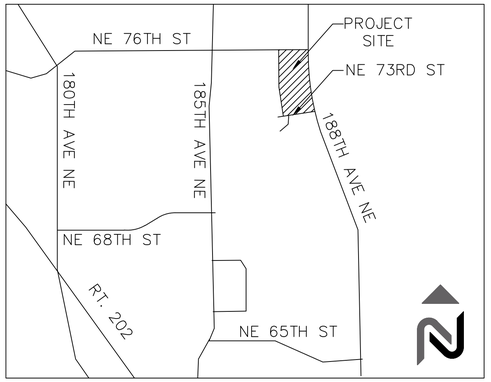
MV TRANSPORTATION FACILITY EXPANSION

PREP SUBMITTAL

N.E. 1/4 OF N.W. 1/4 OF SECTION 07, T. 25 N., R. 06 E., W.M.



VICINITY MAP

NTS

CONSULTANTS

CIVIL:
NAVIX ENGINEERING
11235 SE 6TH STREET
SUITE 150
BELLEVUE, WA 98004
(425) 453-9501
CONTACT: JENELLE TAFLIN, P.E., LEED AP

ARCHITECT:
JACKSON | MAIN ARCHITECTURE
311 FIRST AVENUE SOUTH
SEATTLE, WA 98104
(206) 324-4800
ARCHITECT OF RECORD: GREGG PERCICH
CONTACT: DIANA ATVARS

LANDSCAPE ARCHITECT:
ALTMANN-OLIVER
P.O. BOX 578
CARNATION, WA 98014
(425) 333-4535
CONTACT: SIMONE OLIVER

SURVEYOR:
DOWL
8450 154TH AVENUE NE
REDMOND, WA 98052
(425) 569-2670
CONTACT: PAUL T. RICE, PLS

TRAFFIC ENGINEER:
TRANSPORTATION SOLUTIONS, INC.
8250 165TH AVE NE, SUITE 100
REDMOND, WA 98052
(425) 833-4131
CONTACT: JEFFREY HEE

OWNER'S REPRESENTATIVE

SEACON, LLC
165 NE JUNIPER STREET, SUITE 100
ISSAQUAH, WASHINGTON 98027
CONTACT: BOB POWER
(425) 837-9720

CONTRACTOR

SEACON, LLC
165 NE JUNIPER STREET, SUITE 100
ISSAQUAH, WASHINGTON 98027
CONTACT: BOB POWER
(425) 837-9720

UTILITIES

STORMWATER:
CITY OF REDMOND PUBLIC WORKS
15670 NE 85TH STREET
REDMOND, WA 98073
(425) 556-2701

SANITARY SEWER:
CITY OF REDMOND PUBLIC WORKS
15670 NE 85TH STREET
REDMOND, WA 98073
(425) 556-2701

WATER:
CITY OF REDMOND PUBLIC WORKS
15670 NE 85TH STREET
REDMOND, WA 98073
(425) 556-2701

FIRE DEPARTMENT:
CITY OF REDMOND PUBLIC WORKS
15670 NE 85TH STREET
REDMOND, WA 98073
(425) 556-2200

ELECTRICAL:
PUGET SOUND ENERGY
355 10TH AVE NE EST-11
BELLEVUE, WA 98004
(425) 456-2848

NATURAL GAS:
PUGET SOUND ENERGY
355 10TH AVE NE EST-11
BELLEVUE, WA 98004
(425) 456-2848

TELECOMMUNICATION:
FRONTIER COMMUNICATIONS
2600 WEST CASINO ROAD
EVERETT, WA 98204
(425) 263-4037

PLANNING

CITY OF REDMOND
15670 NE 85TH STREET
REDMOND, WA 98073
(425) 556-2473

TRANSPORTATION

CITY OF REDMOND PUBLIC WORKS
15670 NE 85TH STREET
REDMOND, WA 98073
(425) 556-2701

LEGAL DESCRIPTION

LOT 3, CITY OF REDMOND SHORT PLAT NO. L081452, AS RECORDED SEPTEMBER 6, 2012, UNDER RECORDERS NO. 20120906900004, IN KING COUNTY, WASHINGTON.

PARCEL

PARCEL NUMBER: 0725069141

VERTICAL DATUM

VERTICAL DATUM: NAVD 88

CITY OF REDMOND BENCHMARK: "COR 9156"
2" DIAMETER BRASS DISK SET IN THE SW CORNER OF CONCRETE PAD FOR SIGNAL POLE AT THE NE QUADRANT OF THE INTERSECTION OF NE UNION HILL ROAD AND 188TH AVE NE.
ELEVATION: 67.54 FEET

CITY OF REDMOND BENCHMARK: "COR 9153"
2" DIAMETER BRASS DISK SET IN THE NW CORNER OF CONCRETE POWER VAULT AT THE INTERSECTION OF NE 76TH STREET AND 185TH AVENUE NE.
ELEVATION: 51.41 FEET.

HORIZONTAL DATUM AND HORIZONTAL CONTROL

HORIZONTAL DATUM: WASHINGTON STATE PLANE NORTH, NAD 83 (91-HARN)

BASIS OF BEARING = REDMOND CITY HORIZONTAL CONTROL NOTEBOOK, PUBLISHED 1993 (WSPCS 83N)

BASIS OF BEARING: A LINE BEARING SOUTH 89°33'47" EAST BETWEEN CITY OF REDMOND MONUMENTS GLO-5FW AND GLO-6FW

BASIS OF COORDINATE: CITY OF REDMOND CONTROL POINT GLO-5FW
NORTHING: 246,072.29
EASTING: 1,328,291.92

BEARING REFERENCE MONUMENT: CITY OF REDMOND CONTROL POINT GLO-6FW
NORTHING: 246,032.45 (RECORD)
EASTING: 1,333,515.60 (RECORD)
NORTHING: 246,032.45 (MEASURED)
EASTING: 1,333,515.70 (MEASURED)

REFERENCES

1. TITLE REPORT ISSUED BY FIRST AMERICAN TITLE INSURANCE COMPANY, FILE NO. NCS-374022-WA1, DATED DECEMBER 8, 2014
2. UNION HILL CORPORATE CENTER SHORT PLAT RECORDED UNDER RECORDERS NO. 20120906900004, IN KING COUNTY, WASHINGTON.
3. CITY OF REDMOND LOT LINE ADJUSTMENT NO. L070381, RECORDED UNDER RECORDING NO. 20080311900009
4. AMENDED BINDING SITE PLAN OF CADMAN GRAVEL COMPANY, RECORDED IN VOLUME 150 OF PLATS, PAGE 7-9, RECORDS OF KING COUNTY, WASHINGTON.
5. CADMAN GRAVEL COMPANY BINDING SITE PLAN, RECORDED IN VOLUME 130 OF PLATS, PAGE 97-100, RECORDS OF KING COUNTY, WASHINGTON.

SITE DATA

PARCEL NUMBER: 0725069141

EXISTING USE: MANUFACTURING PARK (MP)
PROPOSED USE: MANUFACTURING PARK (MP)

SITE AREAS:
TOTAL PROPERTY AREA: APPROX. ±179,936 SF (4.13 ACRES)

IMPERVIOUS: 139,422 SF (77.5% OF 179,936 SF)
LANDSCAPE: 40,514 SF (22.5% OF 179,936 SF)

STORMWATER FACILITIES:
DETENTION FACILITY: PUBLIC REGIONAL POND AND ON-SITE DETENTION TANK
WATER QUALITY FACILITY: PUBLIC REGIONAL POND A

NOTES

1. SITE WORK FOR THIS PROJECT SHALL MEET OR EXCEED THE PROJECT SPECIFICATIONS, THE CITY OF REDMOND STANDARD SPECIFICATIONS, AND THE A.P.W.A. STANDARDS WHICH ARE HEREBY REFERENCED AS PART OF THESE PLANS.
2. THE DESIGN SHOWN IS BASED UPON THE ENGINEER'S UNDERSTANDING OF THE EXISTING CONDITIONS. THIS PLAN DOES NOT REPRESENT A DETAILED FIELD SURVEY. THE EXISTING CONDITIONS SHOWN IN THIS PLAN SET ARE BASED UPON THE SURVEY PREPARED BY DOWL, DATED 11/28/2018. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING FIELD CONDITIONS PRIOR TO BIDDING THE PROPOSED SITEWORK IMPROVEMENTS. IF CONFLICTS ARE DISCOVERED, THE CONTRACTOR SHALL NOTIFY THE OWNER PRIOR TO INSTALLATION OF ANY PORTION OF THE SITEWORK WHICH WOULD BE AFFECTED. IF CONTRACTOR DOES NOT ACCEPT EXISTING SURVEY, INCLUDING TOPOGRAPHY AS SHOWN ON THE PLANS, WITHOUT EXCEPTION, HE SHALL HAVE MADE, AT HIS OWN EXPENSE, A TOPOGRAPHIC SURVEY BY A REGISTERED LAND SURVEYOR AND SUBMIT IT TO THE OWNER FOR REVIEW.
3. CAUTION – NOTICE TO CONTRACTOR
THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES AND EXISTING IMPROVEMENTS WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS ON THE PLANS.
4. WET WEATHER CONSTRUCTION NOTE:
ALL PROJECTS WORKING UNDER A DRY SEASON TESC MANAGEMENT PLAN SHALL BE SUBSTANTIALLY COMPLETED BY SEPTEMBER 30TH TO AVOID IMPLEMENTATION OF RAINY SEASON CONSTRUCTION REQUIREMENTS. PROJECTS THAT WILL NOT BE SUBSTANTIALLY COMPLETED BY SEPTEMBER 30TH SHALL SUBMIT A SEASONAL SUSPENSION PLAN AND/OR WET WEATHER PLAN PREPARED IN ACCORDANCE WITH THE GENERAL STANDARDS FOR RAINY SEASON CLEARING/GRADING, FOR APPROVAL BY THE CITY OF REDMOND. AN APPROVED PLAN MUST BE AVAILABLE BY SEPTEMBER 1ST. ALLOW 7 WORKING DAYS FOR EACH REVIEW PERIOD. THE APPROVED PLAN MUST BE IMPLEMENTED BY SEPTEMBER 15TH. IF NO PLAN HAS BEEN APPROVED BY SEPTEMBER 1ST, THEN STOP WORK AND SECURE THE SITE AGAINST EROSION, NO FURTHER WORK WILL BE PERMITTED UNTIL MAY 1ST WHEN THE DRY SEASON RETURNS.

SHEET INDEX

19-XXXX	CVR-1	COVER SHEET
19-XXXX	C-1.0	SITE IMPROVEMENT PLAN
19-XXXX	C-1.3	TRANSPORTATION PLAN
19-XXXX	C-1.4	FIRE PROTECTION PLAN
19-XXXX	C-2.0	GRADING AND DRAINAGE PLAN
19-XXXX	C-3.0	UTILITY PLAN
LANDSCAPE AND IRRIGATION PLANS:		
19-XXXX	L-1	TREE PROTECTION PLAN
19-XXXX	L-2	PLANTING PLAN
19-XXXX	L-3	PLANTING PLAN
19-XXXX	L-4	PLANTING SCHEDULE AND DETAILS
19-XXXX	I-1	IRRIGATION PLAN
19-XXXX	I-2	IRRIGATION PLAN
19-XXXX	I-3	IRRIGATION SCHEDULE AND DETAILS
19-XXXX	I-4	IRRIGATION DETAILS
ILLUMINATION PLANS:		
19-XXXX	IL01	ILLUMINATION PLAN } [STREET LIGHTING]
19-XXXX	IL02	ILLUMINATION PLAN } [STREET LIGHTING]
19-XXXX	IL03	ILLUMINATION PLAN } [SITE LIGHTING]
19-XXXX	IL04	ILLUMINATION PLAN } [SITE LIGHTING]

* BOUNDARY / TOPOGRAPHIC SURVEY SHEETS ARE ONLY TO TRUE SCALE AT 24" X 36" SHEET SIZE AND ARE NOT INCLUDED IN THIS SET DUE TO CITY OF REDMOND 22" X 34" SHEET SIZE REQUIREMENT.

LAND - 2019-00784
CIVPLAN - 2019-XXXXX

NOTE: THIS DEVELOPMENT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE 2019 CITY OF REDMOND STANDARD SPECIFICATION AND DETAILS.

APPROVED FOR CONSTRUCTION

FOR: DIRECTOR OF PUBLIC WORKS
CITY OF REDMOND

DATE:

PLAN CHK ENGR:

STORM:

UTILITY:

FIRE:

TRANS/ENGR:

PLANNING:

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EXISTING LEGEND

FOUND MONUMENT IN CASE
POWER VAULT
LIGHT STANDARD
TRAFFIC SIGNAL
TRAFFIC SIGNAL BOX
BOLLARD
MONITOR WELL
SANITARY SEWER MANHOLE
CATCH BASIN
STORM DRAIN MANHOLE
IRRIGATION CONTROL VALVE
SIGN
LINE CONTINUES
SET BENCHMARK
12"M MAPLE
12"MA MADRONA
12"C CEDAR
12"F FIR
CONCRETE PAVING
BUILDINGS
BRICK PAVING
SS SANITARY SEWER LINE
SD STORM DRAIN LINE

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bellevue, wa 98004
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www.navixeng.com

CLIENT/OWNER
MV TRANSIT

PROJECT NAME
MV TRANSPORTATION FACILITY EXPANSION

NAVIX PROJECT NUMBER: 50.601.002

PROJECT ADDRESS
NE 76TH STREET AND 188TH AVENUE NE
REDMOND, WA 98052

STAMP
PRELIMINARY
JENELLE ELIZABETH TAFLIN
STATE OF WASHINGTON
40872
REGISTERED PROFESSIONAL ENGINEER
08/22/2019

REVISIONS

REV	ISSUED FOR:	DATE
1	PREP SUBMITTAL	08.22.19

SECTION, TOWNSHIP, RANGE:
NE 1/4 OF NW 1/4 OF SECTION 07, TOWNSHIP 25 NORTH, RANGE 06 EAST, W.M.

