP	A55	18.29	1 INCH
DRIP	A56	19.01	1 INCH
DRIP	A57	12.57	1 INCH
ROTOR	A58	29.14	1 INCH
SPRAY	A59	26.0	1 INCH
SPRAY	A60	26.0	1 INCH
DRIP	A61	17.38	1 INCH
DRIP	A62	20.35	1 INCH

MITIGATION AREA ZONE CHART –

	ZONE #	GPM	VALVE SIZE
ROTOR	B1	28.68	1 INCH
SPRAY	B2	5.77	1 INCH
ROTOR	B3	8.4	1 INCH
SPRAY	B4	15.08	1 INCH

A1	1"
10.0 GPM	
40 PSI	

CONTROLLER STATION NUMBER
CONTROL VALVE SIZE
FLOW IN GALLONS PER MINUTE
ZONE OPERATING PRESSURE

PIPE SIZING CHART –
CL 200 LATERALS

GALLONS / MIN.	PIPE SIZE
0 – 10	3/4 INCH
10 – 16	1 INCH
16 – 26	1-1/4 INCH
26 – 35	1-1/2 INCH
35 – 55	2 INCH

IRRIGATION EQUIPMENT LEGEND

SYMBOL (Q T H F)	ITEM	DESCRIPTION	NOTES
	SPRAY HEAD	RAINBIRD MPR SPRAY NOZZLE, 5 SERIES	4" POP-UP AT LAWNS; 6" POP-UP AT SHRUB AREAS
	SPRAY HEAD	RAINBIRD MPR SPRAY NOZZLE, 8 SERIES	4" POP-UP AT LAWNS; 6" POP-UP AT SHRUB AREAS
	SPRAY HEAD	RAINBIRD MPR SPRAY NOZZLE, 10 SERIES	4" POP-UP AT LAWNS; 6" POP-UP AT SHRUB AREAS
	SPRAY HEAD	RAINBIRD MPR SPRAY NOZZLE, 12 SERIES	4" POP-UP AT LAWNS; 6" POP-UP AT SHRUB AREAS
	SPRAY HEAD	RAINBIRD MPR SPRAY NOZZLE, 15 SERIES	4" POP-UP AT LAWNS; 6" POP-UP AT SHRUB AREAS
	SPRAY HEAD	RAINBIRD R-VAN14: 360	4" POP-UP AT LAWNS
	SPRAY HEAD	RAINBIRD R-VAN14: 45-270	4" POP-UP AT LAWNS
	SPRAY HEAD	RAINBIRD MPR SPRAY NOZZLE., 15 STRIP-LCS/RCS	
	SPRAY HEAD	RAINBIRD MPR SPRAY NOZZLE., 15 STRIP-EST	
	ROTOR	RAINBIRD 5000-MPR 35 (RED)	4" POP-UP AT LAWNS
	SUB-SURFACE DRIP IRRIGATION	RAINBIRD XFS-06-12	12 IN SPACING, 12 IN ROW SPACING. PROVIDE FLUSH POINTS AND AIR RELIEF VALVES AT EACH AREA PER DETAILS
	MAINLINE	CLASS 200 PVC	2"
	LATERAL LINE	CLASS 200 PVC	SIZE PER PIPE SIZE CHART
	SLEEVE	SCHEDULE 40 PVC	SIZE = 2 x LINE SIZE, 2" MIN, EXTEND 12" MIN. BEYOND EDGE OF PAVEMENT

IRRIGATION EQUIPMENT LEGEND

SYMBOL	ITEM	DESCRIPTION	NOTES
			BEYOND EDGE OF PAVEMENT
M	METER		NEW 1" METER - SEE CIVIL
BFA	BACKFLOW PREVENTION ASSEMBLY		
DCVA	DOUBLE CHECK VALVE ASSEMBLY	FEBCO 850 DCVA WITH BALL VALVES	1-1/2" DCVA, SEE SHEET C4.101
Y	WYE STRAINER	BRASS STRAINER WITH 80 MESH SCREEN. WATT'S OR EQUAL.	
	QUICK COUPLER	RAINBIRD 33-DLRC	PROVIDE: 33DK KEY; SH-0 ELL; 2049 COVER KEY
C	CONTROLLER	RAINBIRD EXP-12LXMEF W/ ESP LXMSM 12 - 12 STATION MODULES , SIZE CONTROLLER AND ADDITIONAL MODULES FOR 60+ ZONES	EXTERIOR PEDESTAL MOUNT, PROVIDE LXMMSS LOCKING STAINLESS STEEL CABINET AND LXMMSS PED - STAINLESS STEEL PEDESTAL
RT	RAIN SENSOR	RAINBIRD RSD-BEX RAIN SENSOR	MOUNT TO STREET LIGHT IN PROXIMITY TO CONTROLLER
	REMOTE CONTROL VALVE ASSEMBLY	RAINBIRD PEB 1" / 1-½"	SIZE AS NOTED IN ZONE CHART

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BY PLANNING
Name: L.Barr
Date: 05/12/2022

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IRRIGATION ENLARGEMENTS

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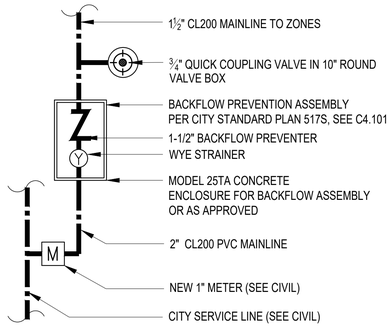
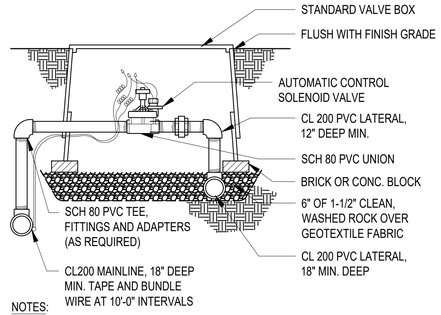
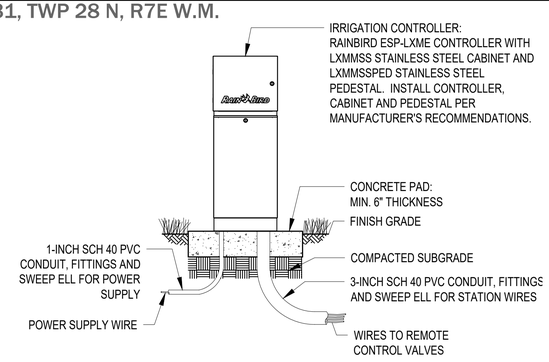


1 POINT OF CONNECTION DIAGRAM
SCALE: 1"=1'-0"



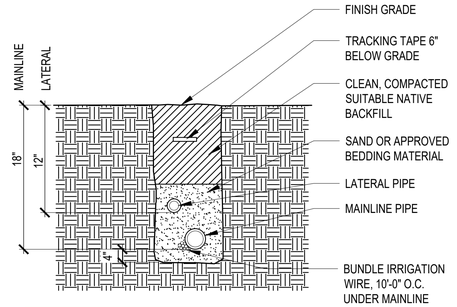
NOTES:
1. USE TEFLON TAPE ON ALL THREADED FITTINGS
2. CUT 'U' SHAPE NOTCHES ON BOTH SIDES OF BOX THAT ALLOW 2" CLEARANCE FROM TOP OF PIPE TO TOP OF CUT-OUT
3. USE WATERTIGHT WIRE SPLICES, TYP.

2 REMOTE CONTROL VALVE
SCALE: 1/2"=1'-0"



NOTES:
1. ESP-LXME CONTROLLER IS AVAILABLE IN 8- OR 12-STATION BASE MODELS. ADDITIONAL MODULES IN 4-, 8- AND 12-STATION VERSIONS MAY BE ADDED TO BRING THE CONTROLLER UP TO 48 STATIONS MAXIMUM.
2. FOR EASE OF INSTALLATION INTO A CONTROLLER WITH MORE THAN 24 STATIONS, INSTALL A JUNCTION BOX AT THE BASE OF CONTROLLER AND TRANSITION LARGER VALVE AND COMMON WIRES FROM FIELD TO 18 AWG MULTI CONDUCTOR WIRE TO BE USED IN CONTROLLER.
3. PROVIDE PROPER GROUNDING COMPONENTS TO ACHIEVE GROUND RESISTANCE OF 10 OHMS OR LESS.

3 IRRIGATION CONTROLLER
SCALE: 1/2"=1'-0"



NOTE: BE PREPARED AT FINAL INSPECTION TO DEMONSTRATE THAT TAPE WAS INSTALLED

4 IRRIGATION TRENCH
SCALE: 1"=1'-0"

1 PVC SUPPLY HEADER
2 PVC SCH 40 TEE OR EL (TYPICAL)
3 BARB X MALE FITTING: RAIN BIRD XFF-MA FITTING (TYPICAL)
4 PVC DRIP MANIFOLD FROM RAIN BIRD CONTROL ZONE VALVE KIT (SIZED TO MEET LATERAL FLOW DEMAND)
5 SUB-SURFACE DRIPLINE: RAIN BIRD XF SERIES DRIPLINE (TYPICAL) POTABLE: XFS DRIPLINE NON-POTABLE: XFSP DRIPLINE
6 PERIMETER OF AREA
7 PERIMETER DRIPLINE PIPE TO BE INSTALLED 2"-4" FROM PERIMETER OF AREA
8 FLUSH POINT (TYPICAL) - SEE RAIN BIRD XFS DETAILS FOR FLUSH POINT INSTALLATION
9 BARB X BARB INSERT TEE OR EL: RAIN BIRD XFF-TEE OR RAIN BIRD XFF-ELBOW (TYPICAL)
10 PVC RISER PIPE
11 PVC SUPPLY MANIFOLD
12 PVC SCH 40 SLEEVE PIPE SIZED TWICE THE SIZE OF MANIFOLD PIPE SIZE
13 PAVEMENT AND CURB
14 TURF OR MULCH
15 FINISH GRADE
16 ½" AIR RELIEF VALVE: RAIN BIRD MODEL: ARV050 SEE RAIN BIRD XFS DETAILS FOR AIR RELIEF INSTALLATION
17 DRIP SYSTEM OPERATION INDICATOR; ONE PER ZONE. MODEL # OPERIND WITH POTABLE YELLOW CAP.

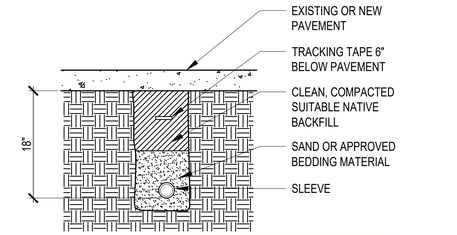
NOTES:
1. DISTANCE BETWEEN LATERAL ROWS AND EMITTER SPACING TO BE BASED ON SOIL TYPE, PLANT MATERIALS AND CHANGES IN ELEVATION. SEE DETAILS AND SPECIFICATIONS.
2. LENGTH OF LONGEST DRIPLINE LATERAL SHOULD NOT EXCEED THE MAXIMUM SPACING SHOWN IN THE ACCOMPANYING TABLE.
3. INSTALL AIR RELIEF VALVE AT HIGH POINTS IN DRIP LATERAL.

XFS Dripline Maximum Lateral Lengths (Feet)

Inlet Pressure PSI	12" Spacing		18" Spacing		24" Spacing	
	Nominal Flow (GPH)		Nominal Flow (GPH)		Nominal Flow (GPH)	
	0.6	**0.9**	**0.6**	**0.9**	**0.6**	**0.9**
15	273	155	314	250	424	322
20	318	169	353	294	508	368
30	360	230	413	350	586	414
40	395	255	465	402	652	474
50	417	285	528	420	720	488
60	460	290	596	455	780	514

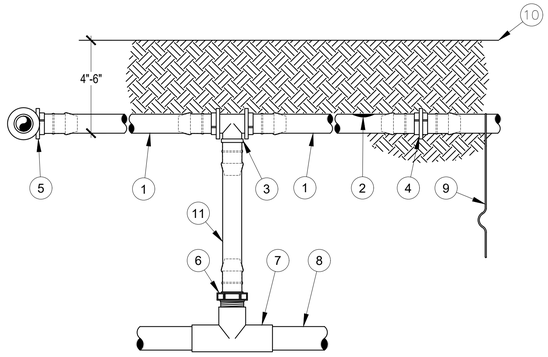
NOTE: HAVE PSI AND GPH INFORMATION AVAILABLE AT DRIP LINE INSPECTION TO CONFIRM SPACING.

6 SUB-SURFACE DRIPLINE TYPICAL ISLAND LAYOUT
SCALE: NTS



NOTE: BE PREPARED AT FINAL INSPECTION TO DEMONSTRATE THAT TAPE WAS INSTALLED

5 IRRIGATION TRENCH UNDER PAVEMENT
SCALE: 1"=1'-0"



1 ON-SURFACE DRIPLINE: RAIN BIRD XF SERIES DRIPLINE POTABLE: XFS DRIPLINE NON-POTABLE: XFSP DRIPLINE
2 INLINE DRIP EMITTER OUTLET, SEE PLANS FOR DRIPLINE OUTLET SPACING.
3 BARB TEE 17x17x17mm RAIN BIRD XFF-TEE
4 BARB COUPLING 17x17mm RAIN BIRD XFF-COUP
5 BARB ELBOW 17x17mm RAIN BIRD XFF-ELBOW
6 BARB MALE ADAPTER 17mm X 1/2" MPT RAIN BIRD XFF-MA-050 17mm X 3/4" MPT RAIN BIRD XFF-MA-075
7 PVC TEE SxSxT
8 PVC LATERAL SUPPLY HEADER
9 TIE DOWN STAKE: RAIN BIRD TDS-050 WITH BEND (TYPICAL)
10 FINISH GRADE
11 RAIN BIRD XF SERIES BLANK TUBING LENGTH AS REQUIRED

NOTES:
1. PLACE TIE DOWN STAKES EVERY THREE FEET IN SAND, F0UR FEET IN LOAM, AND FIVE FEET IN CLAY.
2. AT FITTINGS WHERE THERE IS A CHANGE OF DIRECTION SUCH AS TEES OR ELBOWS, USE TIE-DOWN STAKES ON EACH LEG OF THE CHANGE OF DIRECTION.
3. USE RAIN BIRD FITTINS-TOOL XF INSERTION TOOL FOR FITTING ASSEMBLY.

7 SUB-SURFACE DRIPLINE RISER ASSEMBLY
SCALE: NTS

APPROVED BY PLANNING
Name: L. Barr
Date: 05/12/2022

NO.	DATE	REVISION	BY	CK.
4	5/4/22	CITY PERMIT SUBMITTAL	PCE	MJH

STATE OF WASHINGTON REGISTERED LANDSCAPE ARCHITECT
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IRRIGATION DETAILS
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CLIENT
Garibaldi Lake, LLC
1010 MARKET STREET
KIRKALND, WA 98033
PHONE: (425)876-9390

C|P|H CONSULTANTS
Site Planning • Civil Engineering
Landscape Architecture • Land Use Consulting
11301-B NE 120th Street
Kirkland, WA 98034 • (425) 285-2390
101 South Wenatchee Avenue, Suite C3
Wenatchee, WA 98801 • (509) 293-7731
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LANDSCAPE SPECIFICATIONS

PART 1 – GENERAL

1.1 DESCRIPTION

A. Drawings and general provisions of the contract including General and Supplementary Conditions apply to the work described in this specification.

a. Work included: Provide all labor, materials, transportation and equipment necessary for the complete installation of all project landscaping. Landscaping includes review of subgrades, import and placement of topsoil, specialty topsoil, mulch and other materials, rototilling, fertilizer and amendment application compaction, fine grading, all temporary and permanent seeding, tree, shrub and groundcover planting, staking, pruning, watering and other maintenance until final acceptance and other items as described herein and as necessary to deliver to the owner a complete, thriving healthy landscape installation.

1.2 QUALITY ASSURANCE

A. All work shall be performed by experienced landscape installers. The installer shall maintain an experienced full time field supervisor on site when topsoil placement and planting is in progress.

B. Soil and other material testing shall be performed by a licensed independent laboratory that specializes in the type of testing to be performed.

C. Reference standards: "American Standard for Nursery Stock" Current Edition; Hortus III – Current Edition

D. Pre installation conference. Conduct a pre installation conference on site with the Landscape Architect, general contractor and owner's representative prior to beginning the work.

1.3 PROJECT CONDITIONS

A. Work only within areas designated for new landscape. Do not disturb existing vegetation outside of limits of work.

B. Coordinate work with other trades. Do not damage existing pavements, curbs, underground and overhead utilities, or other existing improvements. Do not store or transport landscape materials over or upon existing pavements in such a manner as to damage or stain existing surfaces.

C. The contractor is responsible for any replacement, cleaning or other remediation necessary as a result of landscape installation operations.

1.4 SUBMITTALS

A. Import Topsoil:

Provide documentation of the source for Import Topsoil and a 2 gallon sample.

Obtain an agricultural suitability analysis of the import topsoil from an accredited soils laboratory at the contractors cost. The analysis shall include soil structure analysis by percentage, percentage of organic matter by weight, pH, percentage N, P, K, heavy metals and trace elements, salinity, recommendations for amendments and an opinion of the suitability of the soils for the intended use. Topsoil must meet the requirements of DOE BMP T5.13

B. Provide certification of Grass Seed from seed vendor for each grass-seed mixture stating the botanical and common name and percentage by weight of each species and variety, and percentage of purity, germination, and weed seed. Include the year of production and date of packaging.

C. Provide product certification for all fertilizers, soil amendments and other imported materials.

1.5 PRODUCT DELIVERY, STORAGE AND HANDLING

A. Labeling: Furnish standard products in unopened manufacturer's standard containers bearing original labels showing quantity, analysis and name of manufacturer. Plant material shall be labeled by genus, species and variety and name of grower.

B. Storage: Store products with protection from weather or other conditions which would damage or impair the effectiveness of the product.

C. Plant material shall be protected from wind and sun at all times. Plant material stored on site for longer than 24 hours prior to planting shall be heeled in to mulch or topsoil to protect root balls. Provide temporary irrigation.

D. Anti-Desiccant: At Contractor's option, spray all evergreen or deciduous plant material in full leaf immediately before transporting with anti-desiccant. Apply an adequate film over trunks, branches, twigs and foliage.

E. Digging: Dig ball and burlap plants with firm, natural balls of earth of diameter not less than that recommended by USDA Standard for Nursery Stock, and of sufficient depth to include the fibrous and feeding roots.

1.6 WARRANTY PERIOD

A. Contractor shall continuously maintain the installed landscape until final acceptance of the project. The Warranty Period begins at final acceptance. Contractor shall warrant that all trees, shrubs and groundcovers installed under this contract will be healthy and in flourishing condition, exhibiting active growth one year from final acceptance. Plants shall be free of dead or dying branches and branch tips, with all foliage of a normal density, size and color.

B. Replacements: As soon as weather conditions permit, replace, without cost to Owner all dead plants and all plants not in a vigorous, thriving condition, as described above and as determined by Project Manager during and at the end of Warranty Period. All replacement plants shall have similar warranty for one year from date of replacement planting.

C. Exclusions: Contractor shall not be held responsible for failures due to neglect by Owner, vandalism, etc., during Warranty Period. Report such conditions in writing to the Landscape Architect.

PRODUCTS

2.1 IMPORT TOPSOIL

A. Commercially manufactured topsoil consisting of a uniform blend of sandy loam, sand and compost. Material shall contain no weed seed, roots, rocks or other materials over ½" diameter, clods, clay lumps, construction debris or other deleterious materials harmful to plant growth. pH between 6.0 and 8.0. Minimum 5% organic content required in lawn areas and 10% in shrub areas per DOE BMP T5.13.

B. Compost for use in import topsoil shall conform to WAC 173-350-220, "compost facility standards". Provide copy of current annual test report from compost facility.

2.2 PLANT MATERIALS

A. General: Verify that all container stock has been grown in the containers in which delivered for at least two (2) months, but not over two (2) years for shrubs or one (1) year for perennial and groundcovers. Do not install container plants that have cracked or broken balls of earth when taken from container.

1. Growing Conditions: Plants shall be nursery-grown in accordance with good horticultural practices under similar climatic conditions to those of the project for at least two years unless otherwise specifically authorized. Collected material shall be identified for approval by the Landscape Architect.

2. Appearance: All plants shall be exceptionally heavy, symmetrical, tightly knit, and so trained or favored in development and appearance as to be superior in form for their species, with regard to number of branches, compactness and symmetry.

3. Vigor: Plants shall be sound, healthy and vigorous, well branched and densely foliated when in leaf. They shall be free of disease, insect pests, eggs, or larvae. They shall have healthy, well-developed root systems. Plants shall be free from physical damage or adverse conditions that would prevent thriving growth.

B. Condition of Root System: Samples must prove to be completely free of circling, kinked or girdling trunk surface and center roots and show no evidence of a root-bound condition.

C. Measurements:

1. General: Measure plants when branches are in their normal upright position. Height and spread dimensions specified refer to main body of plant and not branch tip to tip. Take caliper measurement at a point on the trunk 6 in. above natural ground line for trees up to 4 in. in caliper and at a point 12 in. above the natural ground line for trees over 4 in. in caliper. Evergreen trees shall be measured from the base of the tree to the midpoint of the top central leader.

2. Size Range: Do not use plant materials less than the minimum specified size. If a size range is specified, at least 40 percent of the plants shall be as large as the maximum size specified. The measurements specified are the measurements after pruning, where pruning is required. Plants that meet the measurements specified, but do not possess a normal balance between height and spread shall be rejected.

3. Substitutions: Substitution of species or variety is not allowed without the prior written approval of the Landscape Architect. Approved plants larger than specified may be used if accepted. Use of such plants shall not increase Contract price. If larger plants are accepted, increase the rootball in proportion to the size of the plant.

D. Pruning: Do not prune plants before delivery. After installation, prune as directed by landscape architect.

E. Condition: Trees which have multiple leaders, unless specified, or damaged or crooked leaders will be rejected. Trees having a main leader shall not have been headed back. Trees with abrasions of the bark, sunscalds, disfiguring knots, or fresh cuts of limbs over 3/4 in. which have not completely callused, will be rejected.

2.3 LAWN SEED

A. Lawn Mix: Minimum three Cultivars (1/3 of each) as approved. Seed at minimum rate of 8 lbs./1000 s.f. or greater if recommended by Supplier.

	Proportions by Weight	*Percent Purity*	*Percent Germination*
Perennial Rye (3-way blend)	70%	98%	90%
Fine Fescue	20%	98%	90%
Kentucky Bluegrass	10%	98%	90%

B. Hydromulch: Silva-fiber or approved at minimum rate of 2000 lbs/acre.

C. Tackifier: Use on all sloped areas greater than 5:1 or at manufacturers suggested rate.

D. Hydromulch: Silva-fiber or approved at minimum rate of 2000 lbs/acre.

E. Tackifier: Use on all sloped areas greater than 5:1 or at manufacturers suggested rate.

2.4 TURFGRASS SOD

A. Premium quality, 100% weed, disease and insect free sod complying with "Specifications for Turfgrass Sod Materials" in TPI's "Guideline Specifications for Turfgrass Sodding". Furnish sod of uniform density, color and texture, strongly rooted and capable of vigorous growth and development when planted

2.5 COMMERCIAL FERTILIZERS

A. Top-dress Fertilizer: Complete fertilizer, 50 percent of the nitrogen to be derived from natural organic sources or urea-form. Available phosphoric acid shall be from superphosphate, bone or tankage. Potash shall be derived from muriate of potash containing 60 percent potash:

16% Nitrogen
6% Phosphoric Acid
8% Potash

B. Perennials: Diammonium Phosphate (18-46-0).

2.6 STAKING MATERIALS

A. Tree Stakes: Rough-sawn, sound, new hardwood, free of knots, holes, cross grain, and other defects, 2 by 2 inches by length indicated, pointed at one end.

B. Wire Ties: 11 gauge, single strand, galvanized steel with rubber, two-ply, dark-colored, ½"-5/8" diameter protective hose loops or approved equal.

2.7 TREE PROTECTION MATERIALS

A. Tree Wrap: Tree wrapping material shall be first quality, 4" wide bituminous, impregnated tape, corrugated or crepe brown paper, specifically manufactured for tree wrapping and having a quality to resist insect infestation.

PART 3 - EXECUTION

3.1 SOIL PREPARATION

A. General:

1. Moisture Content: Do not work soil when moisture content is so great that excessive compaction will occur, nor when it is so dry that dust will form in air or that clods will not break readily. Apply water, if necessary to bring soil to an optimum moisture content for tilling and planting. Maintain within 2 percent above or below optimum moisture content at all times during the work.

2. Clearing of Debris: Clear all planting areas of stones 2 in. diameter and larger, weeds, debris and other extraneous materials prior to amending existing soil and incorporating imported topsoil.

3. Weed Control: Weeds may require spraying with Round-up for eradication prior to cultivating them into the soil. Follow manufacturer's specifications for application and treatment.

4. Rototill subgrade to a depth of 4" prior to placement of 8" minimum settled depth of import topsoil.

5. In the event that the contractor intends to amend existing soils for use as topsoil, follow and meet all the requirements of BMP T5.13 for soil amendment.

3.2 HYDROSEEDING

A. Hydroseed only from April 30 thru Sept 1. Outside of this window install sod in lieu of hydroseed.

B. Hydroseed using seed, hydromulch and Tackifier in quantities as specified herein. Use Tackifier on all slopes greater than 1:5.

C. Immediately remove all overspray from walks, planting beds and other surfaces.

D. Provide temporary flagging completely surrounding all seeded areas to deter foot traffic. Remove flagging after first mowing.

3.3 WEED CONTROL

A. Apply pre-emergent weed control to all areas to receive woody, non-lawn ornamental planting after amendment of topsoil.

B. Spray all weeds that may have established prior to planting operations with post emergent herbicide. If rain occurs within 6 hours of application, reapply the product. Wait at least 7 days after last application to rake, till, or re-plant.

C. Apply strictly according to manufacturer's current printed specifications.

3.4 REPLANT REVIEW

A. General: Do not commence planting work prior to acceptance of soil preparation.

B. Finish Grades: Finish grades for all planting areas shall have been established by in accordance to the grading plans. Verify that all grades are within 1 in. plus or minus of required finish grade and that all soil amendments have been installed as specified. Fine rake planting beds prior to planting shrubs.

3.5 LAYOUT AND EXCAVATION OF PLANTING AREAS

A. Layout and Staking: Lay out all trees, shrubs and container locations as shown on Drawings. Landscape Architect reserves the right to review and adjust plant locations. Schedule inspection with the City of Monroe to mark street tree locations prior to planting and backfill of planter strips.

B. Review: Locations of plants will be checked in the field and will be adjusted to exact position before planting begins. Right is reserved to refuse review at this time if, in the Landscape Architect's opinion, an insufficient quantity of plants is available.

C. Equipment for Digging Plant Pits: Use of an auger or vernier spade to dig plant pits is prohibited. Backhoe is acceptable, with scarification of the tree pit after excavation - see below.

D. Plant Pits: Excavate tree and shrub to a minimum of twice the diameter of the ball or container, in accordance with Drawings.

3.6 PLANTING OPERATIONS

A. Handling and De-potting of Plant Materials:

1. Metal Containers: Cut can on two sides with accepted cutting tool. Do not use spade.

2. Plastic Containers: Tip container to horizontal orientation and carefully remove shrub. Support rootball during installation to prevent cracking or shedding of soil.

3. Balled and Burlap Plants: Avoid all damage to rootballs. If rootball is cracked or broken during handling, plant will be rejected. Lift and carry by bottom of ball only. Do not remove wrapping until plant is set in plant pit. Cut and remove all wire completely from around root ball and peel burlap away from upper 1/2 of rootball prior to backfilling.

B. Installation:

1. Scarification:

a. Plant Rootball: After removing plant from container, scarify the sides of the rootball to a depth of 1 in. at four to six equally-spaced locations around the perimeter of the ball. Completely sever or remove all circling roots over 1/4 in. diameter.

b. Plant Pit: Excavate deep enough to accommodate the ball and bed of prepared back fill mix. Compact before setting of plants. Scarify sides of plant pit, thoroughly breaking up all surfaces and eliminating all "glazed" areas.

2. Positioning: Top of rootball should be placed at same level that the plant material was grown in the nursery. Thoroughly foot tamp all backfill. Position plant in planting pit, maintaining plumb condition.

3. Backfilling:

a. Use backfill mix as specified to backfill plant pits. Brace each plant plumb and rigidly in position until planting soil has been tamped solidly around the ball and roots.

b. When plant pits have been backfilled approximately 2/3 full, water thoroughly and saturate rootball, before installing remainder of the backfill mix to top of pit, eliminating all air pockets.

4. Staking and/or Guying: When required, stake or guy as detailed.

D. Adjustment: Adjust plants so that after full settlement has occurred, the grade at the base of the plants is 2 in. above the adjacent planting finish grade.

E. Watering Basin: Form saucer with 3 in. high berm centered around tree and shrub pits 12 in. wider than ball diameter.

F. Watering: Water all plants immediately after completion of planting operations.

G. Labels: Remove all nursery-type plant labels, wires and ties from plants.

3.7 STAKING AND GUYING

A. General:

1. Trees shall be able to stand upright without support, and shall return to the vertical after their tops have been deflected horizontally and released. Stake or guy trees which do not meet this qualification.