PROJECT TEAM
REVIEWED BY: J.TAFLIN
DESIGNED BY: J.GREEN

SHEET NAME
COVER SHEET

SHEET NUMBER
CVR-1
19-XXXX

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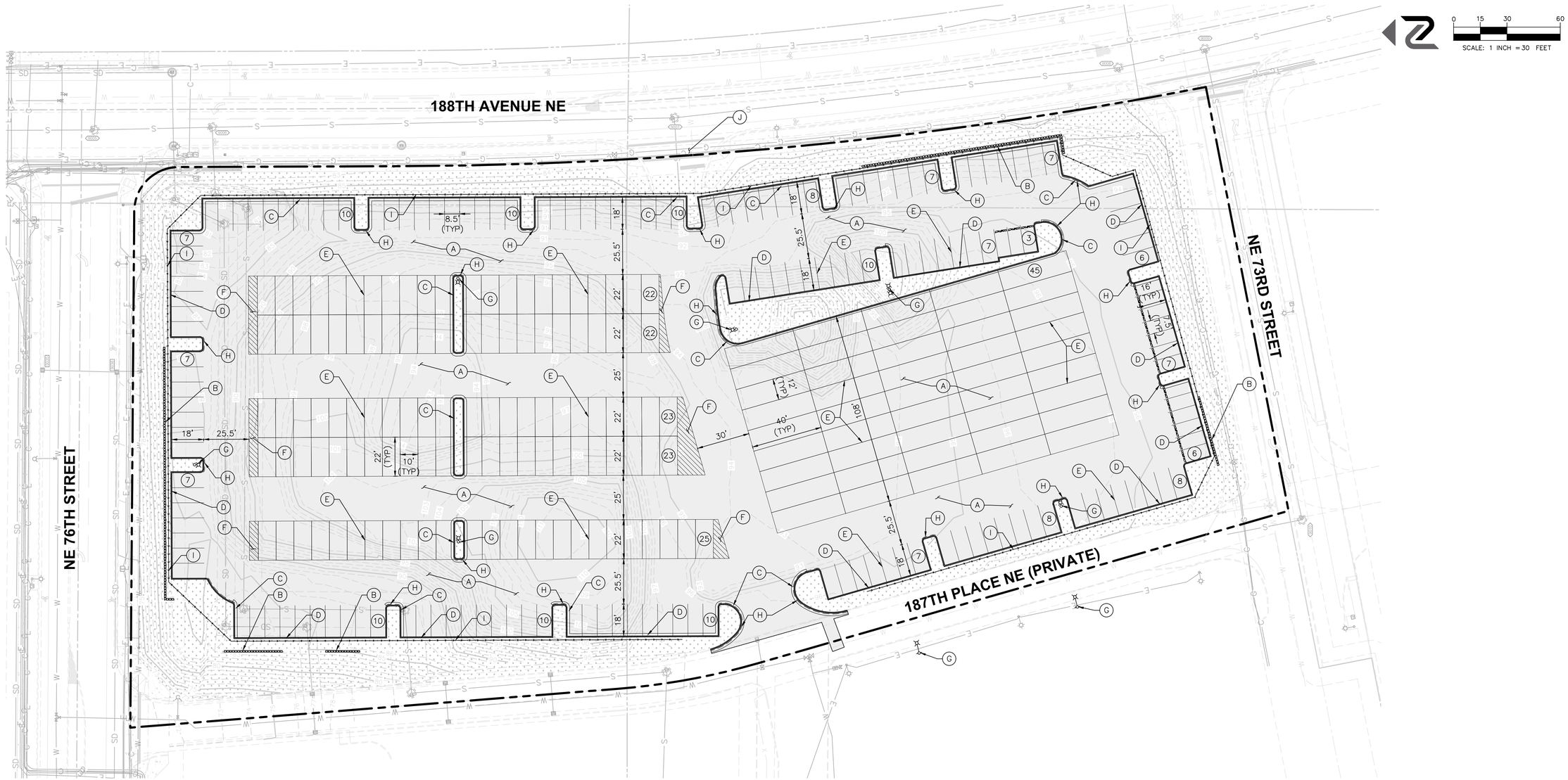

LEGEND:

- PROPERTY LINE
- CONCRETE VERTICAL CURB
- CONCRETE CURB AND GUTTER
- ASPHALT PAVEMENT
- LANDSCAPE AREA
- (#) NUMBER OF PARKING STALLS

SITE DATA:

TOTAL PROPERTY AREA: ±179,936 SF (4.13 ACRES)
IMPERVIOUS: 139,422 SF (77.5% OF 179,936 SF)
LANDSCAPE: 40,514 SF (22.5% OF 179,936 SF)

ALLOWED COVERAGE
80% IMPERVIOUS
20% LANDSCAPE

PROPOSED CAR PARKING

STANDARD STALLS (8.5'x18'):	149 STALLS
COMPACT STALLS (7.5'x16'):	16 STALLS
SHUTTLE BUS STALLS (10'x22'):	115 STALLS
LARGE BUS STALLS (12'x40'):	45 STALLS
TOTAL:	325 STALLS

SITE KEY:

(A) ASPHALT PAVEMENT
(B) KEYSTONE BLOCK WALL PER GEOTECHNICAL ENGINEER RECOMMENDATIONS.
(C) TYPE A-1 CONCRETE CURB AND GUTTER
(D) CONCRETE VERTICAL CURB
(E) 4" WIDE SOLID WHITE STRIPE, (TYP.)
(F) 4" WIDE SOLID WHITE STRIPE AT 45° X 18" SPACING, O.C. (TYP.)
(G) LIGHT POLE. SEE ILLUMINATION PLAN FOR DETAILS
(H) FIRE LANE STRIPING. SEE SHEET C-1.4 FOR FIRE LANE STRIPING REQUIREMENTS.
(I) 8' BLACK VINYL COATED CHAIN LINK FENCE.
(J) EXISTING 188TH AVE NE ENTRANCE TO REMAIN FOR POTENTIONAL FUTURE ACCESS.

NOTE: THIS DEVELOPMENT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE 2019 CITY OF REDMOND STANDARD SPECIFICATION AND DETAILS.

APPROVED FOR CONSTRUCTION

FOR: DIRECTOR OF PUBLIC WORKS
CITY OF REDMOND

DATE: _____

PLAN CHK ENGR: _____

STORM: _____

UTILITY: _____

FIRE: _____

TRANS/ENGR: _____

PLANNING: _____

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NAVIX
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11235 s.e. 6th street | suite 150
bellevue, wa 98004
t: 425.453.9501 | f: 425-453-8208
www.navixeng.com

CLIENT/OWNER

MV TRANSIT

PROJECT NAME

MV TRANSPORTATION FACILITY EXPANSION

NAVIX PROJECT NUMBER: 50.601.002

PROJECT ADDRESS

NE 76TH STREET AND 188TH AVENUE NE REDMOND, WA 98052

STAMP

PRELIMINARY
JENELLE ELIZABETH LIN
STATE OF WASHINGTON
41872
REGISTERED PROFESSIONAL ENGINEER
08/22/2019

REVISIONS

REV	ISSUED FOR:	DATE
1	PREP SUBMITTAL	08.22.19

811

SECTION, TOWNSHIP, RANGE:
NE 1/4 OF NW 1/4 OF SECTION 07, TOWNSHIP 25 NORTH, RANGE 06 EAST, W.M.

PROJECT TEAM
REVIEWED BY: J.TAFLIN
DESIGNED BY: J.GREEN

SHEET NAME

SITE IMPROVEMENT PLAN

SHEET NUMBER

C-1.0
19-XXXX

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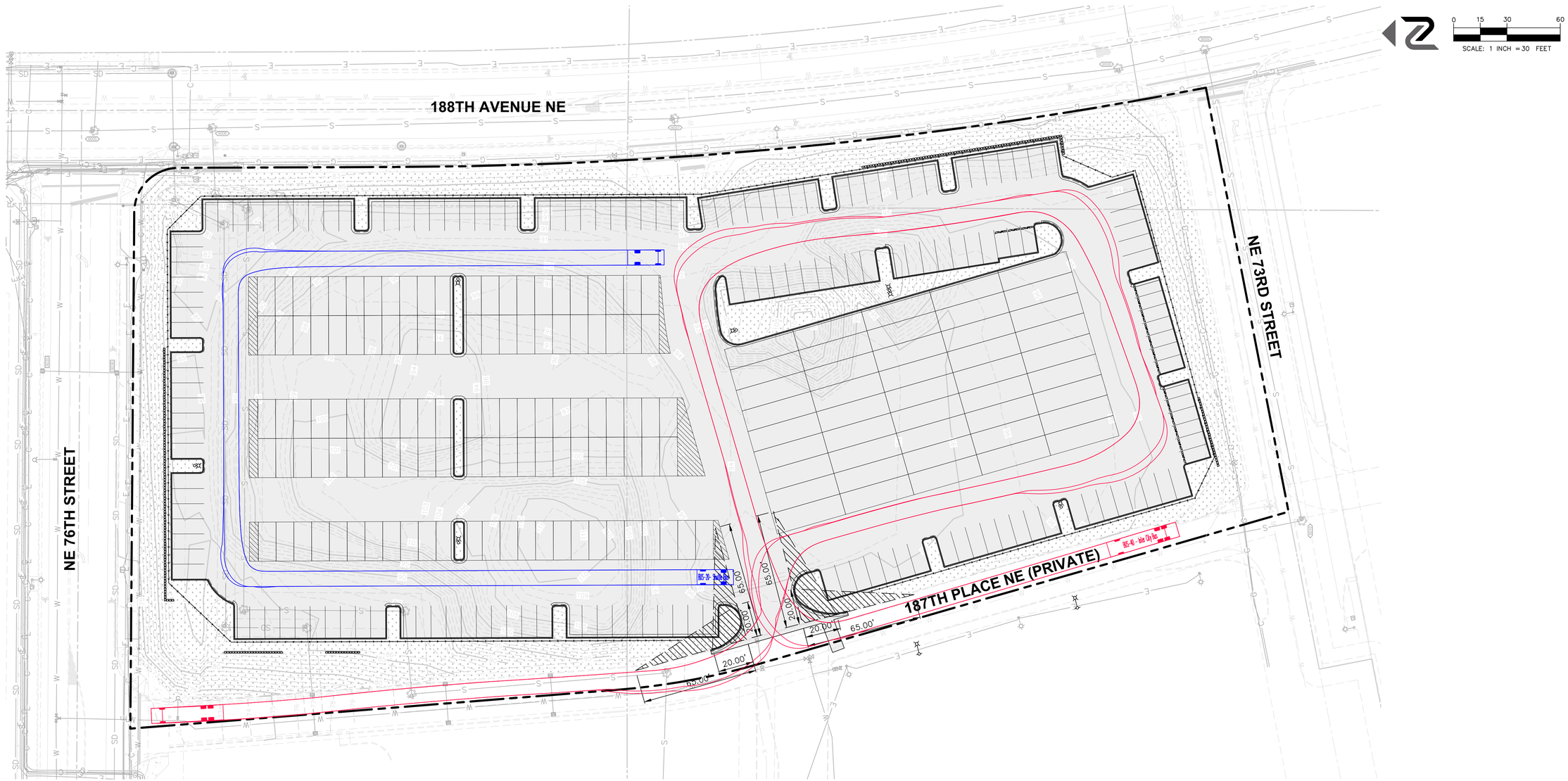


LEGEND:

- PROPERTY LINE
- CONCRETE VERTICAL CURB
- CONCRETE CURB AND GUTTER
- ASPHALT PAVEMENT
- LANDSCAPE AREA
- (#) NUMBER OF PARKING STALLS

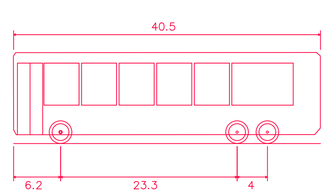
SIGHT DISTANCE:

TYPE OF INTERSECTION
LOCAL ACCESS, DRIVEWAYS, ETC. (25 MPH)

HORIZONTAL SIGHT CLEARANCE FOR INTERSECTION LEGS
A) 20 FEET
B) 65 FEET

SITE DISTANCE TRIANGLE

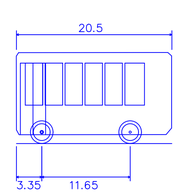
NOTES:
1. FENCES, HEDGES, SIGNS, SHRUBS, NATURAL VEGETATION AND TREES, AND OTHER INANIMATE OBJECTS GREATER THAN 18-INCHES IN WIDTH OR DIAMETER ARE NOT ALLOWED IN THE SIGHT DISTANCE TRIANGLE.
2. THE SPACE BETWEEN 2 AND 8 FEET ABOVE STREET GRADE MUST BE OPEN.



BUS-40 - Inter City Bus

Overall Length	40.500ft
Overall Width	8.500ft
Overall Body Height	12.000ft
Min Body Ground Clearance	1.158ft
Track Width	8.500ft
Lock-to-lock time	5.00s
Max Steering Angle (Virtual)	41.90°

40' BUS
NTS



BUS-20- Shuttle Bus

Overall Length	20.500ft
Overall Width	8.500ft
Overall Body Height	12.000ft
Min Body Ground Clearance	1.158ft
Track Width	8.500ft
Lock-to-lock time	5.00s
Max Steering Angle (Virtual)	41.90°

20' BUS
NTS

NOTE: THIS DEVELOPMENT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE 2019 CITY OF REDMOND STANDARD SPECIFICATION AND DETAILS.

APPROVED FOR CONSTRUCTION

FOR: DIRECTOR OF PUBLIC WORKS
CITY OF REDMOND

DATE: _____

PLAN CHK ENGR: _____

STORM: _____

UTILITY: _____

FIRE: _____

TRANS/ENGR: _____

PLANNING: _____

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CLIENT/OWNER
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PROJECT NAME
MV TRANSPORTATION FACILITY EXPANSION

NAVIX PROJECT NUMBER: 50.601.002

PROJECT ADDRESS
NE 76TH STREET AND 188TH AVENUE NE REDMOND, WA 98052

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PRELIMINARY
JONELLE ELIZABETH LIN
STATE OF WASHINGTON
41872
REGISTERED PROFESSIONAL ENGINEER
08/22/2019

REVISIONS

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1	PREP SUBMITTAL	08.22.19

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SECTION, TOWNSHIP, RANGE:
NE 1/4 OF NW 1/4 OF SECTION 07, TOWNSHIP 25 NORTH, RANGE 06 EAST, W.M.

PROJECT TEAM
REVIEWED BY: J.TAFLIN
DESIGNED BY: J.GREEN

SHEET NAME
TRANSPORTATION PLAN

SHEET NUMBER
C-1.3
19-XXXX

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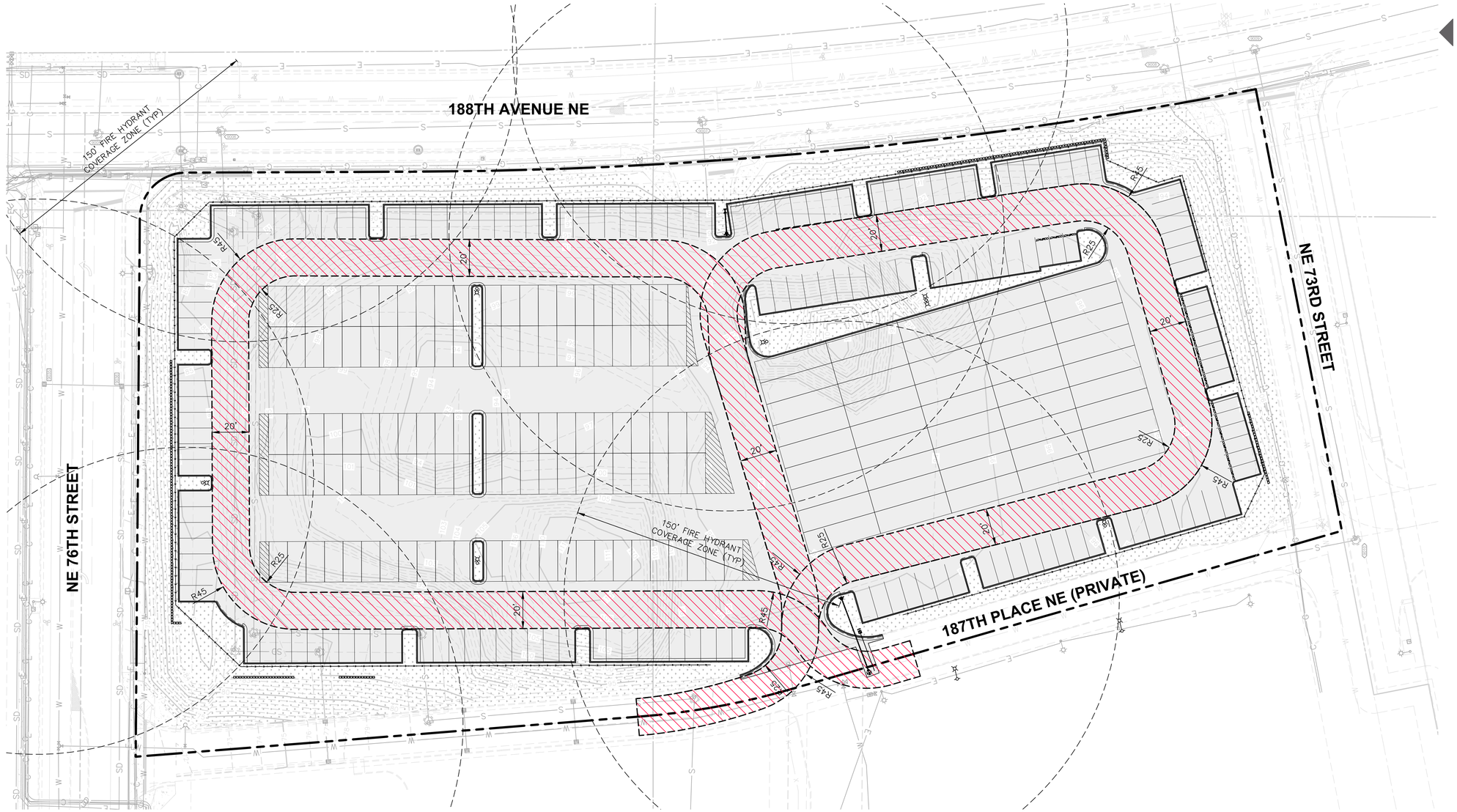
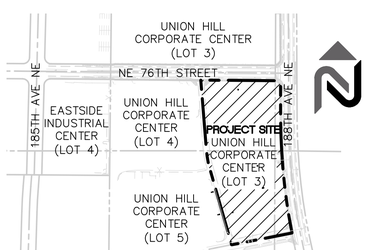


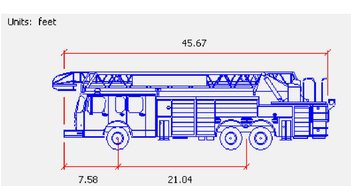
LEGEND:

- PROPERTY LINE
- CONCRETE VERTICAL CURB
- CONCRETE CURB AND GUTTER
- ASPHALT PAVEMENT
- LANDSCAPE AREA
- (#) NUMBER OF PARKING STALLS



VICINITY MAP

SCALE: 1" = 300'



FIRE TRUCK

PROPOSED ROAD GRADES DO NOT EXCEED 10%

FIRE LANE STRIPING,
PAINTED YELLOW ON TOP AND SIDE OF CURB, EXTENDING THE LENGTH OF THE DESGINATED FIRE LANE. PAVEMENT NEXT TO THE CURB TO BE MARKED WITH MINIMUM 18" IN HEIGHT BLOCK LETTERING WITH MINIMUM 3" BRUSH STROKE LETTERING READING "NO PARKING - FIRE LANE." STENCILING OR SIGNS MAY BE USED.

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APPROVED FOR CONSTRUCTION

FOR: DIRECTOR OF PUBLIC WORKS
CITY OF REDMOND

DATE: _____

PLAN CHK ENGR: _____

STORM: _____

UTILITY: _____

FIRE: _____

TRANS/ENGR: _____

PLANNING: _____

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11235 s.e. 6th street | suite 150
bellevue, wa 98004

t: 425.453.9501 | f: 425-453-8208
www.navixeng.com

CLIENT/OWNER

MV TRANSIT

PROJECT NAME

MV TRANSPORTATION FACILITY EXPANSION

NAVIX PROJECT NUMBER: 50.601.002

PROJECT ADDRESS

NE 76TH STREET AND 188TH AVENUE NE
REDMOND, WA 98052

STAMP

PRELIMINARY
JOSEPH ELIZABETH MARTIN
STATE OF WASHINGTON
41872
REGISTERED PROFESSIONAL ENGINEER
08/22/2019

REVISIONS

REV	ISSUED FOR:	DATE
1	PREP SUBMITTAL	08.22.19

SECTION, TOWNSHIP, RANGE:

NE 1/4 OF NW 1/4 OF SECTION 07, TOWNSHIP 25 NORTH, RANGE 06 EAST, W.M.

PROJECT TEAM

REVIEWED BY: J.TAFLIN
DESIGNED BY: J.GREEN

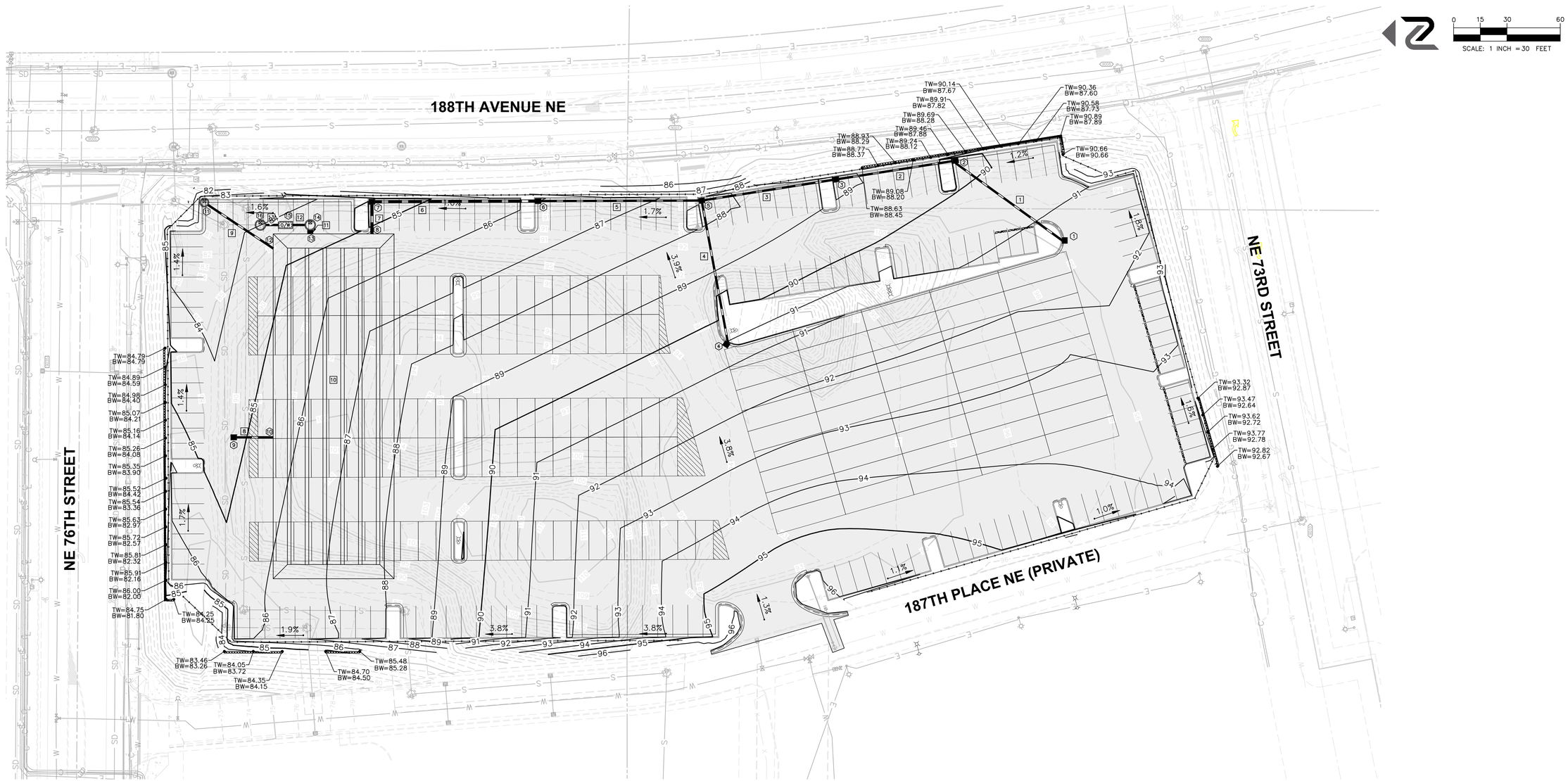
SHEET NAME

FIRE PROTECTION PLAN

SHEET NUMBER

C-1.4
19-XXXX

B:\Washington\Redmond\SEA CON\Lot 3\2Drawings\RESC_LOT3_110S.dwg Aug 21, 2019 - 4:25pm



LEGEND:

- STORM DRAIN PIPE
- SD — EXISTING STORM DRAIN PIPE
- CATCH BASIN TYPE 1 PER WSDOT STD. PLAN B-5.20-00
- CATCH BASIN TYPE 2 PER WSDOT STD. PLAN B-10.20-00
- 88 — MINOR CONTOUR
- 90 — MAJOR CONTOUR
- RIDGE — RIDGE LINE
- XXX.XX — SPOT ELEVATION
- X.XX% — SLOPE
- KEYSTONE BLOCK WALL

STRUCTURE SCHEDULE

#	DESCRIPTION
1	CB TYPE I (A) RIM = 91.36 12" IE = 88.36
2	CB TYPE I (A) RIM = 89.65 12" IE = 86.65
3	CB TYPE I (A) RIM = 88.81 12" IE = 85.81
4	CB TYPE I (A) RIM = 90.51 12" IE = 87.51
5	CB TYPE I (A) RIM = 87.34 12" IE = 84.34
6	CB TYPE I (A) RIM = 85.41 12" IE = 82.91 18" IE = 82.41
7	CB TYPE I (A) RIM = 84.45 18" IE = 80.95
8	DETENTION TANK INLET 18" IE = 80.50
9	CB TYPE I (C) RIM = 84.74 12" IE = 81.74
10	DETENTION TANK INLET 12" IE = 80.50
11	CB TYPE II-48" (A) RIM = 83.00 12" IE = 81.00
12	DETENTION TANK INLET 12" IE = 80.50
13	DETENTION TANK OULET 36" IE = 73.00
14	CB TYPE II-60" (B) WITH CONTROL STRUCTURE RIM = 84.45 36" IE = 72.95 24" IE = 72.95
15	OIL/WATER SEPARATOR RIM = 84.00 12" IE = 72.85
16	CONNECT TO EX. 30" STUB WITH A NEW CB TYPE II-60" (B) RIM = 84.00 12" IE = 72.5± 30" IE = 71.0±

GRATE SCHEDULE (SEE STRUCTURE SCHEDULE FOR GRATE TYPE)

A. RECTANGULAR VANED GRATE PER WSDOT STD. PLAN B-30.30-00
B. SOLID RIM PER WSDOT STD. PLAN 30.20-01
C. RECTANGULAR HERRINGBONE GRATE PER WSDOT STD. PLAN 30.50-00

PIPE SCHEDULE

PIPE #	DIAMETER	LENGTH (FT.)	SLOPE (PERCENT)
1	12" PVC	76	2.25%
2	12" PVC	68	1.24%
3	12" PVC	77	1.91%
4	12" PVC	82	3.87%
5	12" PVC	92	1.55%
6	18" PVC	94	1.55%
7	18" PVC	18	2.50%
8	12" PVC	22	5.64%
9	12" D.I.	47	1.06%
10	1350 LF 8' DIA CMP DETENTION TANK @ 0.0%		
11	36" CMP	5	1.00%
12	12" PVC	10	1.00%
13	12" PVC	10	3.50%

CONTRACTOR TO PERFORM SOIL SAMPLING PER SOIL MANAGEMENT PLAN PRIOR TO START OF GRADING ACTIVITIES.