2. All plant materials shall remain plumb and straight for all given conditions from installation through the guarantee period.

B. Staking (Deciduous Trees):

1. Locate stakes in a line with trunk of tree, perpendicular to prevailing wind and as close to the main trunk as is practical, avoiding root injury. Drive stakes at least 30 in. into firm ground. See Planting Details.

2. Wire support straps shall be placed around the trunk in a single loop. Run wire through grommets on support strap, tighten, and keep taut.

C. Guying (Evergreen Trees):

1. Guy Evergreen trees at points of branching height of tree, with three (3) guys spaced equally around and outside perimeter of ball, in accordance with Drawings.

2. Guys: Provide one turnbuckle for each guy. Use 2 cable clamps at each cable connection. Place Plastic Guy Covers on all guys.

3.8 MULCHING

A. Install a 2 in. deep layer of specified mulch over all planting areas including tree and shrub watering basins unless otherwise noted on drawings.

3.9 GROUNDCOVER AND PERENNIAL PLANTING

A. Planting: Plant groundcover plants at optimum depth for proper growth. Avoid air pockets. Equally spaced triangularly, at distances called for in the Drawings. See Planting Details.

B. Fertilizers: Apply top-dress fertilizer at the rate of 3 pounds per 1,000 square feet immediately after planting.

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BY PLANNING
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Date: 05/12/2022

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CLIENT
Garibaldi Lake, LLC
1010 MARKET STREET
KIRKALND, WA 98033
PHONE: (425)876-9390

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11321-A NE 120th Street
Kirkland, WA 98034 • (425) 285-2390
101 South Wenatchee Avenue, Suite C3
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C. Watering: Water bed thoroughly after fertilizer application. Wash all fertilizer from leaves of plant materials.

3.10 TREE WRAPPING

A. Wrap trunks of deciduous trees with sun-sensitive bark with a spiral wrapping to the height of the third branch.

B. Wrap from top down and tape wrapping securely in place.

3.11 CLEAN-UP

A. Keep all areas of work clean, neat and orderly at all times.

B. Clean up and remove all deleterious materials and debris from the entire work area prior to Final Acceptance.

3.12 MAINTENANCE

A. Continuously maintain all landscape areas until final project acceptance. Provide daily irrigation, and weekly weeding, mowing, fertilization, trash and construction debris removal and other operations as necessary and directed to keep the landscape in a flourishing state.

B. At bioretention swales, inspect all areas on a weekly basis and immediately after each significant rain event. Note and repair any areas of erosion, ponding, accumulation of debris, blocked flow or other problems. Report all such issues to the landscape Architect immediately.

END OF SECTION

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CLIENT

Garibaldi Lake, LLC
1010 MARKET STREET
KIRKALND, WA 98033
PHONE: (425)876-9390

APPROVED
BY PLANNING
Name: L.Barr
Date: 05/12/2022

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SECTION 32 84 00 –IRRIGATION

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. General system requirements, materials, installation and testing requirements for irrigation.

1.2 PERFORMANCE REQUIREMENTS

A. Provide new irrigation for all common area lawn and planting areas associated with this project as indicated on the plan.

B. Design to provide head to head coverage based on the manufacturer's specifications for each head type.

C. All zones to be operated by automatic control valve. Valves to be wired to new controller.

D. Provide adequate manual drain valves to completely drain the system for winterization.

E. Provide at least two quick coupler assemblies at convenient locations.

F. Provide drip system operation indicator at each drip zone. Locate where easily viewed.

1.3 SUBMITTALS

A. Provide head and piping layout plan for review. Plan shall clearly indicate head coverage arcs, pipe sizes and routing, control wire routing and the extent of each individual irrigation zone. Provide summary spreadsheet of zone GPM's.

B. Product Data: For each type of product proposed. Include rated capacities, operating characteristics and furnished specialties and accessories.

PART 2 - PRODUCTS

2.1 PIPES, TUBES, AND FITTINGS

A. Comply with requirements in the piping schedule for applications of pipe, tube, and fitting materials, and for joining methods for specific services, service locations, and pipe sizes.

B. Galvanized-Steel Pipe: ASTM A 53/A 53M, Standard Weight, Type E, Grade B.

1. Galvanized-Steel Pipe Nipples: ASTM A 733, made of ASTM A 53/A 53M or ASTM A 106/A 106M, Standard Weight, seamless-steel pipe with threaded ends.
2. Galvanized, Gray-Iron Threaded Fittings: ASME B16.4, Class 125, standard pattern.
3. Malleable-Iron Unions: ASME B16.39, Class 150, hexagonal-stock body with ball-and-socket, metal-to-metal, bronze seating surface, and female threaded ends.

C. PVC Pipe: ASTM D 1785, PVC 1120 compound, Schedule 40.
1. PVC Threaded Fittings: ASTM D 2464, Schedule 80.
2. PVC Socket Unions: Construction similar to MSS SP-107, except both headpiece and tailpiece shall be PVC with socket ends.

D. PVC Pipe, Pressure Rated: ASTM D 2241, PVC 1120 compound, SDR 21.

1. PVC Socket Fittings: ASTM D 2467, Schedule 80.
2. PVC Socket Unions: Construction similar to MSS SP-107, except both headpiece and tailpiece shall be PVC with socket or threaded ends.

2.2 PIPING JOINING MATERIALS

A. .Solvent Cements for Joining PVC Piping: ASTM D 2564. Include primer according to ASTM F 656.

B. Plastic, Pipe-Flange Gasket, Bolts, and Nuts: Type and material recommended by piping system manufacturer unless otherwise indicated.

2.3 MANUAL VALVES

A. Provide manually operated drain valves at the low point in each irrigation zone, or belly of any pipe run.

2.4 AUTOMATIC CONTROL VALVES

A. Plastic, Automatic Control Valves:

1. Rainbird PEB Series valves. Provide plastic union at both sides of valve assembly to facilitate removal/replacement.

2.5 SPRINKLERS

A. General Requirements: Designed for uniform coverage over entire spray area indicated at available water pressure.

B. Plastic, Pop-up, Gear-Drive Rotary Sprinklers:

1. Manufacturers: Subject to compliance with requirements.

a. Rainbird irrigation products or approved equal.

2. Description:

a. Body Material: ABS.
b. Nozzle: ABS.
c. Retraction Spring: Stainless steel.
d. Internal Parts: Corrosion resistant.
e. Pop-up ht: 4" in lawn areas, 6" in shrub areas.

C. Plastic, Surface, Pop-up Spray Sprinklers:

1. Manufacturers: Subject to compliance with requirements.

a. Rainbird irrigation products or approved equal.

2. Description:

a. Body Material and Flange: ABS.
b. Pattern: Fixed, with flow adjustment.
c. Pop-up ht: 4" in lawn areas, 6" in shrub areas.

2.6 QUICK COUPLERS

A. Description: Factory-fabricated, bronze or brass, two-piece assembly. Include coupler water-seal valve; removable upper body with spring-loaded or weighted, rubber-covered cap; hose swivel with ASME B1.20.7, 3/4-11.5NH threads for garden hose on outlet; and operating key.

1. Locking-Top Option: Vandal-resistant locking feature. Include two matching keys.

2.7 CONTROLLERS

A. Provide new controller (Rainbird ESP series or approved equal).

B. Controller shall have at least three zones capacity in excess of what is required for the system.

2.8 BOXES FOR AUTOMATIC CONTROL VALVES

A. Plastic Boxes:

1. Description: Box and cover, with open bottom and openings for piping; designed for installing flush with grade.

a. Size: 11" by 17" jumbo valve box with extensions as required.
b. Shape: Rectangular.
c. Sidewall Material: PE.
d. Cover Material: PE.

1) Lettering: "IRRIGATION."

PART 3 - EXECUTION

3.1 EARTHWORK

A. Install warning tape directly above pressure piping, 12 inches below finished grades, except 6 inches below subgrade under pavement and slabs.

B. Provide minimum cover over top of underground piping according to the following:

1. Irrigation Main Piping: Minimum depth of 18 inches below finished grade.
2. Circuit Piping: 12 inches.
3. Sleeves: 18 inches.
4. All piping: maximum 24" bury depth.

3.2 PIPING INSTALLATION

A. Install piping at minimum uniform slope of 0.5 percent down toward drain valves.

B. Install piping free of sags and bends.

C. Install groups of pipes parallel to each other, spaced to permit valve servicing.

D. Install fittings for changes in direction and branch connections.

E. Install unions adjacent to valves and to final connections to other components with NPS 2 or smaller pipe connection.

F. Install flanges adjacent to valves and to final connections to other components with NPS 2-1/2 or larger pipe connection.

G. Lay piping on solid subbase, uniformly sloped without humps or depressions. Where soils are rocky, provide 4" sand bedding below and above the pipe.

H. Install PVC piping in dry weather when temperature is above 40 deg F. Allow joints to cure at least 24 hours at temperatures above 40 deg F before testing.

3.3 JOINT CONSTRUCTION

A. Ream ends of pipes and tubes and remove burrs. Bevel plain ends of steel pipe.

B. Remove scale, slag, dirt, and debris from inside and outside of pipe and fittings before assembly.

C. Threaded Joints: Thread pipe with tapered pipe threads according to ASME B1.20.1. Cut threads full and clean using sharp dies. Ream threaded pipe ends to remove burrs and restore full ID. Join pipe fittings and valves as follows:

1. Apply appropriate tape or thread compound to external pipe threads unless dry seal threading is specified.
2. Damaged Threads: Do not use pipe or pipe fittings with threads that are corroded or damaged. Do not use pipe sections that have cracked or open welds.

D. Flanged Joints: Select rubber gasket material, size, type, and thickness for service application. Install gasket concentrically positioned. Use suitable lubricants on bolt threads.

E. Ductile-Iron Piping Gasketed Joints: Comply with AWWA C600 and AWWA M41.

F. PE Piping Fastener Joints: Join with insert fittings and bands or fasteners according to piping manufacturer's written instructions.

G. PVC Piping Solvent-Cemented Joints: Clean and dry joining surfaces. Join pipe and fittings according to the following:

1. Comply with ASTM F 402 for safe-handling practice of cleaners, primers, and solvent cements.
2. PVC Pressure Piping: Join schedule number, ASTM D 1785, PVC pipe and PVC socket fittings according to ASTM D 2672. Join other-than-schedule-number PVC pipe and socket fittings according to ASTM D 2855.
3. PVC Nonpressure Piping: Join according to ASTM D 2855.

3.4 VALVE INSTALLATION

A. Install valves below grade in line with pipe, with a minimum of 6" clear space around all sides of valve..

B. Provide 1cf of 3/8" washed pea gravel drainage sump in the bottom of all valve box assemblies.

C. Set valve boxes as required to maintain specified clearances to valves. Utilize extensions as required. Set entire assembly on brick supports as base to stabilize valve box. Top of boxes flush with finish grade.

3.5 SPRINKLER INSTALLATION

A. Install sprinklers after hydrostatic test is completed.

B. Install sprinklers at manufacturer's recommended heights.

C. Locate part-circle sprinklers to maintain a consistent distance of 4 inches from walls and pavement edges unless otherwise indicated.

3.6 FIELD QUALITY CONTROL

A. Perform tests and inspections. Provide all test results to the City of Monroe

B. Tests and Inspections:

1. Mainline pressure test. Once mainlines have been completed, including installation of valves, perform a mainline pressure test in the presence of the landscape architect or owners representative.

a. Purge all air from the mainline and fill with water.

b. Utilizing portable pumping equipment outfitted with a pressure gauge and means for isolating the pump assembly from the pipe to be tested, pressurize the mainline to 140 PSI and isolate.

c. Observe pressure for 30 minutes. Mainlines that exhibit 5 psi loss in pressure or less over 30 minutes shall be deemed passing.

2. Leak Test: After installation and prior to backfill, charge system and test each zone for leaks. Repair leaks and retest until no leaks exist.
3. Operational Test: After electrical circuitry has been energized, operate controllers and automatic control valves to confirm proper system operation.

4. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.

C. Any irrigation product will be considered defective if it does not pass tests and inspections.

3.7 ADJUSTING

A. Adjust settings of controllers.

B. Adjust automatic control valves to provide flow rate at rated operating pressure required for each sprinkler circuit.

C. Adjust spray patterns to minimize overspray and eliminate head fogging.

D. Adjust sprinklers and devices, except those intended to be mounted aboveground, so they will be flush with, or not more than 1/2 inch below, finish grade.

END OF SECTION 328400

Provide results of pressure test to the City of Monroe prior to irrigation mainlines and valve locations inspection

NO.	DATE	REVISION	BY	CK.
2	5/4/22	CITY PERMIT SUBMITTAL	PCE	MJH

STATE OF WASHINGTON
REGISTERED
LANDSCAPE ARCHITECT
DAVID STUART ANDREWS
CERTIFICATE NO. 439

RECEIVED
05/11/2022
CITY OF MONROE

Approved as redlined

APPROVED
BY PLANNING
Name: L.Ban
Date: 05/12/2022

GARIBALDI PRD
ENGINEERING PERMIT PACKAGE
IRRIGATION SPECIFICATIONS
CITY OF MONROE
SNOHOMISH COUNTY, WA

CLIENT
Garibaldi Lake, LLC
1010 MARKET STREET
KIRKALND, WA 98033
PHONE: (425)876-9390

C|P|H CONSULTANTS
Site Planning • Civil Engineering
Landscape Architecture • Land Use Consulting
11321-B NE 120th Street
Kirkland, WA 98034 • (425) 285-2390
101 South Wenatchee Avenue, Suite C3
Wenatchee, WA 98801 • (509) 293-7731
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PROJECT NO.
0054-18-028

DRAWING
L3.10

SHEET 79 OF 85

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LPLNT-541828
CGRD541828
CUWS541828
CUSD541828
OTOP541828
CSIT541828
OTRL541828
LWTLD-541828

WETLAND BUFFER MITIGATION PLANTING LEGEND

SYMBOL	BOTANICAL NAME	COMMON NAME	QTY	SIZE	SPACING	NOTES
TREES						
	Acer circinatum	*Vine Maple*		8-10' ht. Multi-stem, 3 canes min.		
	Pseudotsuga menziesii	*Douglas Fir*		8'-10' ht.		
	Thuja plicata	*Western Redcedar*		8'-10' ht.		
	Corylus cornuta	*Western Hazelnut*				
SHRUBS						
	Oemleria cerasiformis	*Indian Plum*		5 gal.	As Shown	Evergreen
	Rosa gymnocarpa	*Baldhip Rose*		5 gal.	As Shown	Evergreen
	Rubus parviflorus	*Thimbleberry*		2 gal.	As Shown	Herbaceous
	Sambucus racemosa	*Red Elderberry*		2 gal.	As Shown	Evergreen
	Symphoricarpos albus	*Snowberry*		5 gal.	As Shown	Deciduous
GROUNDCOVERS						
	Gaultheria shallon	*Salal*				
	Polystichum munitum	*Sword Fern*				

WETLAND BUFFER ENHANCEMENT AND RESTORATION CONSTRUCTION SEQUENCING

1. CONDUCT A SITE MEETING BETWEEN THE CONTRACTOR, ENVIRONMENTAL CONSULTANT, AND THE OWNERS REPRESENTATIVE TO REVIEW THE PROJECT PLANS, STAGING/STOCKPILE AREAS, AND MATERIAL DISPOSAL AREAS.
2. SURVEY THE CLEARING LIMITS AND INSTALL SILT FENCE AND ANY OTHER EROSION AND SEDIMENTATION CONTROL BMP'S PER THE CIVIL PLANS.
3. REMOVE AND LEGALLY DISPOSE OF ALL MAN MADE STRUCTURES, PAVEMENTS AND DEBRIS PILES FROM THE WETLAND BUFFER AREAS. REMOVAL INCLUDES FOOTINGS AND OTHER BELOW GRADE ITEMS TO WHATEVER DEPTH ENCOUNTERED.
4. ENVIRONMENTAL CONSULTANT TO FLAG EXTENT OF AREAS OF INVASIVE SPECIES FOR REMOVAL.
5. EXCAVATE AND REMOVE INVASIVE SPECIES IN IDENTIFIED AREAS . REMOVAL INCLUDES SOIL AND ROOT MASS TO A MINIMUM DEPTH OF 8" BELOW EXISTING GRADE.
6. DE-COMPACT SOILS IN CLEARED BUFFER AREAS BY ROTOTILLING TO A MINIMUM DEPTH OF 9".
7. AMEND SOILS IN CLEARED BUFFER AREAS WITH 9" SETTLED DEPTH OF APPROVED IMPORT WETLAND TOPSOIL .
8. AFTER OBTAINING APPROVAL OF TOPSOIL PLACEMENT, INSTALL HABITAT FEATURES PER PLAN AND DETAILS.
9. INSTALL PLANT MATERIAL S INDICATED ON THE PLANTING PLAN.
10. STAKE PLANTS PER DETAILS. INSTALL 3" DEPTH OF BARK MULCH MULCH THROUGHOUT ALL BUFFER AREAS.
11. INSTALL TEMPORARY IRRIGATION FOR ALL ENHANCEMENT PLANTINGS.
12. INSTALL SPLIT RAIL FENCE AND CRITICAL AREA SIGNAGE.



1 WETLAND BUFFER MITIGATION PLAN
SCALE: 1" = 20'-0"

0 20 40
PLAN IN FEET

N

NOTE: FOR OVERALL SITE PLANTING LEGEND, NOTES AN DETAILS SEE SHEET L1.10

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05/09/2022
CITY OF MONROE

APPROVED
BY PLANNING
Name:
Date: 05/12/2022

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1	5/4/22	CITY PERMIT SUBMITTAL	PCE	MJH

STATE OF WASHINGTON
REGISTERED
LANDSCAPE ARCHITECT
DAVID STUART ANDREWS
CERTIFICATE NO. 439

GARIBALDI PRD
ENGINEERING PERMIT PACKAGE
WETLAND BUFFER MITIGATION PLAN
CITY OF MONROE
SNOHOMISH COUNTY, WA

CLIENT
Garibaldi Lake, LLC
1010 MARKET STREET
KIRKALND, WA 98033
PHONE: (425)876-9390

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PROJECT NO.
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SHEET 80 OF 85

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GENERAL CONSTRUCTION NOTES

CODE:
VAULT DESIGN AND CONSTRUCTION SHALL CONFORM TO THE PROVISIONS OF THE 2018 IBC AS ADOPTED BY THE CITY OF MONROE, WASHINGTON

GENERAL DETAILS:
CONSTRUCTION DETAILS NOT FULLY SHOWN OR NOTED SHALL BE SIMILAR TO DETAILS SHOWN FOR SIMILAR CONDITIONS.

DISCREPANCIES:
THE CONTRACTOR SHALL NOTIFY ENGINEER UPON FINDING ANY DISCREPANCY OR OMISSION IN THE DRAWINGS OR SPECIFICATIONS.

SHORING & EXCAVATION:
THE CONTRACTOR SHALL BE SOLEY RESPONSIBLE FOR ALL EXCAVATION PROCEDURES, INCLUDING LAGGING, SHORING AND PROTECTION OF ADJACENT PROPERTY, STRUCTURES, STREETS AND UTILITIES.

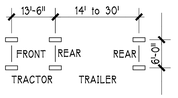
WALL BACKFILL:
PRIOR TO BACKFILLING VAULT WALLS THE CONTRACTOR SHALL HAVE PLACED THE LID PLANKS AND PROVIDED A MINIMUM OF 5 DAYS OF CURE ON THE PLANK VOID FILL.

BACKFILL SOIL:
SEE THE GEOTECHNICAL REPORT FOR WALL BACKFILL MATERIAL REQUIREMENTS AND PLACEMENT AND COMPACTION REQUIREMENTS. ALL COMPACTION OCCURING WITHIN 5' OF THE WALL SHALL BE COMPLETED USING HAND OPERATED MACHINERY.

DESIGN CRITERIA

VERTICAL LOADS ON VAULT LID:
UNIFORM LIVE LOAD : = 150PSF

*HS25 TRUCK WHEEL LOADS :



TRACTOR :
FRONT AXLE = 10,000 lb.
SINGLE REAR AXLE = 40,000 lb.
TRAILER :
SINGLE REAR AXLE = 40,000 lb.

* DESIGN LIVE LOAD & TRUCK WHEEL LOAD, TO BE APPLIED INDEPENDENTLY AND IN COMBINATION WITH THE SOIL COVER DEAD LOAD.

RAISED GRATED OPENING:
100 PSF UNIFORM PEDESTRIAN LIVE LOAD

IMPACT & FATIGUE:
DUE TO THE LOW SPEEDS OF THE SERVICE VEHICLES AND THE SOIL COVER OVER THE LID, INCREASES IN VEHICLE LOADS TO ACCOUNT FOR IMPACT & FATIGUE ARE NOT REQUIRED.

SOIL COVER FOR LID DESIGN:
PLANK MANUFACTURER SHALL BE RESPONSIBLE FOR DETERMINING THE SOIL COVER DEPTHS USED IN THE LID DESIGN BASED ON THE PERMITTED CIVIL DRAWING, VAULT AND FINISHED GRADE ELEVATIONS.

SOIL COVER FOR SUBSTRUCTURE DESIGN:
THE SUBSTRUCTURE WAS DESIGNED FOR THE FOLLOWING SOIL COVER DEPTHS:
NORTH VAULT (TRACT 990) : 2.0FT TO 4.0FT
SOUTH VAULT (TRACT 996) : 2.0FT TO 4.0FT

FOUNDATION DESIGN:
FOUNDATION DESIGN IS BASED ON THE FOLLOWING VALUES PROVIDED BY TERRA ASSOCIATES, INC. AS PRESENTED IN THEIR GEOTECHNICAL REPORT DATED 12-14-2018

ALLOWABLE BEARING PRESSURE: 5,000 PSF [DENSE GLACIAL TILL]
LATERAL EARTH PRESSURES ON DETENTION VAULT: DRAINED LEVEL BACKFILL
AT REST CONDITION: 50 PCF EFW
ACTIVE CONDITION: 35 PCF EFW
SEISMIC PRESSURE COMPONENT: E = 8H PSF UNIFORM HORZ PRESSURE
SATURATED SOIL DENSITY: 125 PCF

To be verified with geotech for native and compaction for fill, prior to placement of footing/slab.

DEFERRED SUBMITTALS

THE FOLLOWING AREAS OF WORK SHALL BE CONSIDERED AS "DEFERRED SUBMITTALS" AS DEFINED IN THE 2018 IBC

PRECAST PRESTRESSED HOLLOW CORE PLANK

ALL DEFERRED SUBMITTALS SHALL BEAR THE STAMP AND SIGNATURE OF A CIVIL ENGINEER LICENSED TO PRACTICE IN THE STATE OF WASHINGTON WHO HAS CURRENT DESIGN EXPERIENCE IN THE TYPE OF WORK REVIEWED.

THE DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THEIR DESIGN AND SUBMITTAL DOCUMENTS HAVE BEEN REVIEWED BY THE ENGINEER OF RECORD.

COPIES OF THE APPROVED DEFERRED SUBMITTAL DOCUMENTS SHALL BE MAINTAINED ON SITE BY THE GENERAL CONTRACTOR AND MADE AVAILABLE FOR REVIEW AS REQUESTED.

OPEN METAL GRATING

OPEN METAL GRATING SHALL BE WELDED STEEL BAR GRATING AS SPECIFIED ON THE DRAWINGS. ALL STEEL GRATING AND GRATING COMPONENTS INCLUDING ITEMS EMBEDED WITHIN THE CONCRETE SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION.

SUPPLIER SHALL PROVIDE ALL COMPONENTS NECESSARY TO INSTALL AND SECURE THE GRATING IN PLACE.

SUPPLIER SHALL PROVIDE SHOP DRAWINGS DESCRIBING ALL COMPONENTS OF THE INSTALLATION, TO THE ENGINEER FOR REVIEW PRIOR TO FABRICATION.

VAULT PLANS TO BE KEPT ON SITE, SEPARATE FROM THE REST OF THE CIVILS FOR FIELD INSPECTION.

SPECIAL INSPECTION PLAN

GENERAL:
SPECIAL INSPECTION BY A QUALIFIED INSPECTOR IS REQUIRED IN ACCORDANCE WITH THE 2018 IBC.

QUALIFICATION:
THE SPECIAL INSPECTOR SHALL BE A QUALIFIED PERSON WHO SHALL DEMONSTRATE COMPETENCE, TO THE SATISFACTION OF THE BUILDING OFFICIAL.

REQUIRED VERIFICATION & INSPECTION:
THE SPECIAL INSPECTOR SHALL PERFORM THE VERIFICATIONS & INSPECTIONS NOTED IN THE SCHEDULE BELOW

INSPECTION & TESTING SCHEDULE

TYPES OF WORK	FREQ.	2018 IBC SECTION
CAST IN PLACE CONC		
REINFORCING STEEL, PLACEMENT.	P	1705.3
INSTALLATION & FASTENING OF PRECAST PANELS	P	1705.3
PLACEMENT OF CONCRETE	C	1705.3
VERIFYING USE OF REQUIRED DESIGN MIX	P	1705.3
TESTING OF THE CONCRETE FOR SPECIFIED STRENGTH, AIR CONTENT AND SLUMP	C	1705.3
STRUCTURAL STEEL		
STRUCTURAL STEEL (GRATING) FABRICATION	P	1704.2.5
SOILS		
VERIFICATION OF SOIL-BEARING CAPACITY: INSTALLATION OF DRAINAGE SYSTEM:	C	1705.6
PLACEMENT & COMPACTION OF WALL BACKFILL:	P	1705.6
POST INSTALLED ANCHORS		
EPOXY ANCHORS	C	PER ICC-ESR REPORT

FREQUENCY LEGEND
C = CONTINUOUS P = PERIODIC
SEE REFERENCES AND STANDARDS LISTED WITHIN THE VERIFICATION & INSPECTION SCHEDULE FOR MEANING OF PERIODIC AND CONTINUOUS INSPECTIONS.

CERTIFICATE OF COMPLIANCE:
THE SPECIAL INSPECTION AGENCY SHALL PROVIDE A FINAL LETTER CERTIFICATE OF COMPLIANCE STATING THAT THE REVIEWED WORK WAS COMPLETED IN ACCORDANCE WITH THE PERMITTED DOCUMENTS.

SUBMITTAL OF REPORTS:
ALL SPECIAL INSPECTION REPORTS AND TESTING REPORTS SHALL BE SUBMITTED TO THE OWNER, SITE STRUCTURES AND THE BUILDING OFFICIAL BY THE AGENCY PERFORMING THE INSPECTION OR TESTING.

REINFORCING BAR

MATERIAL REQUIREMENT:

REINFORCING BARS:
USE DEFORMED BARS CONFORMING TO ASTM A615, GRADE 60, EXCEPT AS NOTED ON THE DRAWINGS.

FABRICATION AND PLACING REQUIREMENTS:

BENDING:
BARS SHALL BE BENT COLD. BARS PARTIALLY EMBEDDED IN CONCRETE SHALL NOT BE FIELD BENT UNLESS NOTED OR SHOWN OTHERWISE OR AUTHORIZED BY THE ENGINEER.

PLACING:
REINFORCEMENT SHALL BE SUPPORTED AND TIED TO PREVENT DISPLACEMENT BY CONSTRUCTION LOADS OR BY PLACING OF CONCRETE.

CONCRETE COVER:
MINIMUM CONCRETE COVER FOR REINF. SHALL BE AS FOLLOWS, UNLESS NOTED OTHERWISE:

CONCRETE CAST AGAINST EARTH_____ 3"
CONCRETE CAST AGAINST FORMS AND EXPOSED TO EARTH_____ 2"

WET SETTINGS:
REINFORCEMENT ANCHOR BOLTS, OR ANY EMBEDDED ITEM WITHIN THE CONCRETE, MAY NOT BE SET INTO THE CONCRETE AFTER IT HAS BEEN POURED WITHIN THE FORMS.

LAP SPLICES:
LAP ALL BARS 24" MIN UNLESS SHOWN OTHERWISE ON THESE DRAWINGS.

STRUCTURAL STEEL

MATERIALS:

a. STRUCTURAL STEEL SHAPES & PLATES SHALL CONFORM TO ASTM A36.
b. HOLLOW STRUCTURAL SECTIONS SHALL CONFORM TO ASTM A500 GRADE B, Fy=42,000PSI.

WELDING:
CONFORM TO AWS D1.1 "STRUCTRUAL WELDING CODE - STEEL". WELDERS SHALL BE CERTIFIED IN ACCORDANCE WITH WABO REQUIREMENTS. USE E70 ELECTRODES OF TYPE REQUIRED FOR MATERIALS TO BE WELDED.

GALVANIZING:
ALL STEEL SECTIONS SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION CONFORMING TO ASM A-125. REPAIRS SHALL CONFORM TO ASTM A-780 USING ZINC RICH PAINT. THE COATING THICKNESS FOR THE PAINT MUST BE 50% MORE THAN THE SURROUNDING COATING THICKNESS, BUT NOT GREATER THAN 4.0 MILS.