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APPROVED FOR CONSTRUCTION

FOR: DIRECTOR OF PUBLIC WORKS
CITY OF REDMOND

DATE: _____

PLAN CHK ENGR: _____

STORM: _____

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CLIENT/OWNER

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PROJECT NAME

MV TRANSPORTATION FACILITY EXPANSION

NAVIX PROJECT NUMBER: 50.601.002

PROJECT ADDRESS

NE 76TH STREET AND 188TH AVENUE NE REDMOND, WA 98052

STAMP

PRELIMINARY
DANIELLE ELIZABETH MARTIN
STATE OF WASHINGTON
41872
REGISTERED PROFESSIONAL ENGINEER
08/22/2019

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811

SECTION, TOWNSHIP, RANGE:

NE 1/4 OF NW 1/4 OF SECTION 07, TOWNSHIP 25 NORTH, RANGE 06 EAST, W.M.

PROJECT TEAM

REVIEWED BY: J.TAFLIN
DESIGNED BY: J.GREEN

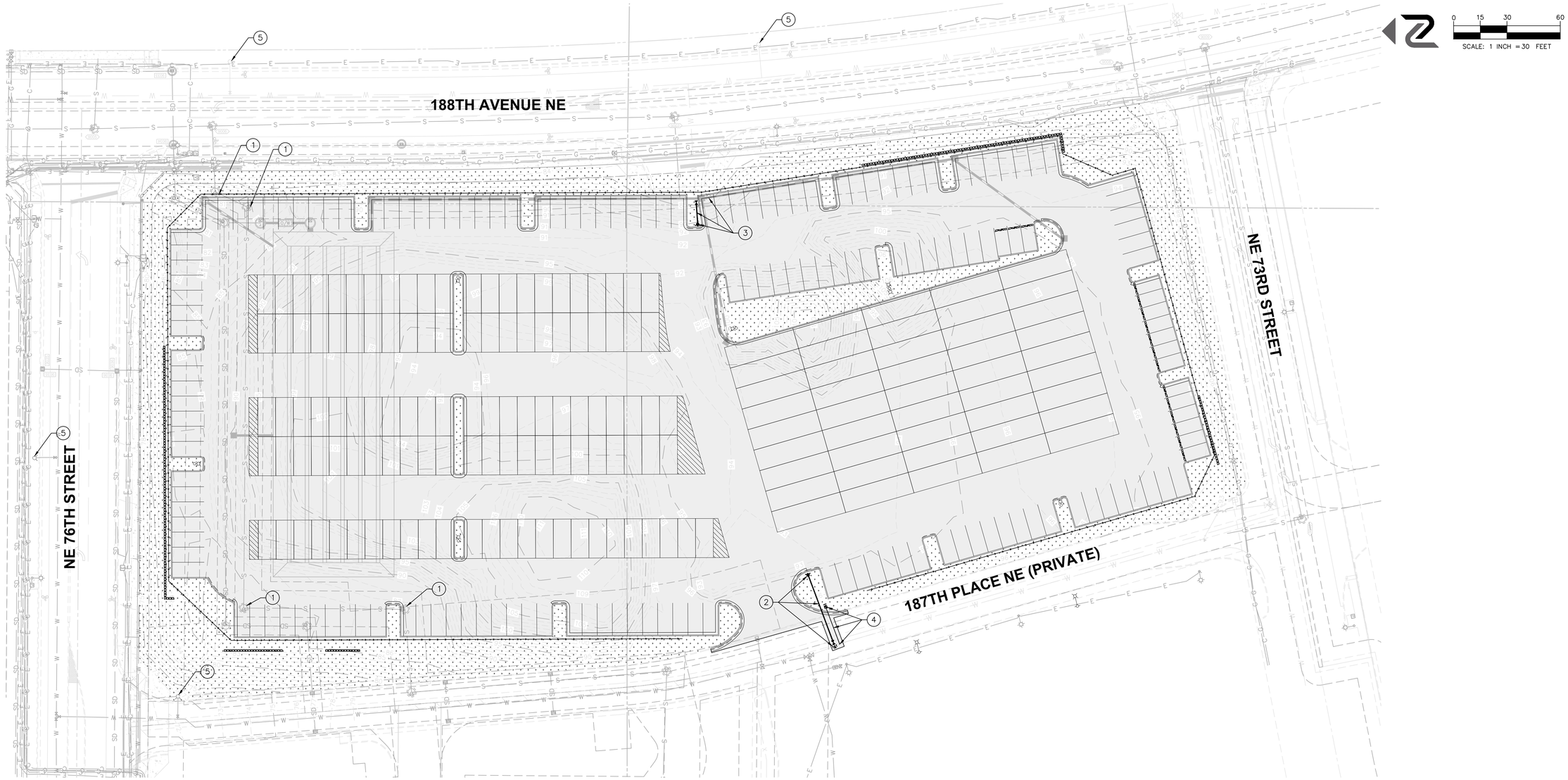
SHEET NAME

GRADING AND DRAINAGE PLAN

SHEET NUMBER

C-2.0
19-XXXX

B:\Washington\Redmond\SEA CON\Lot 3\2Drawings\RESC_LOT3_120C.dwg Aug 21, 2019 - 4:27pm



LEGEND:

- FIRE HYDRANT SERVICE LINE
- WATER METER
- WATER TEE
- GATE VALVE
- FIRE HYDRANT

WATER AND SANITARY SEWER SCHEDULE

1	ADJUST EXISTING SEWER MANHOLE TO EXISTING GRADE
2	CONNECT NEW FIRE HYDRANT SERVICE TO EXISTING 12" WATER MAIN PER CITY OF REDMOND STANDARDS AND REQUIREMENTS WITH: 1 –12" x 6 TEE WITH THRUST BLOCKING (MJxFL) 1 – 6" GATE VALVE (FLXMJ) 1 – FIRE HYDRANT ASSEMBLY PER COR STD. PLAN 713 43 LF 6" D.I. FIRE LINE CONTRACTOR TO VERIFY EXISTING WATER MAIN LOCATION PRIOR TO CONSTRUCTION OF ANY PORTION OF PROPOSED FIRE HYDRANT SERVICE EXTENSION AND NOTIFY ENGINEER OF ANY DISCREPANCIES.
3	RELOCATE EXISTING FIRE HYDRANT EXTEND EXISTING 6" FIRE LINE WITH 13 LF D.I. 1–6" GATE VALVE (FLxMJ) CONTRACTOR TO VERIFY EXISTING FIRE LINE LOCATION PRIOR TO CONSTRUCTION OF ANY PORTION OF PROPOSED FIRE HYDRANT SERVICE EXTENSION AND NOTIFY ENGINEER OF ANY DISCREPANCIES.
4	CONNECT NEW IRRIGATION SERVICE TO EXISTING 12" WATER MAIN WITH 22 LF 2" POLY AND 1" IRRIGATION METER PER COR STD PLAN 703.
5	PRESERVE AND PROTECT EXISTING FIRE HYDRANT TO REMAIN.

NOTE: ALL WATER MAIN PIPE SHALL BE RESTRAINED JOINT. RESTRAINED JOINTS FOR PUSH-ON TYPE JOINTS SHALL BE US PIPE FIELD-LOK GASKET AND AMERICAN PIPE FASTGRIP GASKET PER CITY OF REDMOND STANDARD.

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NAVIX PROJECT NUMBER: 50.601.002

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STAMP

PRELIMINARY
ISABELLE ELIZABETH FLAFLIN
STATE OF WASHINGTON
41872
REGISTERED PROFESSIONAL ENGINEER
08/22/2019

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SECTION, TOWNSHIP, RANGE:

NE 1/4 OF NW 1/4 OF SECTION 07, TOWNSHIP 25 NORTH, RANGE 06 EAST, W.M.

PROJECT TEAM

REVIEWED BY: J.TAFLIN
DESIGNED BY: J.GREEN

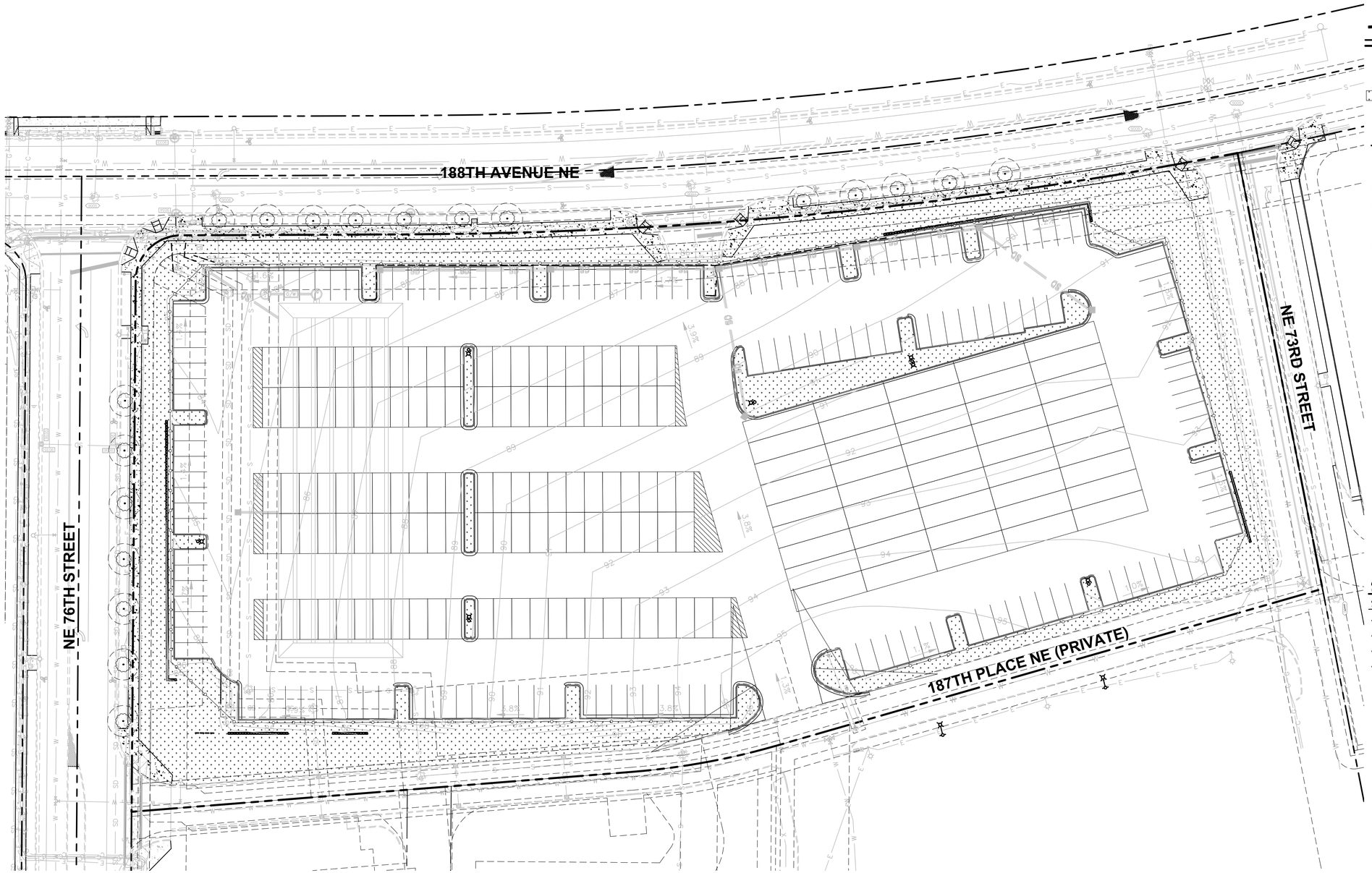
SHEET NAME

UTILITY PLAN

SHEET NUMBER

C-3.0
19-XXXX

B:\Washington\Redmond\SEA CON\Lot 3\2Drawings\RESC_LOT3_130U.dwg Aug 21, 2019 - 4:28pm



TREE PRESERVATION LEGEND

PROPERTY LINE

~ LOCATION OF EXISTING 6" DECIDUOUS STREET TREE WITH 5' DRIPLINE SETBACK - ALL WILL REMAIN WITH NO DISTURBANCE WITHIN THE 5' SETBACK

LANDSCAPE AREA - 31,576 SF

SITE DATA

SITE STATISTICS

TOTAL PROPERTY AREA: 179,936 SF (4.13 AC)
TOTAL IMPERVIOUS: 139,442 SF (77.5% OF 179,936 SF)
PERVIOUS AREA: 40,514 SF (22.5% OF 179,936 SF)

PROPOSED CAR PARKING

STANDARD STALLS (8.5' X 18'): 149 STALLS
COMPACT STALLS (7.5' X 16'): 16 STALLS
SHUTTLE BUS STALLS (10' X 22'): 115 STALLS
LARGE BUS STALLS (12' X 40'): 45 STALLS
TOTAL STALLS: 325 STALLS

SHEET INDEX

SHEET #	SHEET TITLE
L-1	TREE PROTECTION PLAN
L-2	PLANTING PLAN
L-3	PLANTING PLAN
L-4	PLANTING DETAILS

GRAPHIC SCALE
(IN FEET)

0 15 30 45 60 90

SCALE: 1:30

N

NOTES

1. EXISTING BASE INFORMATION AND PROPOSED SITE PLAN PROVIDED BY NAVIX ENGINEERING (425) 458-7934.

ECOLOGY SCORE COMPLIANCE

1. 25% OF THE PLANTS INSTALLED ARE NORTHWEST ADAPTIVE AND 25% OF THE PLANTS INSTALLED ARE NATIVE - 5 POINTS - PER THIS PLAN, 61% OF PLANTS PROVIDED ARE NATIVE - SEE SHEET L-4

3. MINIMUM OF 25% OF PROPOSED TREES ARE EVERGREENS - 5 POINTS - PER THIS PLAN, 46% OF TREES ARE EVERGREEN - SEE SHEET L-4

6. 10% INCREASE OVER THE MINIMUM NUMBER OF REQUIRED REPLACEMENT TREES, STREET TREES OR PARKING LOT TREES - 5 POINTS - PER THIS PLAN, 325 PARKING STALLS REQUIRES 81 PARKING LOT TREES AND 91 WERE PROVIDED

12. MINIMUM 50% OF REQUIRED PLANTING AREAS IN DISTURBED SOILS ARE AMENDED - 3 POINTS - PER THIS PLAN, ALL SOILS WILL BE AMENDED, SEE TOPSOIL SPECIFICATIONS ON FINAL LANDSCAPE PLAN.