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CONCRETE

CONCRETE REQUIREMENTS:

LOCATION	STRENGTH	MAX W/C RATIO
WALLS & C.I.P LID & BMS	4000PSI @ 28 DAYS	0.50
FTGS & GRADE SLAB	4000PSI @ 56 DAYS	0.53
PLANK VOID FILL	TO MEET PLANK MFGR'S REQUIREMENTS*	
PLANK JOINT GROUT	TO MEET PLANK MFGR'S REQUIREMENTS*	

* MINIMUM STRENGTH SHALL BE 3000PSI @ 28 DAYS.

AIR CONTENT:
CONC. EXPOSED TO WEATHER SHALL CONTAIN 5% +/-1% ENTRAINED AIR.

MIX DESIGN:
SHALL BE BASED ON FIELD EXPERIENCE OR TRIAL MIXTURES IN CONFORMANCE WITH THE SPECIFICATIONS. SUBMIT MIX DESIGNS TO THE ENGINEER FOR REVIEW PRIOR TO PLACEMENT.

MATERIAL REQUIREMENTS:
CEMENT: ASTM C150. ADMIXTURES: ACI 301.
AGGREGATES: ASTM C33. WATER: ASTM C84.

EXPOSURE CATEGORIES:
FREEZING THAWING F0
SULFATE S0
IN CONTACT w/ WATER W1
CORROSION PROTECTION C1

PLACING REQUIREMENTS:

PLACING:
PLACE CONCRETE AS NEARLY AS PRACTICABLE TO ITS FINAL POSITION TO AVOID SEGREGATION.

DEBRIS:
REMOVE ALL DEBRIS FROM FORMS PRIOR TO PLACING CONCRETE.

CONSOLIDATION:
CONSOLIDATE CONCRETE BY SUITABLE MEANS. THOROUGHLY WORK CONCRETE AROUND EMBEDDED ITEMS AND INTO CORNERS OF FORMS.

CURING REQUIREMENTS:

CURING:
CONCRETE SHALL BE MAINTAINED IN A MOIST CONDITION FOR A SUITABLE PERIOD OF TIME AFTER PLACEMENT.

WEATHER CONDITIONS:
ADEQUATE PRECAUTIONS SHALL BE TAKEN DURING HOT AND COLD WEATHER IN ACCORDANCE WITH THE SPECIFICATIONS.

LID PLANK PLACEMENT:
IN NO CASE SHALL THE LID PLANKS BE PLACED BEFORE THE WALLS HAVE BEEN ALLOWED A MINIMUM OF 3 DAYS OF CURE. WHEN AVERAGE AMBIENT TEMPERATURES ARE LESS THAN 50 DEGREES FAHRENHEIT, THE CONTRACTOR MUST ALLOW A MINIMUM CURE TIME OF 7 DAYS OR PROVIDE AN ADDITIONAL SET OF CYLINDERS TO BE BROKEN AT THE TIME OF LID PLACEMENT DEMONSTRATING A MINIMUM CONCRETE STRENGTH OF 1,000 PSI HAS BEEN REACHED.

HOLLOW CORE PLANK

SCOPE OF WORK:
THE WORK INCLUDED IS THE DESIGN, MANUFACTURE AND DELIVERY OF PRECAST PRESTRESSED CONCRETE UNITS. DESIGN PLANK FOR THE MOST CRITICAL OF THE LOADING CONDITIONS AS SHOWN WITHIN THE DESIGN CRITERIA NOTE.

THE MANUFACTURER SHALL SUBMIT STRUCTURAL CALCULATIONS AND PLACEMENT DRAWINGS SIGNED BY A WASHINGTON STATE REGISTERED CIVIL ENGINEER FOR REVIEW PRIOR TO FABRICATION.

THE MANUFACTURER SHALL INSTALL ALL BLOCK OUTS REQUIRED FOR STRUCTURAL CONNECTIONS AS INDICATED ON THESE DRAWINGS. NO OTHER PENETRATIONS ARE ALLOWED WITHOUT THE PRIOR APPROVAL OF THE PLANK MANUFACTURER.

ALL HOLLOW CORE JOINTS SHALL BE GROUTED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

48"ϕ PRECAST CATCH BASIN BASE

SPECIFICATIONS:
PRECAST CATCH BASIN BASE SHALL MEET ASTM C478 AND THE APWA/WSDOT STANDARD SPECIFICATION FOR PRECAST CONCRETE MANHOLE SECTIONS.

MATERIALS:

a. REINFORCING STEEL Fy=60KSI MINIMUM
b. CONCRETE f'c=4,000PSI MIN @ 28 DAYS

MINIMUM REQUIREMENTS::

CIRCUMFERENTIAL WALL THICKNESS SHALL BE NO LESS THAN 5" THICK AND SHALL HAVEA MINIMUM OF 0.12 SQ. IN/FT OF REINFORCING STEEL HORZ AND VERT PLACED AT THE CENTER OF THE WALL.

BASE THICKNESS SHALL BE NO LESS THAN 6" THICK AND SHALL HAVE A MINIMUM OF 0.15 SQ. IN/FT OF REINFORCING STEEL IN EACH ORTHOGONAL DIRECTION PLACED AT THE CENTER OF THE SLAB.

22-CBLD-0003
Page 1 of 5

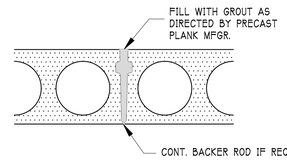
CITY OF MONROE
DEPARTMENT OF BUILDING SAFETY
DATE 05/12/2022 BY
NO CHANGES AUTHORIZED UNLESS APPROVED BY THE BUILDING OFFICIAL
REVIEWED FOR CODE COMPLIANCE

These plans have been reviewed for compliance with the City of Monroe Public Works Design and Construction Standards and required conditions regarding water, sanitary sewer, storm water management, and streets only. Prior to beginning construction additional approvals may be required from other city departments or state or federal agencies.

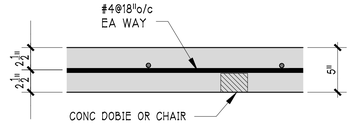
☒ Approved ☐ Approved as corrected

The granting of this approval does not presume to give authority to violate or cancel the provisions of any law, conditions or regulation regarding this development activity or the performance of construction. Subject to field inspection and correction. No changes authorized unless approved by the City Engineer.

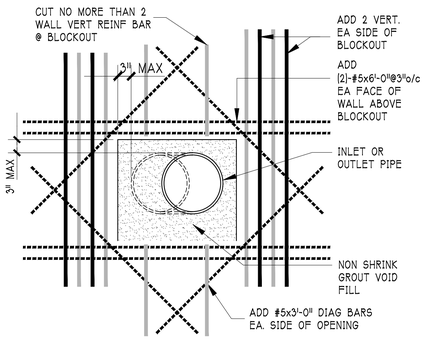
CITY OF MONROE ENGINEERING
By _____ Date 05/12/2022



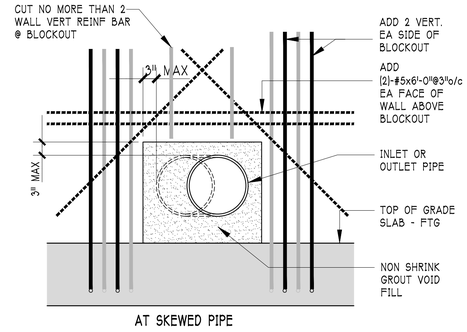
1 S1 TYP PLANK JOINT DETAIL
SCALE 1"=1'-0"



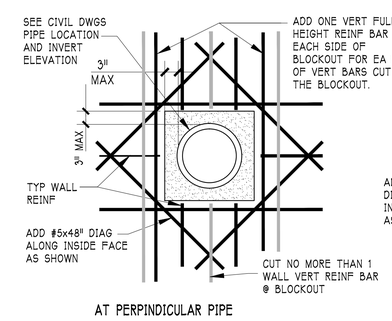
2 S1 TYP GRADE SLAB SECTION
SCALE 1-1/2"=1'-0"



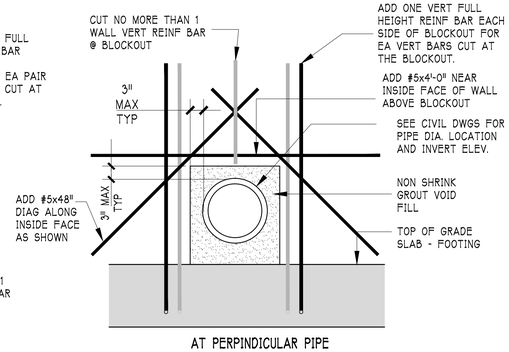
AT SKEWED PIPE



AT SKEWED PIPE

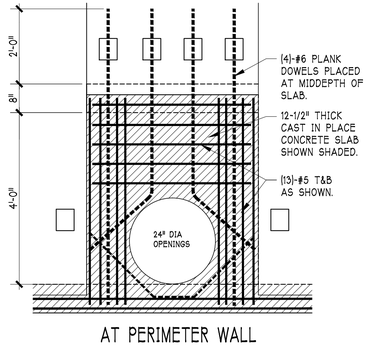


AT PERPINDICULAR PIPE

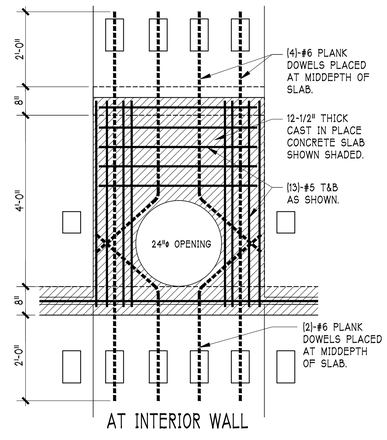


AT PERPINDICULAR PIPE

3 S1 WALL REINF @ PIPE PENETRATION
3/4"=1'-0"



AT PERIMETER WALL



AT INTERIOR WALL

4 S1 LID REINF @ MANHOLE w/ KNEE-WALL
SCALE NTS

DATE:	DESCRIPTION:
09-24-2021	ISSUED FOR CONST PERMIT APPLICATION

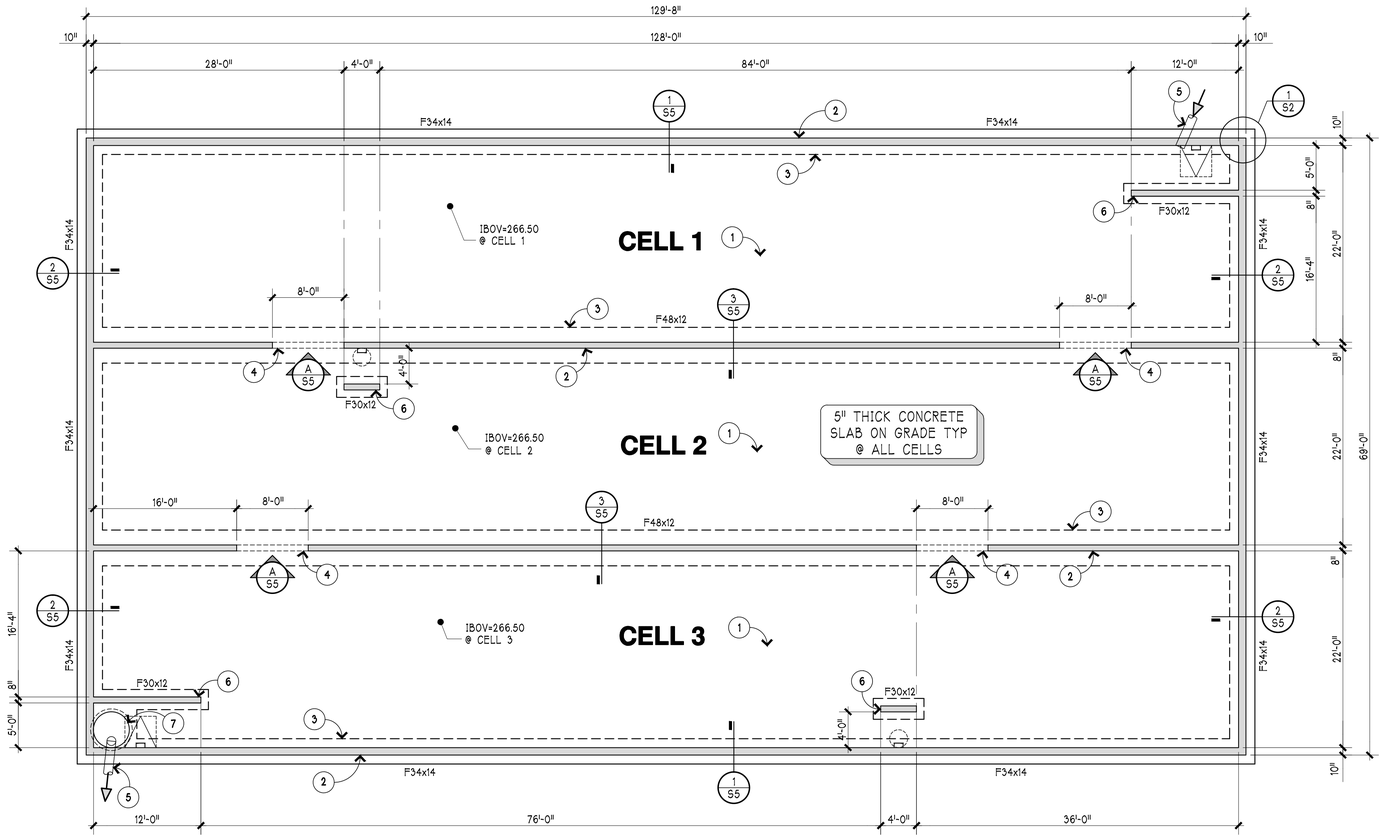
Site Structures
A Division of Kosnik Engineering PC
10505 19th AVE SE, SUITE B
EVERETT, WASHINGTON 98208
Ph: (425) - 357 - 9600
e-mail: dan@kosnik.com

09-24-2021
DANIEL J. KOSNIK
STATE OF WASHINGTON
21741
PROFESSIONAL ENGINEER

GARIBALDI PRD
STORM WATER DETENTION VAULTS
CITY OF MONROE, WASHINGTON

STRUCTURAL NOTES & TYPICAL DETAILS

SHEET:
S1 OF 5
S-21-080



SOUTH VAULT (TRACT 996) FOUNDATION PLAN

SCALE 1/8" = 1'-0"

PLAN KEYNOTES

1. 5" THICK CONCRETE SLAB ON GRADE REINF WITH #4@18"o/c EA WAY. PLACE ALL REINF AT MID-DEPTH OF THE SLAB. CAST GRADE SLAB IN A SINGLE POUR. SEE 2/S1 FOR REINF PLACEMENT DETAIL.
2. C.I.P. CONCRETE WALLS AT THE PERIMETER & INTERIOR OF THE VAULT. SEE WALL SECTIONS ON S5 FOR THICKNESS & REINFORCING. SEE 1/S2 FOR REINF @ WALL CORNER REINF.
3. THICKENED SLAB FOOTINGS TO BE CAST WITH THE GRADE SLAB. SEE WALL SECTIONS ON S5 FOR SIZE & REINF.
4. 8FT WIDE OPENING WITHIN THE CELL DIVIDER WALL. SEE A/S5 FOR WALL REINF AT OPENING.
5. PIPE INLET OR OUTLET TO VAULT. SEE CIVIL DWGS FOR PIPE DIAM, LOCATION & INVERT ELEV. SEE 3/S1 FOR WALL REINF @ PENETRATION.
6. 8" THICK KNEE-WALL. REINF w/ #5@12"o/c HORZ. AND VERT. PLACED AT THE CENTER OF THE WALL. PROVIDE (2)-#5 HORZ AT THE TOP OF THE WALL & (2)-#5 VERT AT THE FREE ENDS OF THE WALL. EXTEND VERT BARS 11" INTO THE 12-1/2" THICK LID CLOSURE POUR. SEE 3/S2 FOR FTG INFORMATION.
7. 48" DIAMETER CATCH BASIN BASE TO ACT AS SUMP. SEE 2/S2 FOR DETAIL. PLACE SUMP INLINE w/ OUTLET PIPE AS SHOWN.

LEGEND

IBOV	INSIDE BOTTOM OF VAULT (TOP OF GRADE SLAB)
	CIP CONCRETE WALL OR CURB
	CONCRETE SPREAD FOOTING
F34x14	34" WIDE x 14" THICK FTG. SEE 1 & 2/S5
F48x12	48" WIDE x 12" THICK FTG. SEE 3/S5
F30x12	30" WIDE x 12" THICK FTG. SEE 3/S2

DIMENSIONS & ELEVATIONS

THE CONTRACTOR AND HIS SUBCONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL DIMENSIONS AND ELEVATIONS SHOWN ON THESE DRAWINGS WITH THE CURRENT PERMITTED SET OF CIVIL DRAWINGS, AND SHALL NOTIFY BOTH THE CIVIL & STRUCTURAL ENGINEERS IN WRITING OF ALL DISCREPANCIES BETWEEN THE CIVIL DWGS AND THESE DWGS PRIOR TO CONSTRUCTION.

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Page 2 of 5

CITY OF MONROE
DEPARTMENT OF BUILDING SAFETY

DATE 05/12/2022 BY

NO CHANGES AUTHORIZED UNLESS APPROVED BY THE BUILDING OFFICIAL

REVIEWED FOR CODE COMPLIANCE

These plans have been reviewed for compliance with the City of Monroe Public Works Design and Construction Standards and required conditions regarding water, sanitary sewer, storm water management, and streets only. Prior to beginning construction additional approvals may be required from other city departments or state or federal agencies.

☒ Approved ☐ Approved as corrected

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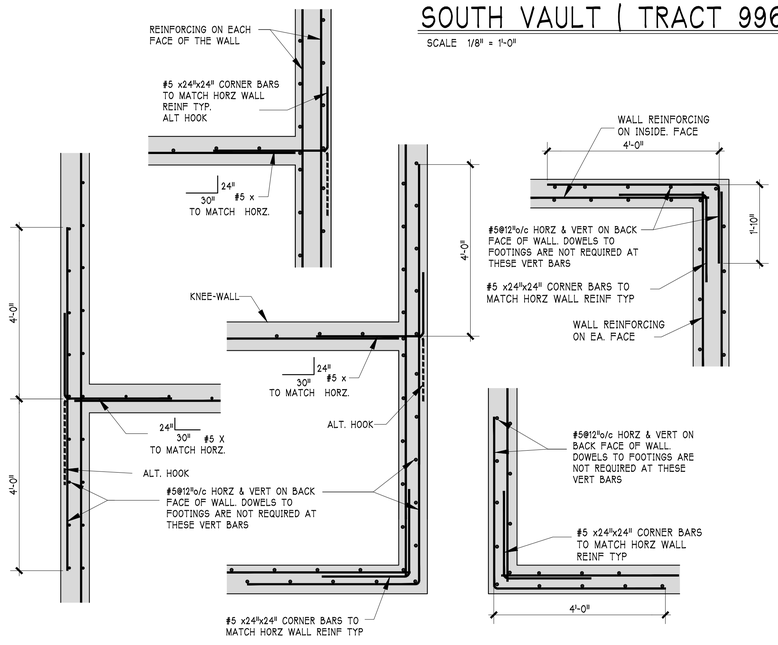
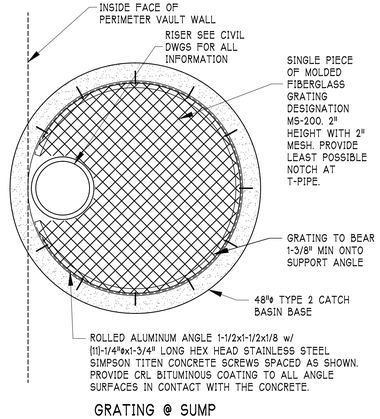
CITY OF MONROE ENGINEERING

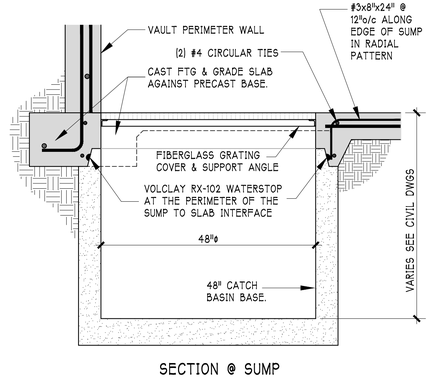
By Date 05/12/2022



1 / S2 TYP WALL CORNER REINF.
NTS



GRATING @ SUMP



SECTION @ SUMP

2 / S2 SUMP DETAIL
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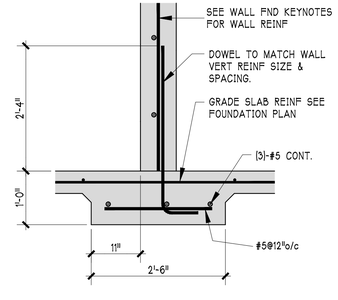

3 / S2 KNEEWALL FTG DETAIL
SCALE 3/4"=1'-0"

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09-24-2021
DANIEL J. KOENIK
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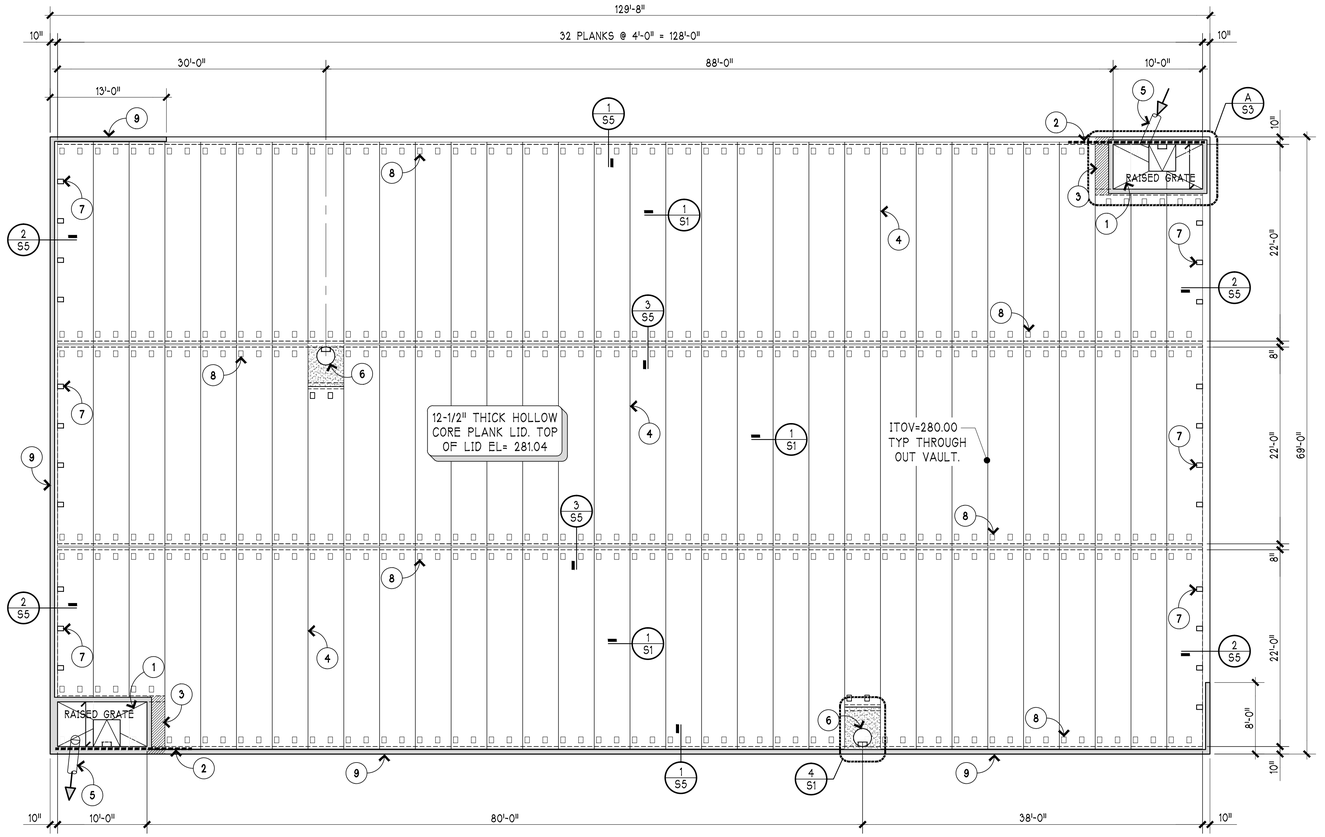
20744
PROFESSIONAL ENGINEER
STRUCTURAL ENGINEER

GARIBALDI PRD
STORM WATER DETENTION VAULTS
CITY OF MONROE, WASHINGTON

SOUTH VAULT
FOUNDATION PLAN
& DETAILS

SHEET:
S2 OF 5
S-21-080



SOUTH VAULT (TRACT 996) LID PLAN

SCALE 1/8" = 1'-0"

PLAN KEYNOTES

1. 5'-0"x10'-0" OPENING TO RECEIVE OPEN METAL BAR GRATING w/ INTEGRAL 36" x 36" HINGED ACCESS HATCH. SET TOP OF GRATING 9" MIN ABOVE THE HIGHEST ADJACENT FINISHED GRADE. SEE A/S3 FOR GRATING ASSEMBLY INFORMATION.
2. ADD (4)-#6x15'-0" @ 3"o/c WITHIN THE WALL ON THE INTERIOR FACE & AT THE TOP OF THE WALL. PLACE BAR AS SHOWN ON THE PLAN.
3. HATCHED AREA REPRESENTS 24" WIDE x 12-1/2" THICK CAST IN PLACE CONCRETE BEAM. SEE 3/S3 FOR BM REINFORCING.
4. 12-1/2" THICK PRECAST HOLLOW CORE PLANK. SEE S1 FOR LID LOADING REQUIREMENTS.
5. PIPE INLET OR OUTLET TO VAULT. SEE CIVIL DWGS FOR PIPE DIAM, LOCATION & INVERT ELEV. SEE 3/S1 FOR WALL REINF @ PENETRATION.
6. 24" DIAM. OPENING THRU LID w/ KNEEWALL TO ACCEPT RISERS, LADDER, RING & LOCKING MANHOLE COVER PER CIVIL DRAWINGS. SEE 4/S1 FOR LID REINF AT MANHOLE.
7. PROVIDE BLOCKOUTS IN THE EDGE CELL OF THE PLANK PARALLEL TO THE PERIMETER VAULT WALLS OR CAST IN PLACE LID. LOCATE BLOCKOUTS APPROXIMATELY AS SHOWN ON THIS PLAN. SEE WALL SECTIONS & DETAILS FOR REINFORCING.
8. POUR SLOTS IN TOP OF PLANK. MANUFACTURER TO PROVIDE A MINIMUM OF 2 SLOTS @ EACH END OF EACH PLANK. PLANK MANUFACTURER MAY REQUIRE GROUTING OF ADDITIONAL CELLS BEYOND THE MINIMUM OF 2. THE GENERAL CONTRACTOR SHALL INCLUDE GROUTING OF THESE ADDITIONAL CELLS IN HIS BID. SEE WALL SECTIONS FOR REINFORCING.
9. 6" THICK CURB. SEE 7/S5 FOR REINF DETAILS VERIFY EXTENT w/ THE CIVIL DWGS.

LEGEND

ITOV — INSIDE TOP OF VAULT (SOFFIT OF LID)

⟷ — GRATING SPAN DIRECTION

CONSTRUCTION LOADS

THE VAULT LID HAS BEEN DESIGNED TO CARRY THE "DESIGN LOADS" ONLY AFTER VAULT CONSTRUCTION IS COMPLETE, ALL DESIGN CONCRETE AND GROUT STRENGTHS HAVE BEEN ACHIEVED, AND ALL COVER HAS BEEN PLACED OVER THE VAULT WITHIN THE LIMITS SPECIFIED ON THIS DRAWING. "BOBCAT" OR OTHER LIGHT EQUIPMENT SHALL BE USED FOR PLACEMENT OF MATERIALS OVER THE VAULT LID. ALTERNATIVELY, ALLOWABLE UNIFORM LOADS ON THE BARE SLAB CAN BE OBTAINED FROM THE PLANK MFGR.