20. INSTALLED TREES THAT WILL ATTAIN AN AVERAGE 30-FOOT-SPREAD CANOPY IN 10 YEARS WITHIN PARKING LOTS - 3 POINTS - PER THIS PLAN, PARKING LOT TREES ARE RED MAPLE, DOUGLAS FIR, INCENSE CEDAR AND SUGAR MAPLE - SEE SHEET L-4

TOTAL POINTS - 21

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Altmann Oliver Associates, LLC
AOA
Environmental Planning & Landscape Architecture
PO Box 578 Carnation, WA 98014 Office (425) 333-4535 Fax (425) 333-4509

STATE OF WASHINGTON REGISTERED LANDSCAPE ARCHITECT

SIMONE CATHERINE OLIVER
CERIFICATE NO. 744
EXPIRES 6/25/21

TREE PROTECTION PLAN
PRELIMINARY LANDSCAPE PLAN
MV TRANSPORTATION FACILITY EXPANSION - LOT 3
NE 76TH STREET & 188TH AVE. NE
REDMOND, WASHINGTON

Revisions	Date	By

Date 08-23-19
Scale AS NOTED
Project# 6010

Sheet # L-1
19-XXXX

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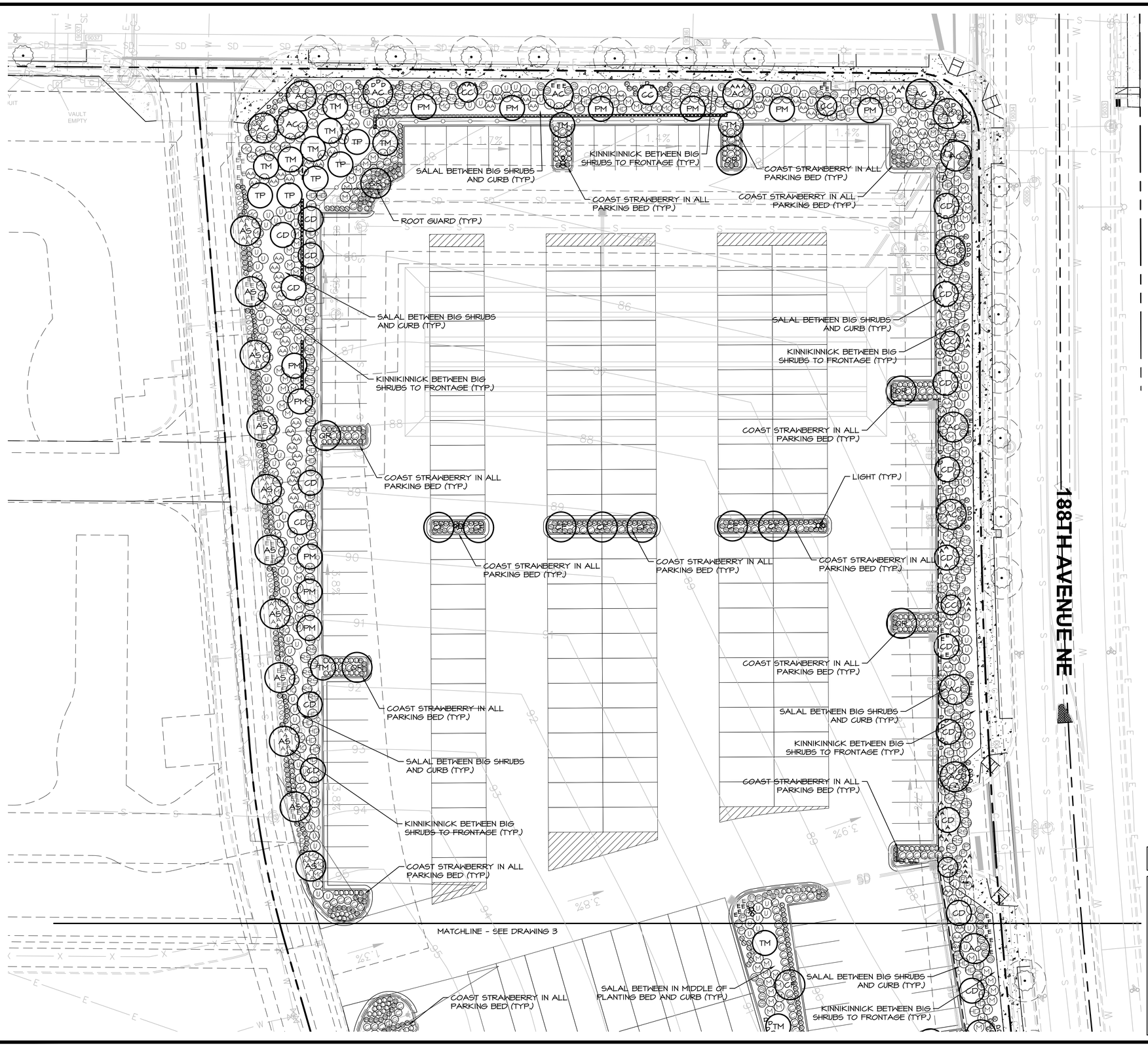

PLANT LIST (SEE L-8 FOR COMPLETE PLANT SCHEDULE)

EVERGREEN TREE

KEY	SCIENTIFIC NAME	COMMON NAME
CD	CALOCEDRUS DECURRENS	INCENSE CEDAR
PM	PSEUDOTSUGA MENZIESII	DOUGLAS FIR
TP	THUJA PLICATA	WESTERN RED CEDAR
TM	TSUGA MERTENSIANA	MAINTAIN HEMLOCK

DECIDUOUS TREE

KEY	SCIENTIFIC NAME	COMMON NAME
AS	ACER SACCHARUM	SUGAR MAPLE
QR	QUERCUS RUBRA	RED OAK
CF	STERWARTIA PSEUDOCAMELLIA	JAPANESE STERWARTIA

MULTI-STEM DECIDUOUS TREE

KEY	SCIENTIFIC NAME	COMMON NAME
AC	ACER CIRCINATUM	VINE MAPLE
CC	CORYLUS CORNUTA	WESTERN HAZELNUT

LARGE EVERGREEN SHRUB

KEY	SCIENTIFIC NAME	COMMON NAME
M	MAHONIA AQUIFOLIUM	TALL OREGON GRAPE
MC	MYRICA CALIFORNICA	PACIFIC WAX MYRTLE
U	RHODODENDRON 'UNIQUE'	UNIQUE RHODODENDRON

SMALL EVERGREEN SHRUB

KEY	SCIENTIFIC NAME	COMMON NAME
L	LAVANDULA ANGUSTIFOLIA	ENGLISH LAVENDER
N	MAHONIA NERVOSA	CREEPING OREGON GRAPE
R	ROSMARINUS OFFICINALIS	ROSEMARY
V	VACCINIUM OVATUM	EVERGREEN HUCKLEBERRY

LARGE DECIDUOUS SHRUB

KEY	SCIENTIFIC NAME	COMMON NAME
AA	AMELANCHIER ALNIFOLIA	SERVICEBERRY
HD	HOLODISCUS DISCOLOR	OCEAN SPRAY
RS	RIBES SANGUINEUM	RED-FLOWERING CURRANT

SMALL DECIDUOUS SHRUB / ORNAMENTAL GRASS

KEY	SCIENTIFIC NAME	COMMON NAME
B	BERBERIS THUNBERGII 'ROYAL BURGUNDY'	JAPANESE BARBERRY
C	PANICUM 'CHEYANNE SKY'	CHEYANNE SKY SWITCHGRASS
P	POTENTILLA FRUITICOSA 'MCKAY'S WHITE'	MCKAY'S WHITE BUSH CINQUEFOIL
G	ROSA GYMNOCARPA	BALDHIP ROSE
S	SPIRAEA JAPONICA 'LITTLE PRINCESS'	LITTLE PRINCESS SPIREA

EVERGREEN GROUNDCOVER / PERENNIAL

KEY	SCIENTIFIC NAME	COMMON NAME
	ARCTOSTAPHYLOS UVA-URSI	KINNICKINNIK
A	ASTILBE ARENDSII HYBRIDS	ASTILBE
O	HOSTA 'PATRIOT'	PATRIOT HOSTA
E	ECHINACEA PURPUREA	CONEFLOWER
	FRAGARIA CHILOENSIS	COAST STRAWBERRY
	GAULTHERIA SHALLON	SALAL
D	RUDBECKIA HIRTA	GLORIOSA DAISY

GRAPHIC SCALE
(IN FEET)
0 10 20 30 40 60
SCALE: 1:20

N

NOTES

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REDMOND, WASHINGTON

Revisions	Date	By

Date 08-23-19
Scale AS NOTED
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Sheet # L-2
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PLANT LIST (SEE L-8 FOR COMPLETE PLANT SCHEDULE)

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GRAPHIC SCALE
(IN FEET)
0 10 20 30 40 60
SCALE: 1:20

N

NOTES

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Altmann Oliver Associates, LLC
AOA
Environmental Planning & Landscape Architecture
PO Box 578 Carnation, WA 98014 Office (425) 333-4535 Fax (425) 333-4509

STATE OF WASHINGTON REGISTERED LANDSCAPE ARCHITECT

SIMONE CATHERINE OLIVER
CERIFICATE NO. 744
EXPIRES 6/25/21

PLANTING PLAN
PRELIMINARY LANDSCAPE PLAN
MV TRANSPORTATION FACILITY
EXPANSION - LOT 3
NE 78TH STREET & 188TH AVE. NE
REDMOND, WASHINGTON

Revisions	Date	By

Date 08-23-19
Scale AS NOTED
Project# 6010

Sheet # L-3
19-XXXX

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PLANT SCHEDULE

EVERGREEN TREE

KEY	SCIENTIFIC NAME	COMMON NAME	SPACING	QTY.	SIZE (MIN.)	NOTES	NATIVE	DROUGHT TOLERANT
CD	CALOCEDRUS DECURRENS	INCENSE CEDAR	AS SHOWN	23	6' HT.	FULL & BUSHY	X	X
PM	PSEUDOTSUGA MENZIESII	DOUGLAS FIR	AS SHOWN	16	6' HT.	FULL & BUSHY	X	X
TP	THUJA PLICATA	WESTERN RED CEDAR	AS SHOWN	11	6' HT.	FULL & BUSHY	X	X
TM	TSUGA MERTENSIANA	MAINTAIN HEMLOCK	AS SHOWN	13	6' HT.	FULL & BUSHY	X	X

DECIDUOUS TREE

KEY	SCIENTIFIC NAME	COMMON NAME	SPACING	QTY.	SIZE (MIN.)	NOTES	NATIVE	DROUGHT TOLERANT
AS	ACER SACCHARUM	SUGAR MAPLE	AS SHOWN	18	2.5" CAL.	SINGLE TRUNK	-	X
QR	QUERCUS RUBRA	RED OAK	AS SHOWN	14	2" CAL.	SINGLE TRUNK	-	X
CF	STEWARTIA PSEUDOCAMELLIA	JAPANESE STEWARTIA	AS SHOWN	13	2" CAL.	SINGLE TRUNK	-	X

MULTI-STEM DECIDUOUS TREE

KEY	SCIENTIFIC NAME	COMMON NAME	SPACING	QTY.	SIZE (MIN.)	NOTES	NATIVE	DROUGHT TOLERANT
AC	ACER CIRCINATUM	VINE MAPLE	AS SHOWN	21	7' HT.	MULTI-TRUNK (3 MIN.)	X	X
CC	CORYLUS CORNUTA	WESTERN HAZELNUT	AS SHOWN	8	7' HT.	MULTI-TRUNK (3 MIN.)	X	X

LARGE EVERGREEN SHRUB

KEY	SCIENTIFIC NAME	COMMON NAME	SPACING	QTY.	SIZE (MIN.)	NOTES	NATIVE	DROUGHT TOLERANT
M	MAHONIA AQUIFOLIUM	TALL OREGON GRAPE	4' O.C.	161	30" HT.	FULL & BUSHY	X	X
MC	MYRICA CALIFORNICA	PACIFIC WAX MYRTLE	4' O.C.	147	30" HT.	FULL & BUSHY	X	X
U	RHODODENDRON 'UNIQUE'	UNIQUE RHODODENDRON	4' O.C.	186	30" HT.	FULL & BUSHY	-	X

SMALL EVERGREEN SHRUB

KEY	SCIENTIFIC NAME	COMMON NAME	SPACING	QTY.	SIZE (MIN.)	NOTES	NATIVE	DROUGHT TOLERANT
L	LAVANDULA ANGUSTIFOLIA	ENGLISH LAVENDER	2' O.C.	264	2 GAL.	FULL & BUSHY	-	X
N	MAHONIA NERVOSA	CREEPING OREGON GRAPE	2' O.C.	66	2 GAL.	FULL & BUSHY	X	X
R	ROSMARINUS OFFICINALIS	ROSEMARY	2' O.C.	303	2 GAL.	FULL & BUSHY	-	X
V	VACCINIUM OVATUM	EVERGREEN HUCKLEBERRY	2' O.C.	116	2 GAL.	FULL & BUSHY	X	X

LARGE DECIDUOUS SHRUB

KEY	SCIENTIFIC NAME	COMMON NAME	SPACING	QTY.	SIZE (MIN.)	NOTES	NATIVE	DROUGHT TOLERANT
AA	AMELANCHIER ALNIFOLIA	SERVICEBERRY	4' O.C.	120	30" HT.	MULTI-STEM (3 MIN.)	X	X
HD	HOLODISCUS DISCOLOR	OCEAN SPRAY	4' O.C.	101	30" HT.	MULTI-STEM (3 MIN.)	X	X
RS	RIBES SANGUINEUM	RED-FLOWERING CURRANT	4' O.C.	125	30" HT	MULTI-STEM (3 MIN.)	X	X

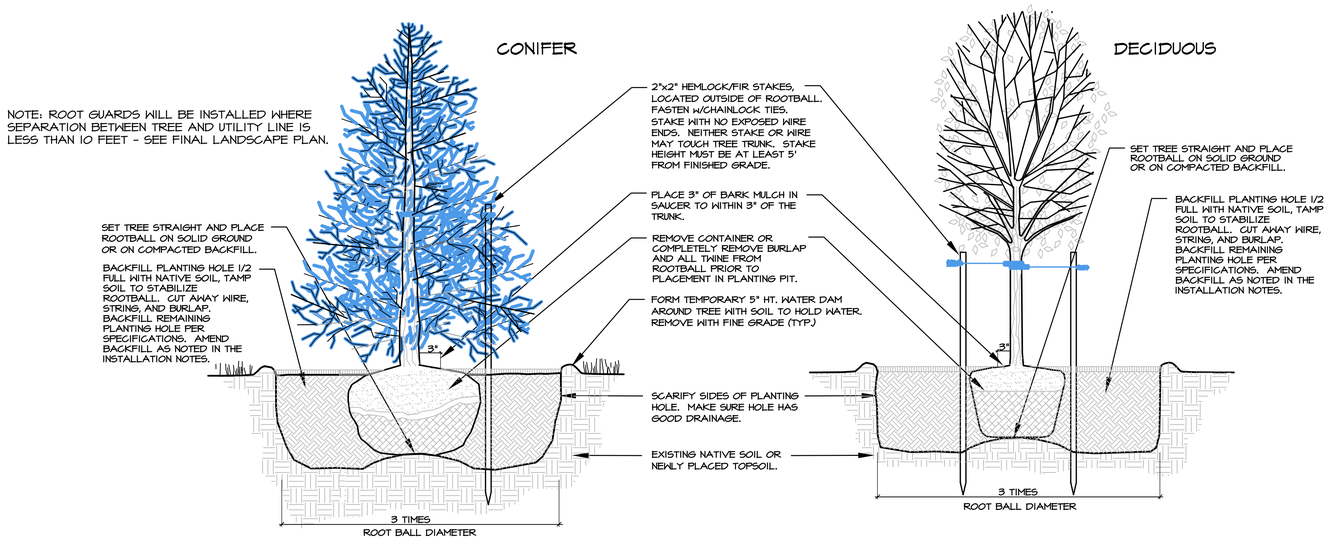
SMALL DECIDUOUS SHRUB / ORNAMENTAL GRASS

KEY	SCIENTIFIC NAME	COMMON NAME	SPACING	QTY.	SIZE (MIN.)	NOTES	NATIVE	DROUGHT TOLERANT
B	BERBERIS THUNBERGII 'ROYAL BURGUNDY'	JAPANESE BARBERRY	2' O.C.	111	2-5 GAL.	FULL & BUSHY	-	X
C	PANICUM 'CHEYANNE SKY'	CHEYANNE SKY SWITCHGRASS	3' O.C.	148	2-5 GAL.	FULL & BUSHY	-	X
P	POTENTILLA FRUITICOSA 'MCKAY'S WHITE'	MCKAY'S WHITE BUSH CINQUEFOIL	3' O.C.	87	2-5 GAL.	FULL & BUSHY	X	X
G	ROSA GYMNOCARPA	BALDHIP ROSE	3' O.C.	56	2-5 GAL.	FULL & BUSHY	X	X
S	SPIRAEA JAPONICA 'LITTLE PRINCESS'	LITTLE PRINCESS SPIREA	2' O.C.	82	2-5 GAL.	FULL & BUSHY	-	X

EVERGREEN GROUNDCOVER / PERENNIAL

KEY	SCIENTIFIC NAME	COMMON NAME	SPACING	QTY.	SIZE (MIN.)	NOTES	NATIVE	DROUGHT TOLERANT
	ARCTOSTAPHYLOS UVA-URSI	KINNICKINNIK	18" O.C.	*TBD	4" POT	FULL & BUSHY	X	X
A	ASTILBE ARENDSII HYBRIDS	ASTILBE	2' O.C.	67	1 GAL.	FULL & BUSHY	-	X
O	HOSTA 'PATRIOT'	PATRIOT HOSTA	2' O.C.	45	1 GAL.	FULL & BUSHY	X	X
E	ECHINACEA PURPUREA	CONEFLOWER	2' O.C.	62	1 GAL.	FULL & BUSHY	-	X
	FRAGARIA CHILOENSIS	COAST STRAWBERRY	18" O.C.	*TBD	4" POT	FULL & BUSHY	X	X
	GAULTHERIA SHALLON	SALAL	18" O.C.	*TBD	4" POT	FULL & BUSHY	X	X
D	RUDBECKIA HIRTA	GLORIOSA DAISY	3' O.C.	6	1 GAL.	FULL & BUSHY	-	X

*SEE FINAL LANDSCAPE PLAN



1 B&B TREE PLANTING (TYP.)
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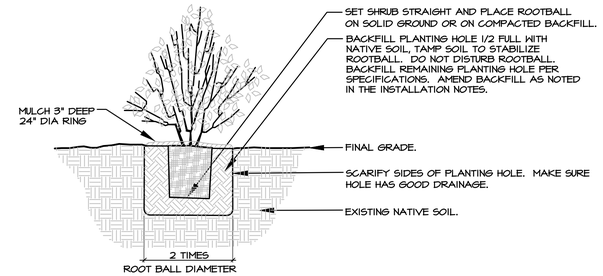

2 CONTAINER SHRUB PLANTING (TYP.)
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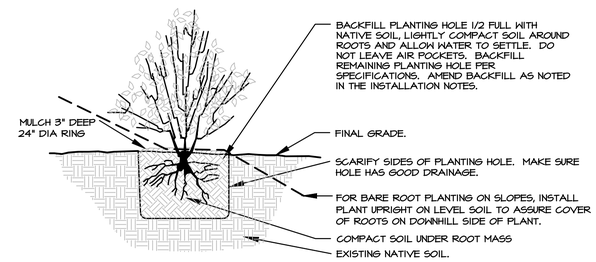

3 BARE-ROOT SHRUB PLANTING (TYP.)
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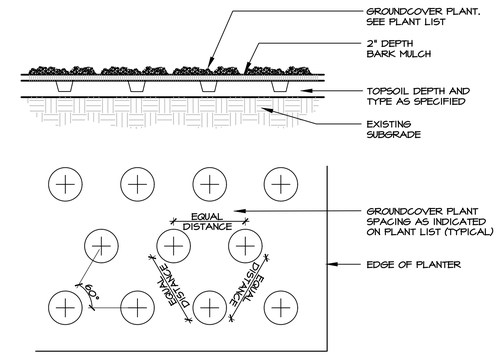

4 GROUNDCOVER PLANTING (TYP.)
SCALE: NTS

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FOR: DIRECTOR OF PUBLIC WORKS
CITY OF REDMOND

DATE:

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STORM:

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CERIFICATE NO. 744
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PLANT SCHEDULE & DETAILS
PRELIMINARY LANDSCAPE PLAN
MV TRANSPORTATION FACILITY
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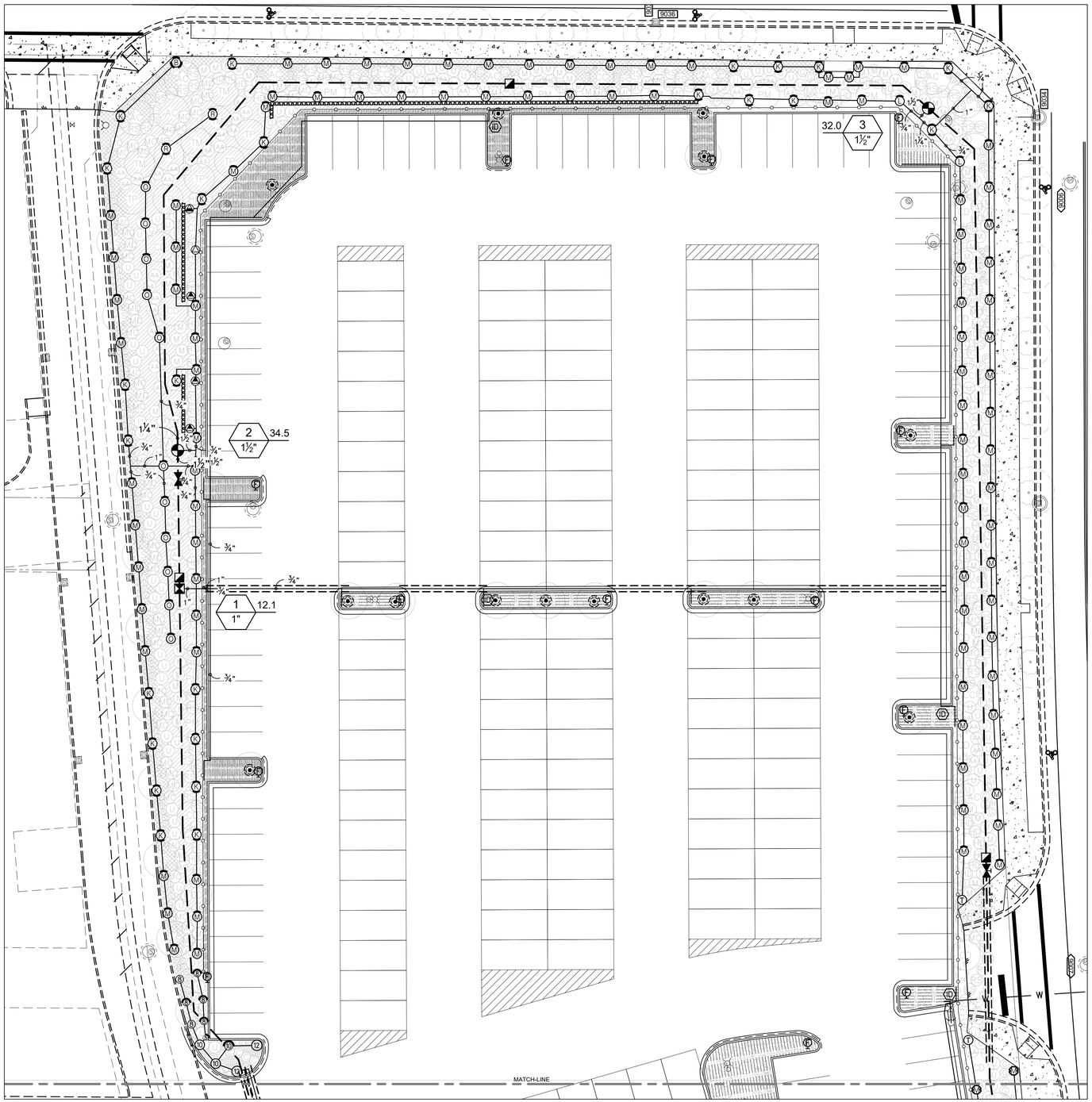

GRAPHIC SCALE
(IN FEET)
0 10 20 30 40 60
SCALE:1:20

N

NOTES

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SHEET INDEX

SHEET #	SHEET TITLE
I-1	IRRIGATION PLAN
I-2	IRRIGATION PLAN
I-3	IRRIGATION SCHED. & DETAILS
I-4	IRRIGATION DETAILS

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MV TRANSPORTATION FACILITY EXPANSION – LOT 3
NE 78TH STREET & 188TH AVE. NE
REDMOND, WASHINGTON