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CITY OF MONROE ENGINEERING

By _____ Date 05/12/2022

22-CBLD-0003
Page 3 of 5

CITY OF MONROE
DEPARTMENT OF BUILDING SAFETY

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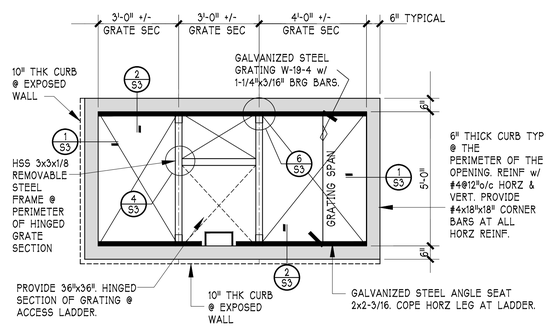
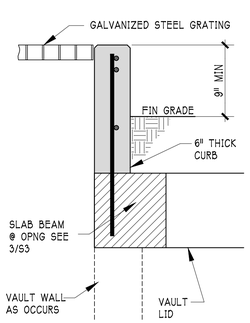
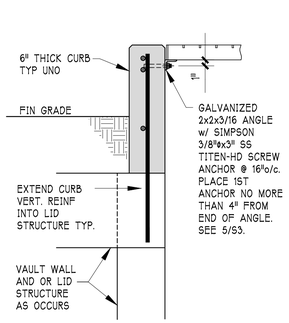


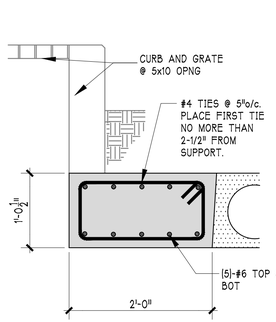
A/S3 GRATING & CURB @ RAISED 5'x10' OPNG
SCALE 3/8"=1'-0"



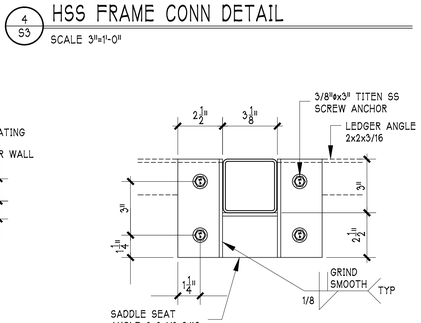
1/S3 TYP CURB @ OPNG
SCALE 1"=1'-0"



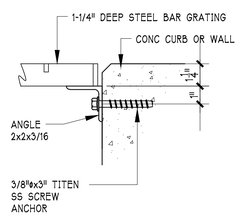
2/S3 TYP CURB @ OPNG
SCALE 1"=1'-0"



3/S3 SLAB BEAM @ OPNG
SCALE 1"=1'-0"



4/S3 HSS FRAME CONN DETAIL
SCALE 3"=1'-0"



5/S3 LEDGER ANGLE DETAILS
SCALE 3"=1'-0"

6/S3 HSS SEAT DETAIL
SCALE 3"=1'-0"

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09-24-2021
DANIEL J. KOENIK
STATE OF WASHINGTON
20744
PROFESSIONAL ENGINEER

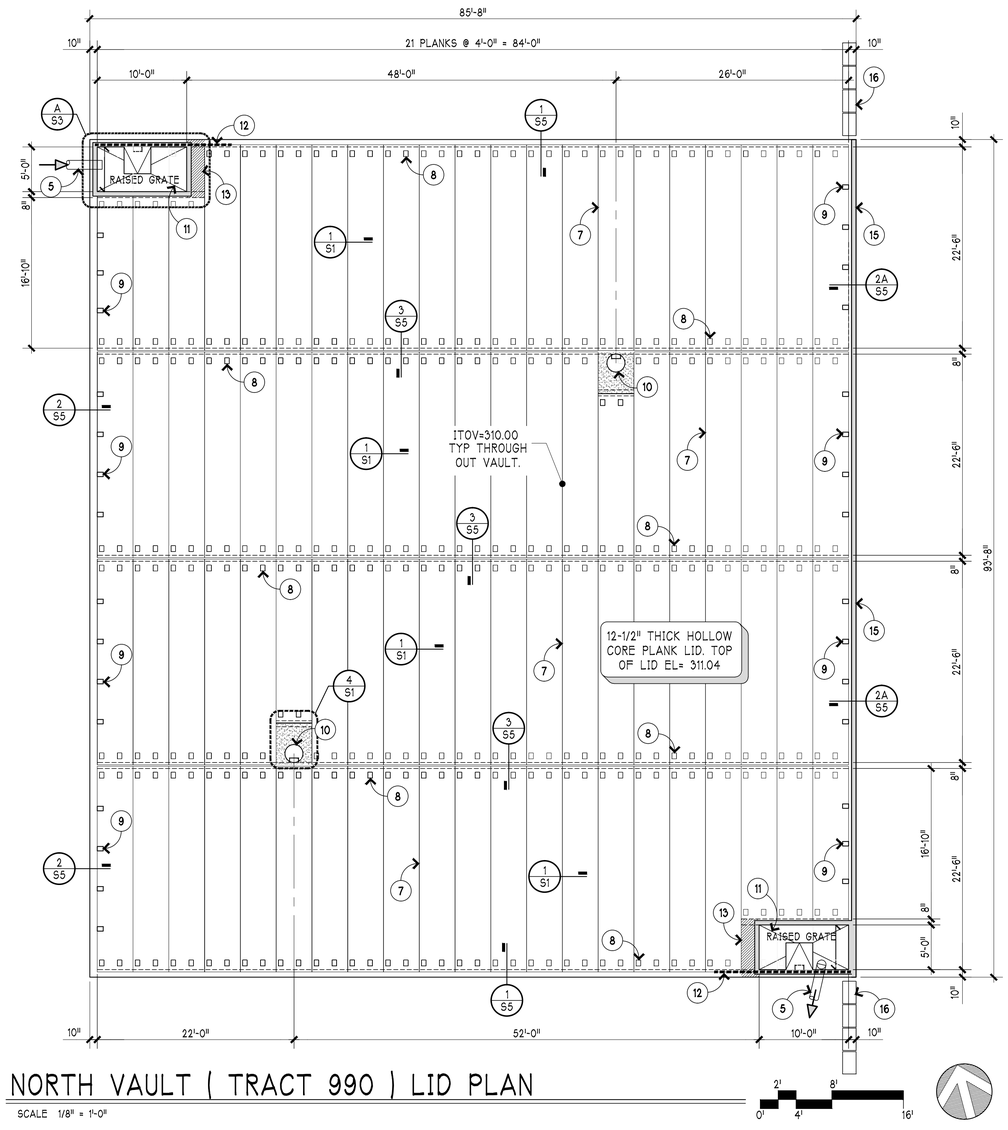
GARIBALDI PRD

STORM WATER DETENTION VAULTS

CITY OF MONROE, WASHINGTON

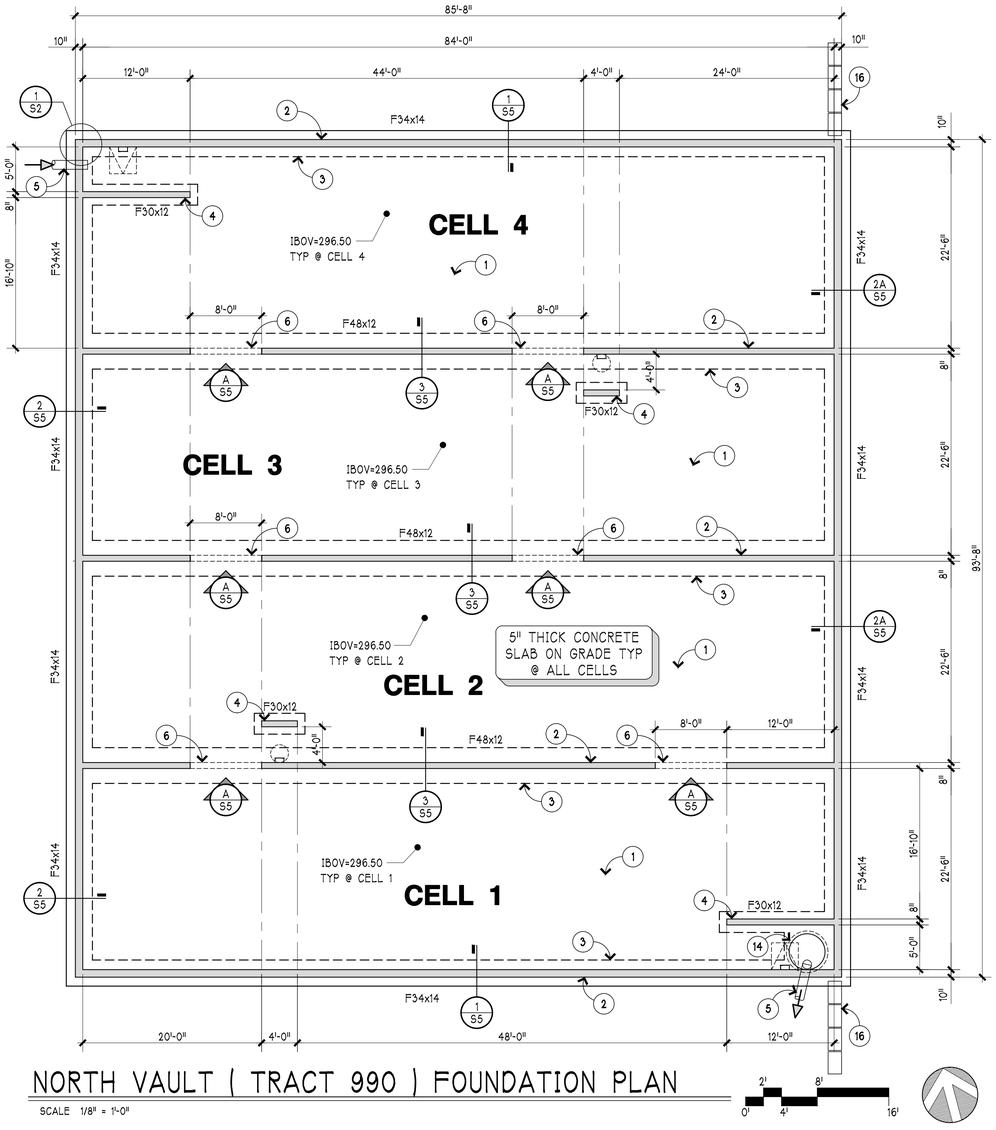
SOUTH VAULT LID PLAN & DETAILS

SHEET:
S3 OF 5
S-21-080



NORTH VAULT (TRACT 990) LID PLAN

SCALE 1/8" = 1'-0"



NORTH VAULT (TRACT 990) FOUNDATION PLAN

SCALE 1/8" = 1'-0"

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CITY OF MONROE ENGINEERING

By _____ Date 05/12/2022

PLAN KEYNOTES

1. 5" THICK CONCRETE SLAB ON GRADE REINF WITH #4@18"o/c EA WAY. PLACE ALL REINF AT MID-DEPTH OF THE SLAB. CAST GRADE SLAB IN A SINGLE POUR. SEE 2/S1 FOR REINF PLACEMENT DETAIL.
2. C.I.P. CONCRETE WALLS AT THE PERIMETER & INTERIOR OF THE VAULT. SEE WALL SECTIONS ON S5 FOR THICKNESS & REINFORCING. SEE 1/S2 FOR REINF @ WALL CORNER REINF.
3. THICKENED SLAB FOOTINGS TO BE CAST WITH THE GRADE SLAB. SEE WALL SECTIONS ON S5 FOR SIZE & REINF.
4. 8" THICK KNEE-WALL. REINF w/ #5@12"o/c HORZ. AND VERT. PLACED AT THE CENTER OF THE WALL. PROVIDE (2)#5 HORZ AT THE TOP OF THE WALL & (2)#5 VERT AT THE FREE ENDS OF THE WALL. EXTEND VERT BARS 11" INTO THE 12-1/2" THICK LID CLOSURE POUR. SEE 3/S2 FOR FTG INFORMATION.
5. PIPE INLET OR OUTLET TO VAULT. SEE CIVIL DWGS FOR PIPE DIAM, LOCATION & INVERT ELEV. SEE 3/S1 FOR WALL REINF @ PENETRATION.
6. 8FT WIDE OPENING WITHIN THE CELL DIVIDER WALL. SEE A/S5 FOR WALL REINF AT OPENING.
7. 12-1/2" THICK PRECAST HOLLOW CORE PLANK. SEE S1 FOR LID LOADING REQUIREMENTS.
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9. PROVIDE BLOCKOUTS IN THE EDGE CELL OF THE PLANK PARALLEL TO THE PERIMETER VAULT WALLS OR CAST IN PLACE LID. LOCATE BLOCKOUTS APPROXIMATELY AS SHOWN ON THIS PLAN. SEE WALL SECTIONS & DETAILS FOR REINFORCING.
10. 24" DIAM. OPENING THRU LID w/ KNEEWALL TO ACCEPT RISERS, LADDER, RING & LOCKING MANHOLE COVER PER CIVIL DRAWINGS. SEE 4/S1 FOR LID REINF AT MANHOLE.
11. 5'-0"x10'-0" OPENING TO RECEIVE OPEN METAL BAR GRATING w/ INTEGRAL 36" x 36" HINGED ACCESS HATCH. SET TOP OF GRATING 9" MIN ABOVE THE HIGHEST ADJACENT FINISHED GRADE. SEE A/S3 FOR GRATING ASSEMBLY INFORMATION.
12. ADD (4)-#6x15'-0" @ 3"o/c WITHIN THE WALL ON THE INTERIOR FACE & AT THE TOP OF THE WALL. PLACE BAR AS SHOWN ON THE PLAN.
13. HATCHED AREA REPRESENTS 24" WIDE x 12-1/2" THICK CAST IN PLACE CONCRETE BEAM. SEE 3/S3 FOR BM REINFORCING.
14. 48" DIAMETER CATCH BASIN BASE TO ACT AS SUMP. SEE 2/S2 FOR DETAIL. PLACE SUMP INLINE w/ OUTLET PIPE AS SHOWN.
15. 6" THICK CURB. SEE 7/S5 FOR REINF DETAILS.
16. RETAINING WALL ADJACENT TO VAULT PERIMETER WALL. SEE CIVIL DWGS FOR ALL INFORMATION.

LEGEND

ITOV	INSIDE TOP OF VAULT (SOFFIT OF LID)
IBOV	INSIDE BOTTOM OF VAULT (TOP OF GRADE SLAB)
	GRATING SPAN DIRECTION
	CIP CONCRETE WALL OR CURB
	CONCRETE SPREAD FOOTING
F34x14	34" WIDE x 14" THICK FTG. SEE 1, 2 & 2A/S5
F48x12	48" WIDE x 12" THICK FTG. SEE 3/S5
F30x12	30" WIDE x 12" THICK FTG. SEE 3/S2

22-CBLD-0003
Page 4 of 5

CITY OF MONROE
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CONSTRUCTION LOADS

THE VAULT LID HAS BEEN DESIGNED TO CARRY THE "DESIGN LOADS" ONLY AFTER VAULT CONSTRUCTION IS COMPLETE, ALL DESIGN CONCRETE AND GROUT STRENGTHS HAVE BEEN ACHIEVED, AND ALL COVER HAS BEEN PLACED OVER THE VAULT WITHIN THE LIMITS SPECIFIED ON THIS DRAWING. "BOBCAT" OR OTHER LIGHT EQUIPMENT SHALL BE USED FOR PLACEMENT OF MATERIALS OVER THE VAULT LID. ALTERNATIVELY, ALLOWABLE UNIFORM LOADS ON THE BARE SLAB CAN BE OBTAINED FROM THE PLANK MFGR.