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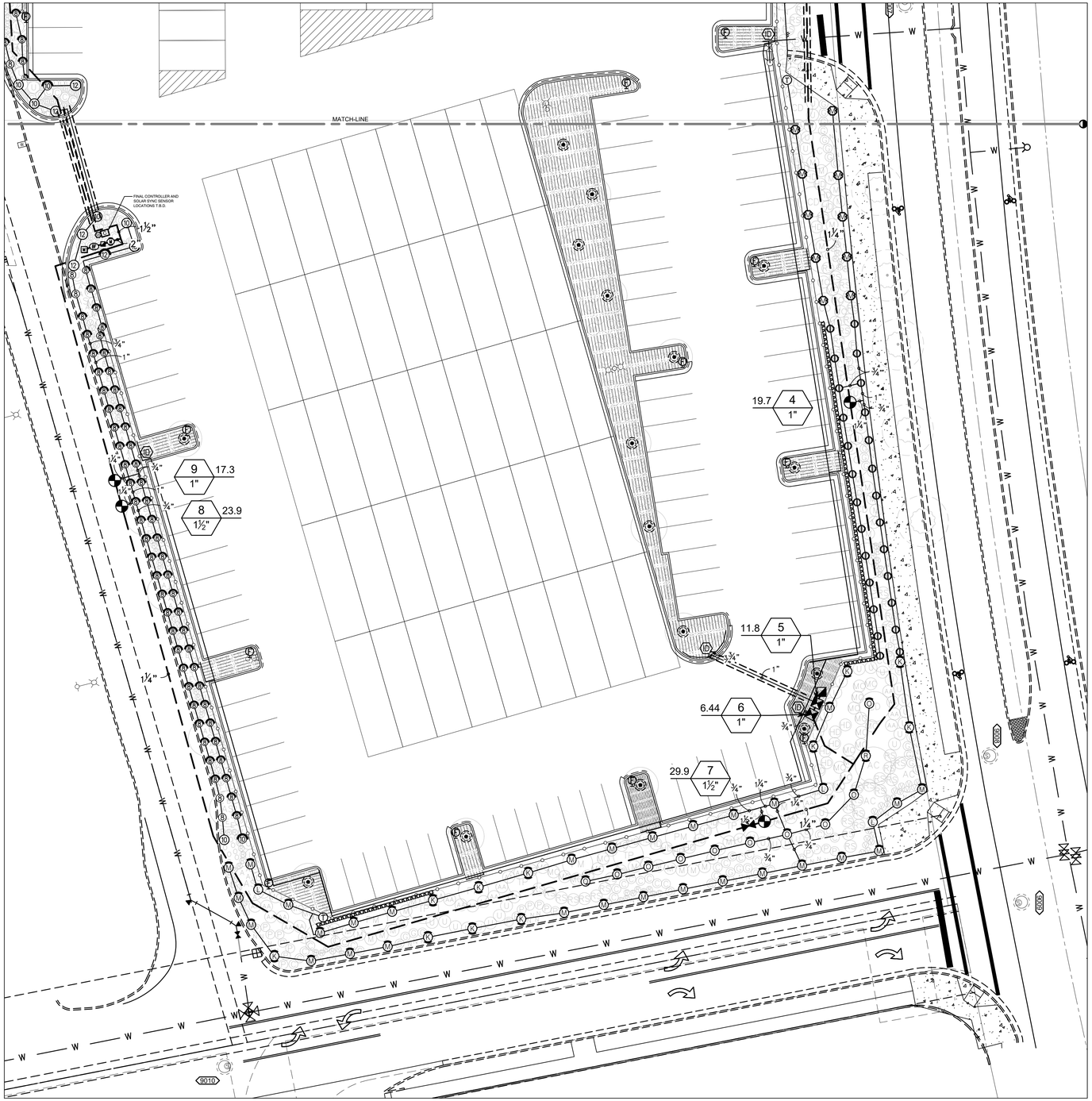

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SCALE:1:20

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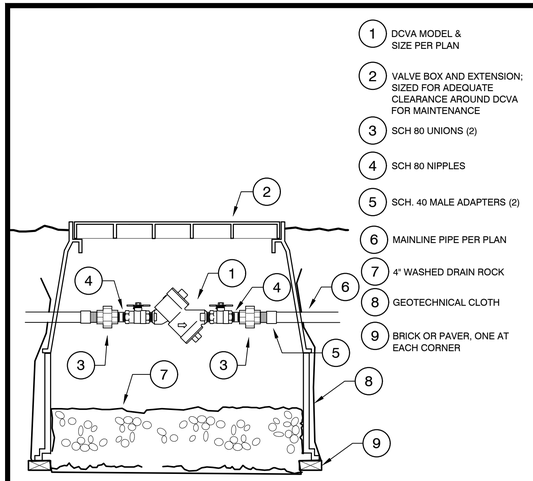
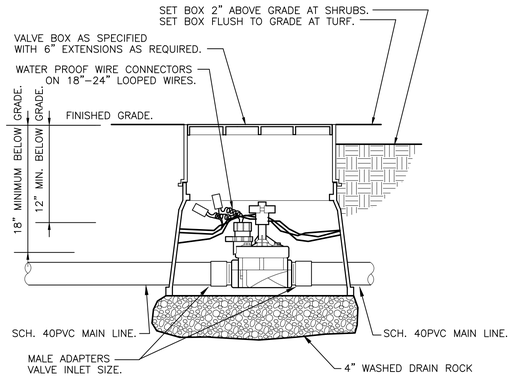


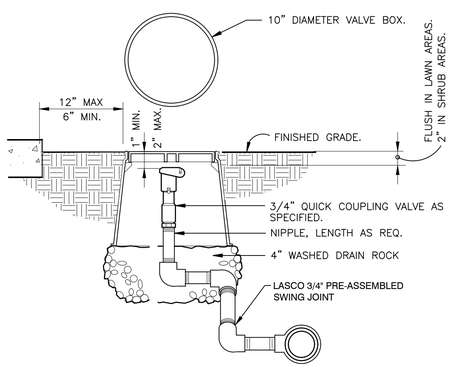
1 DCVA IN VALVE BOX

NTS DETAIL–FILE



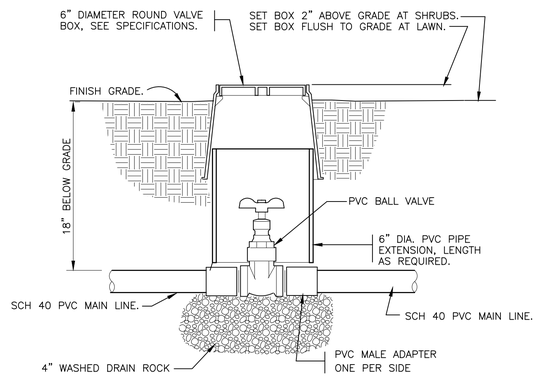
2 MASTER CONTROL VALVE

NTS DETAIL-FILE



3 QUICK COUPLING VALVE-PLM STANDARD DETAIL

NTS DETAIL-FILE



4 PVC ISOLATION VALVE-PLM STANDARD DETAIL

NTS DETAIL-FILE

VALVE SCHEDULE

NUMBER	MODEL	SIZE	TYPE	GPM	PSI	PSI @ POC	PRECIP
1	Netafim LVCZS8010075-HF	1"	Area for Dripline	12.11	54.96	64.72	0.38 in/h
2	Hunter ICV-G	1-1/2"	Shrub Rotary	34.46	43.81	65.62	0.43 in/h
3	Hunter ICV-G	1-1/2"	Shrub Rotary	32.03	45.72	72.56	0.42 in/h
4	Hunter ICV-G	1"	Shrub Rotary	19.67	44.43	61.20	0.86 in/h
5	Netafim LVCZS8010075-HF	1"	Area for Dripline	11.77	53.58	65.16	0.38 in/h
6	Netafim LVCZS8010075-HF	1"	Area for Dripline	6.44	49.33	58.55	0.38 in/h
7	Hunter ICV-G	1-1/2"	Shrub Rotary	29.91	44.97	71.86	0.48 in/h
8	Hunter ICV-G	1-1/2"	Shrub Spray	23.94	35.78	50.72	1.17 in/h
9	Hunter ICV-G	1"	Shrub Spray	17.34	35.26	46.75	1.03 in/h

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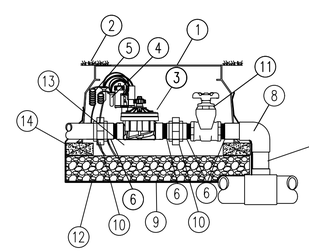
CRITICAL ANALYSIS

Generated:	2019-08-23 15:10
P.O.C. NUMBER: 03	
Water Source Information:	
FLOW AVAILABLE	
Water Meter Size:	1"
Flow Available:	37.50 gpm
PRESSURE AVAILABLE	
Static Pressure at POC:	85.00 psi
Elevation Change:	5.00 ft
Service Line Size:	2"
Length of Service Line:	20.00 ft
Pressure Available:	82.00 psi
DESIGN ANALYSIS	
Maximum Station Flow:	34.46 gpm
Flow Available at POC:	37.50 gpm
Residual Flow Available:	3.04 gpm
Pressure Req. at Critical Station:	45.73 psi
Loss for Fittings:	1.15 psi
Loss for Main Line:	11.52 psi
Loss for POC to Valve Elevation:	0.00 psi
Loss for Backflow:	6.50 psi
Loss for Master Valve:	1.54 psi
Loss for Water Meter:	6.13 psi
Critical Station Pressure at POC:	72.57 psi
Pressure Available:	82.00 psi
Residual Pressure Available:	9.43 psi



1 JUMBO VALVE BOX
2 FINISH GRADE
3 REMOTE CONTROL VALVE MODEL PER PLAN
4 WATERPROOF CONNECTORS (2)
5 18–24" COILED WIRE
6 SCH 80 T.O.E. NIPPLE
7 SCH 80 NIPPLE
8 MAIN LINE PIPE & FITTINGS
9 3/4" MINUS WASHED GRAVEL
10 PVC SLIP UNIONS
11 ISOLATION VALVE AS SPECIFIED
12 GEOTECHNICAL CLOTH UNDER GRAVEL--WRAP UP SIDES
13 4" CLEARANCE BETWEEN VALVE AND GRAVEL
14 PAVING UNIT AT EACH CORNER

5 REMOTE CONTROL VALVE WITH S.O.V.

NTS 328406.13-10

IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL
18 Q, 18 H, 18 F	Hunter PROS-12-PRS30-CV 5` radius
18 Q, 18 T, 18 H, 18 F	Hunter PROS-12-PRS30-CV 8` radius
18 Q, 18 T, 18 H, 18 F	Hunter PROS-12-PRS30-CV 10` radius
18 Q, 18 T, 18 H, 18 TT, 18 TQ, 18 F	Hunter PROS-12-PRS30-CV 12` radius
4, 6, 8, 10, 12, 15, 17	Hunter PROS-12-PRS30-CV ADJ
T	Hunter MP Corner PROS-12-PRS40-CV
LST, RST, SST	Hunter MP Strip PROS-12-PRS40-CV
M, L, S	Hunter MP1000 PROS-12-PRS40-CV
M, L, S	Hunter MP2000 PROS-12-PRS40-CV
M, L, S	Hunter MP3000 PROS-12-PRS40-CV
ADJ, 360	Hunter MP800SR PROS-12-PRS40-CV
M, L, S	Hunter MP815 PROS-12-PRS40-CV

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION
	Netafim LVCZS8010075-HF Pre-Assembled Control Zone Kit, with 1" Series 80 Control Valve, 3/4" Disc Filter, and High Flow Pressure Regulator 4.5GPM to 17.6GPM.
	Netafim TLSOV 1/2" insert ball valve in 10" valve box. Provide adequate blank tubing or Cobra tubing to extend ball valve out of box.
	Hunter ECO-ID Working Pressure: 15-50 PSI. Inlet: 1/2" FPT (attach with PVC fitting or flexible swing joint). Visual: 6" yellow pop-up stem. Body/Stem: UV-resistant plastic
	Drip Line Tree Ring 0.4 GPH @ 12" o.c. Approximately 20 lf of tubing per tree. Connect to dripline grid.
	Area to Receive Dripline Netafim TLHCVXR3-12 (18) Techline HCVXR Pressure Compensating Landscape Dripline with Check Valve and Anti-Siphon feature. 0.33GPH emitters at 12.0" O.C. Dripline laterals spaced at 18.0" apart, with emitters offset for triangular pattern. 17mm.

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION
	Hunter ICV-G 1", 1-1/2", 2", and 3" Plastic Electric Remote Control Valves, Globe Configuration, with NPT Threaded Inlet/Outlet, for Commercial/Municipal Use.
	Hunter HQ-44LRC Quick coupler valve, yellow rubber locking cover, red brass and stainless steel, with 1" NPT inlet, 2-piece body.
	Nibco T-113-BHW Class 125 bronze gate shut off valve with bronze wheel handle, same size as mainline pipe diameter at valve location. Size Range - 1/4" - 3"
M	Hunter IBV 1-1/2" 1", 1-1/2", 2", and 3" Brass Electric Master Valve, Globe Configuration, with NPT Threaded Inlet/Outlet, for Commercial/Municipal Use.
BF	Zurn 950XLT 1-1/2" Double Check Valve Assembly
C	Hunter IC-1200-PP Modular Controller, 12 stations, Outdoor Model, Plastic Pedestal. Commercial Use. With one ICM-600 module included.
SS	Hunter WSS Wireless Solar, rain freeze sensor with outdoor interface, connects to Hunter PCC, Pro-C, and I-Core Controllers, install as noted. Includes 10 year lithium battery and rubber module cover, and gutter mount bracket.
M	Water Meter 1"
	Irrigation Lateral Line: PVC Class 200 SDR 21
	Irrigation Mainline: PVC Schedule 40
	Pipe Sleeve: PVC Schedule 40

Valve Callout
Valve Number
Valve Flow
Valve Size

Altmann Oliver Associates, LLC
AOA Environmental Planning & Landscape Architecture
PO Box 578 Carnation, WA 98014 Office (425) 333-4535 Fax (425) 333-4509

STATE OF WASHINGTON REGISTERED LANDSCAPE ARCHITECT

SIMONE CATHERINE OLIVER
CERIFICATE NO. 744
EXPIRES 6/25/21

IRRIGATION SCHEDULES & DETAILS
PRELIMINARY LANDSCAPE PLAN
MV TRANSPORTATION FACILITY
EXPANSION – LOT 3
NE 78TH STREET & 188TH AVE. NE
REDMOND, WASHINGTON