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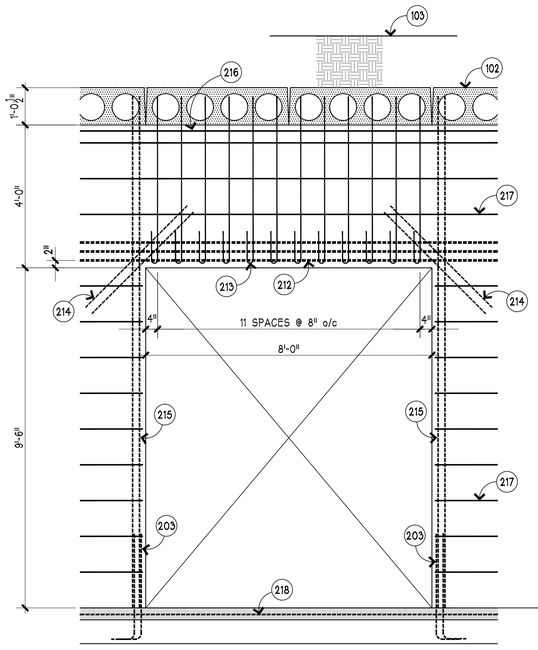
09-24-2021
DANIEL J. KOENIK
STATE OF WASHINGTON
20144
PROFESSIONAL ENGINEER

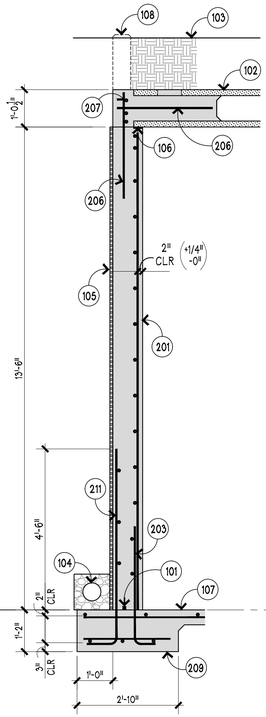
GARIBALDI PRD
STORM WATER DETENTION VAULTS
CITY OF MONROE, WASHINGTON

NORTH VAULT
LID & FOUNDATION PLANS

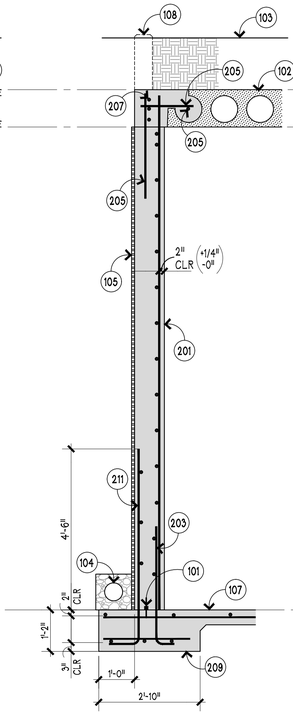
SHEET:
S4 OF 5
S-21-080



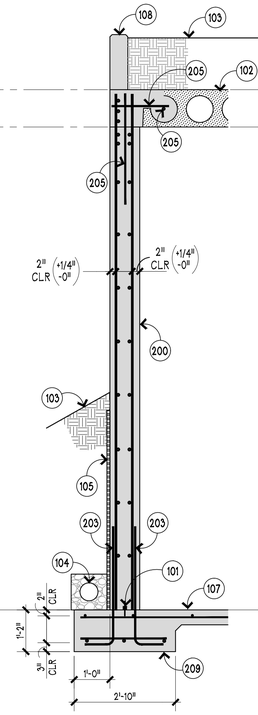
A S5 OPNG IN CELL DIVIDER WALL
SCALE 1/2"=1'-0"



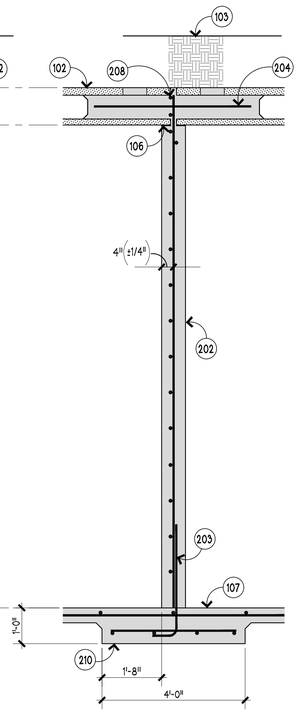
1 S5 TYP WALL SECTION
SCALE 1/2"=1'-0"



2 S5 TYP WALL SECTION
SCALE 1/2"=1'-0"



2A S5 TYP WALL SECTION
SCALE 1/2"=1'-0"



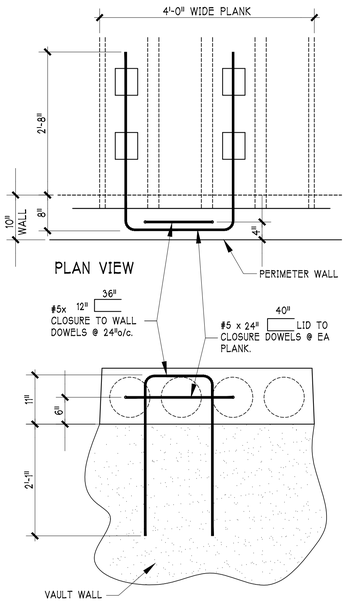
3 S5 TYP WALL SECTION
SCALE 1/2"=1'-0"

WALL SECTION GENERAL KEYNOTES

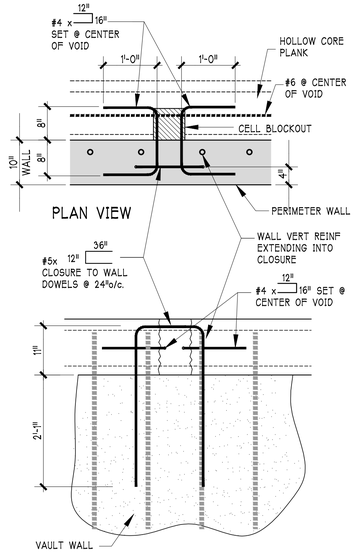
101. PROVIDE CONTINUOUS 4" PVC WATERSTOP - RIBBED WITH CENTERBULB AT THE BASE OF ALL PERIMETER WALLS. INSTALL WATERSTOP IN ACCORDANCE WITH ALL MANUFACTURER'S INSTRUCTIONS. PLACE AT THE CENTER OF THE WALL
102. 12-1/2" THICK PRECAST HOLLOW CORE PLANK.
103. FINISHED GRADE ELEVATION VARIES. SEE DESIGN CRITERIA ON SHEET S1 FOR APPROXIMATE SOIL DEPTHS OVER THE VAULT LID IN ADDITION TO THE CIVIL DWGS FOR FINAL GRADE ELEVATIONS.
104. 6"ø PERFORATED PVC FTG DRAIN SET IE OF DRAIN NO MORE THAN 6" ABOVE THE TOP OF THE FOOTING. WRAPPED IN 18"x18" MINIMUM DRAIN ROCK BEDDING & FILTER FABRIC. ROUTE DRAIN TO DISCHARGE POINT AS SHOWN ON THE CIVIL DWGS.
105. APPLY PREFABRICATED DRAINAGE PANEL TO ALL PERIMETER VAULT WALLS. EXTEND DRAINAGE PANEL OVER THE HEIGHT OF THE WALL AS SHOWN. SEE GEOTECHNICAL ENGINEER FOR MATERIAL SPECIFICATIONS.
106. PLANK TO BEAR 3" MINIMUM ONTO THE TOP OF THE CONCRETE WALL. SEE PLANK MANUFACTURER'S DRAWINGS FOR FINAL BEARING LENGTH. INSTALL BEARING PAD AS DETAILED ON THE PRECAST PLANK PLACEMENT DRAWINGS.
107. SEE FOUNDATION PLAN FOR SLAB REINFORCING.
108. 6" THICK CURB AS OCCURS. SEE 7/S5 FOR REINF DETAILS. SEE LID PLAN FOR EXTENT.

WALL SECTION REINFORCING KEYNOTES

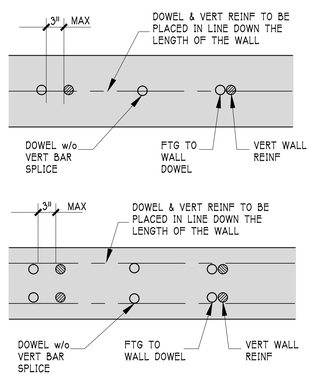
200. 10" THICK CONCRETE WALL REINF w/ #5@18"o/c HORZ EA FACE & #7@12"o/c VERT. OUTSIDE FACE & #6@18"o/c VERT INSIDE FACE. PLACE VERT REINF NEAR THE INSIDE FACE OF THE WALL. LAP ALL HORZ BARS 24" MIN @ SPLICE LOCATIONS. PROVIDE (2)-#5 CONT HORZ BARS @ THE TOP OF THE WALL. EXTEND VERT REINF 11" MIN INTO THE LID CLOSURE POUR.
201. 10" THICK CONCRETE WALL REINF w/ #5@12"o/c HORZ & #7@8"o/c VERT. PLACE VERT REINF NEAR THE INSIDE FACE OF THE WALL. LAP ALL HORZ BARS 24" MIN @ SPLICE LOCATIONS. PROVIDE (2)-#5 CONT HORZ BARS @ THE TOP OF THE WALL. EXTEND VERT REINF 11" MIN INTO THE LID CLOSURE POUR WHERE POSSIBLE.
202. 8" THICK CONCRETE WALL REINF w/ #5@12"o/c HORZ & VERT. PLACE VERT REINF @ THE CENTER OF THE WALL. LAP ALL HORZ BARS 24" MIN @ SPLICE LOCATIONS. PROVIDE (2)-#5 CONT HORZ BARS @ THE TOP OF THE WALL. EXTEND ALL VERT REINF 11" MIN INTO THE LID CLOSURE POUR.
203. #5 FTG TO WALL DOWEL @ EA VERT. PROVIDE STD HOOK @ END OF BAR CAST INTO FOOTING. DOWELS SHALL BE EMBEDDED A MIN. OF 9" +/- 1/2" INTO THE 12" FTG & 11" INTO THE 14" THICK FTG & SHALL EXTEND INTO THE WALL 28" MIN. SEE 6/S5 FOR PLACEMENT DETAIL.
204. #5x4'-0"@24"o/c PLACED SUCH THAT EACH 48" WIDE PLANK RECEIVES (2) BARS. LOCATE BARS IN VOIDS WITH POUR SLOTS AS SHOWN ON THE PRECAST PLANK PLACEMENT DWGS. PROVIDE ADDITIONAL BARS @ EACH PLANK IF REQ'D AND SHOWN ON THE PRECAST PLANK SHOP DWGS.
205. LID & WALL TO CLOSURE POUR REINF @ VOID BLOCKOUTS. SEE 5/S5.
206. LID & WALL TO CLOSURE POUR REINF @ VOID END FILL. SEE 4/S5
207. (3)-#6 CONT IN CLOSURE POUR. LAP 36" AT ALL SPLICE LOCATIONS.
208. (2)-#5 CONT IN CLOSURE POUR. LAP 30" AT ALL SPLICE LOCATIONS.
209. REINF FTG w/ #5@16"o/c TRANS & (3)-#5 LONG BOTTOM.
210. REINF FTG w/ #5@12"o/c TRANS & (4)-#5 LONG BOTTOM.
211. #5@16"o/c WALL TO FOOTING DOWELS. EXTEND 54" INTO THE WALL AND 11" INTO THE 14" THICK FOOTING. PROVIDE STD HOOK AT END OF BAR EMBEDED WITHIN FTG. PROVIDE (3)-#4 CONT HORZ. BARS AS SHOWN. SET DOWELS 1-1/2" CLR FROM THE BACKFILLED FACE OF THE WALL.
212. (3)-#7@ 3"o/c. EXTEND 30" INTO WALL @ EA JAMB OF OPENING.
213. #4 VERT w/ 180 HOOK @ HEAD OF OPNG, SPACED AS SHOWN.
214. (2)-#5 x 4'-0" @ 4"o/c DIAGONAL BARS AT THE CENTER OF THE WALL.
215. PROVIDE (2)-#5 VERT EACH FREE EDGE OF WALL.
216. (2)-#5 HORZ @ THE TOP OF THE WALL.
217. #5@12"o/c TYP CELL DIVIDER WALL HORZ REINFORCING.
218. ADDED (5)-#6x15'-0" TOP BARS WITHIN THE FOOTING. CENTER ON OPNG & EQUALLY DISTRIBUTE OVER THE WIDTH OF THE FTG.



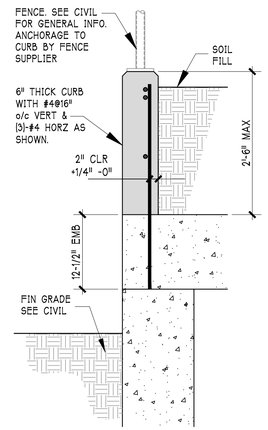
4 S5 LID & WALL TO CLOSURE DOWELS AT PLANK VOID END FILL - 10" WALL
SCALE 3/4"=1'-0"



5 S5 LID & WALL TO CLOSURE DOWELS AT VOID BLOCKOUTS - 10" WALL
SCALE 3/4"=1'-0"



6 S5 TYP FTG DOWEL PLACEMENT DETAIL
SCALE 1"=1'-0"



7 S5 CURB DETAIL
SCALE 1"=1'-0"

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CITY OF MONROE
DEPARTMENT OF BUILDING SAFETY
DATE 05/12/2022 BY
NO CHANGES AUTHORIZED UNLESS APPROVED BY THE BUILDING OFFICIAL
REVIEWED FOR CODE COMPLIANCE

These plans have been reviewed for compliance with the City of Monroe Public Works Design and Construction Standards and required conditions regarding water, sanitary sewer, storm water management, and streets only. Prior to beginning construction additional approvals may be required from other city departments or state or federal agencies.

☒ Approved ☐ Approved as corrected

The granting of this approval does not presume to give authority to violate or cancel the provisions of any law, conditions or regulation regarding this development activity or the performance of construction. Subject to field inspection and correction. No changes authorized unless approved by the City Engineer.

CITY OF MONROE ENGINEERING
By Date 05/12/2022

RECEIVED
05/09/2022
CITY OF MONROE

DATE	DESCRIPTION
09-24-2021	ISSUED FOR CONST PERMIT APPLICATION

Site Structures
A Division of Koenik Engineering PC
10205 19th AVE SE, SUITE B
EVERETT, WASHINGTON 98208
Ph: (425) - 357 - 9600
e-mail: dan@koenik.com

09-24-2021 DANIEL J. KOENIK STATE OF WASHINGTON 20744 REGISTERED PROFESSIONAL ENGINEER

GARIBALDI PRD

STORM WATER DETENTION VAULTS

CITY OF MONROE, WASHINGTON

WALL SECTIONS & DETAILS

SHEET:
S5 OF 5
S-21-080