Revisions	Date	By

Date 08–23–19
Scale AS NOTED
Project# 6010

Sheet # L–3
19–XXXX

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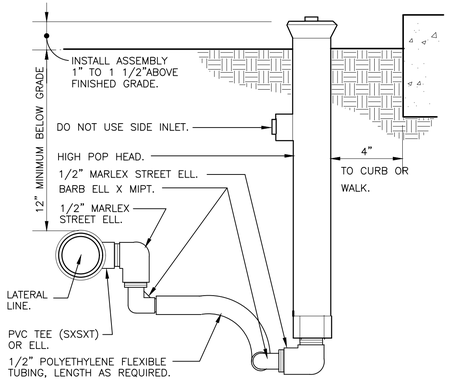
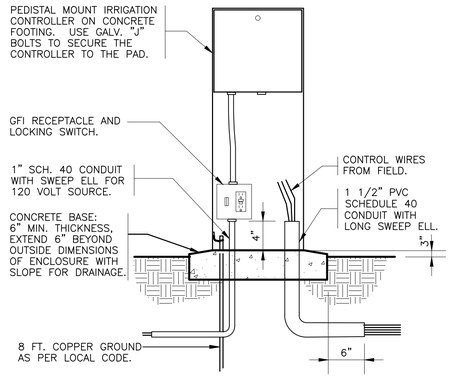
6010 Vision Hall Lot Irrigation.dwg



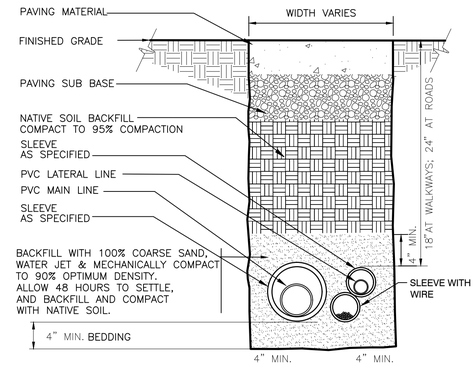
1 SHRUB SPRAY HIGHPOP W/ FLEX ASSEMBLY

NTS 328403.29-01



2 PEDESTAL MOUNT CONTROLLER

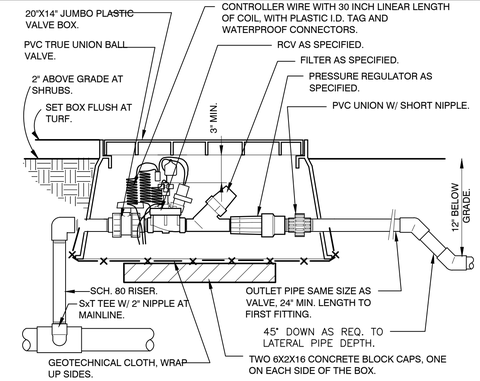
NTS 328409.13-03



NOTE: COMPACTED NATIVE SOILS ONLY MAY BE USED UNDER WALKWAYS.

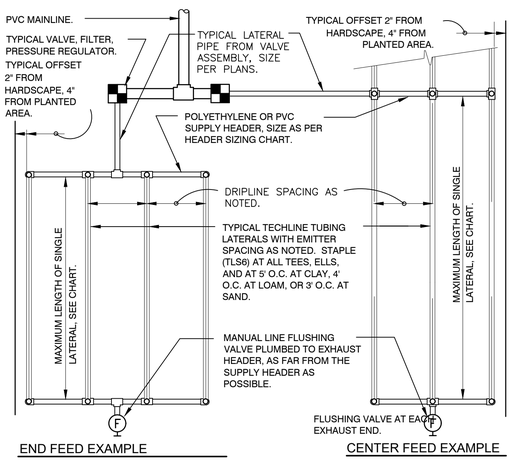
3 SLEEVE DETAIL

NTS 328409.76-20



4 1" DRIP VALVE KIT

NTS 328413.76-29



TECHLINE CV MAXIMUM LENGTH OF SINGLE LATERAL (FEET)

DRIPPER SPACING			12"				18"				24"	
DRIPPER FLOW RATE (GPH)			0.26	0.4	0.6	0.9	0.26	0.4	0.6	0.9	0.6	0.9
INLET PRESSURE (PSI)		15	127	109	86	65	177	151	120	91	152	116
		25	427	325	256	194	604	459	361	274	458	348
		35	539	409	322	244	763	579	456	346	580	440
		45	618	469	369	280	877	664	523	397	666	506

TECHLINE FLOW PER 100 FEET

DRIPPER SPACING	0.26 GPH DRIPPER		0.4 GPH DRIPPER		0.6 GPH DRIPPER		0.9 GPH DRIPPER	
	GPH	GPM	GPH	GPM	GPH	GPM	GPH	GPM
12"	26.40	0.44	40.00	0.67	61.00	1.02	92.00	1.53
18"	17.58	0.29	26.67	0.44	41.00	0.68	61.00	1.02
24"	N/A	N/A	N/A	N/A	31.00	0.51	46.00	0.77

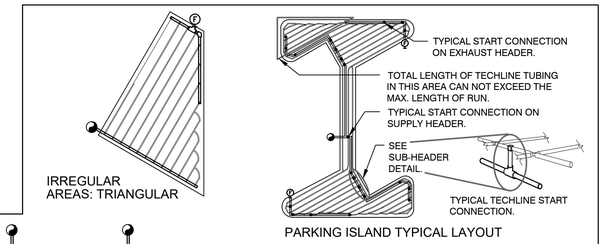
SUPPLY AND EXHAUST HEADER SIZING CHART (UNLESS NOTED ON PLANS)

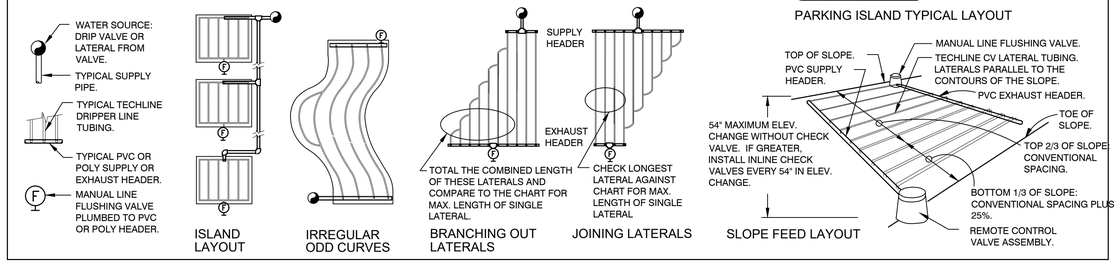
STEP 1: ADD LENGTH OF ALL TECHLINE LATERAL TUBING CONNECTED TO THE HEADER.
STEP 2: DIVIDE THIS TOTAL LENGTH BY 100 TO INDICATE THE LENGHT IN UNITS OF 100.
STEP 3: LOCATE THE GPM THAT APPLIES FOR EACH UNIT OF 100 FEET LENGTH ON THE CHART "TECHLINE FLOW PER 100 FEET". MULTIPLY THIS GPM NUMBER TIMES THE UNITS OF 100 FEET FOR THE TOTAL GPM AT THIS HEADER.
STEP 4: SIZE THE HEADER WITH THE FOLLOWING:

1 TO 6 GPM:	3/4" HEADER.	6 TO 10 GPM: 1" HEADER.
10 TO 20 GPM:	1 1/4" HEADER.	20 TO 30 GPM: 1 1/2" HEADER.

TECHLINE CV GENERAL GUIDELINES FOR WATERING TIME

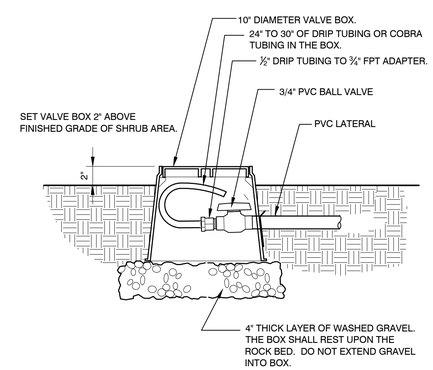
	TURF			SHRUB & GROUND COVER		
	CLAY	LOAM	SANDY	CLAY	LOAM	SANDY
DIPPER FLOW (GPH)	0.26	0.4	0.6	0.26	0.4	0.6
DRIPPER INTERVAL	18"	12"	12"	18"	18"	12"
LATERAL (ROW) SPACING	18"–22"	18"–22"	12"–16"	18"–24"	18"–24"	16"–20"
APPLICATION RATE (IN/HR)	.19–0.15	.43–.35	.96–.72	.19–.21	.29–.21	.72–.58
TIME TO APPLY 1/4"	79–100	35–43	16–21	79–107	52–71	21–26





5 TYPICAL NETAFIM TECHLINE CV REQUIREMENTS

N.T.S. 328413.56–04

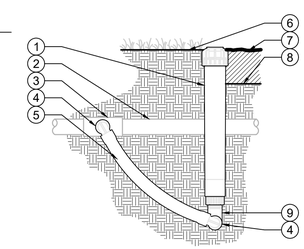


6 DRIP FLUSH VALVE-PVC CONNECTION

NTS DETAIL-FILE

LEGEND:

1. ECO INDICATOR - ECOID
2. LATERAL PIPE PER PLAN
3. FPT CONNECTION FROM LATERAL
4. BARB ELBOW
5. FLEX TUBING
6. FINISHED GRADE IN TURF
7. ADJACENT MULCH
8. FINISHED GRADE IN PLANTER BED
9. MARLEX STREET ELBOW



7 HUNTER ECO-INDICATOR

NTS 328413-02

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PO Box 578 Carnation, WA 98014 Office (425) 333-4535 Fax (425) 333-4509

STATE OF WASHINGTON REGISTERED LANDSCAPE ARCHITECT

SIMONE CATHERINE OLIVER
CERIFICATE NO. 744
EXPIRES 6/25/21

IRRIGATION DETAILS
PRELIMINARY LANDSCAPE PLAN
MV TRANSPORTATION FACILITY EXPANSION – LOT 3
NE 78TH STREET & 188TH AVE. NE
REDMOND, WASHINGTON

Revisions	Date	By

Date 08–23–19
Scale AS NOTED
Project# 6010

Sheet # 1–3
19–XXXX

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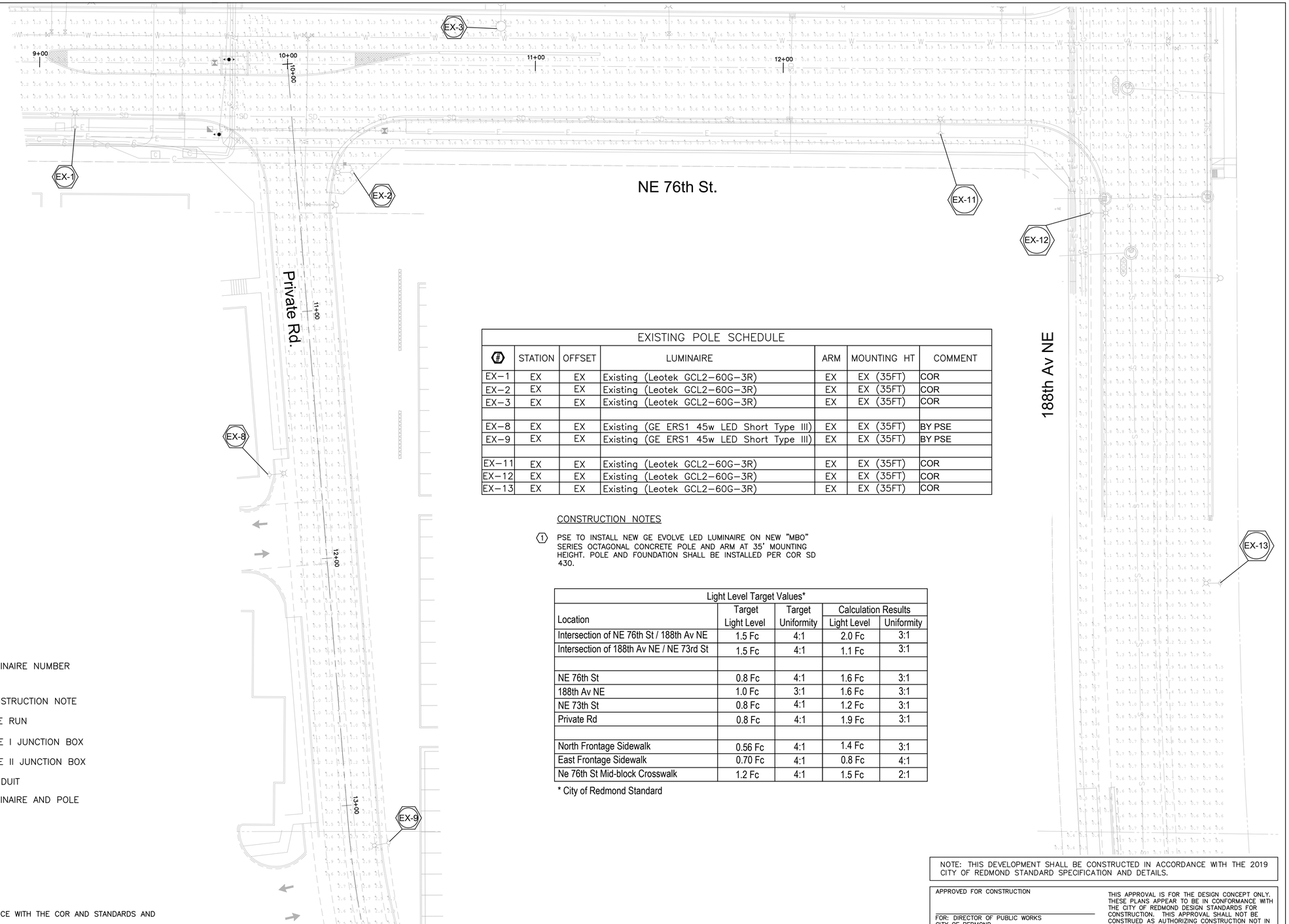

MATCH LINE STA 13+48.5 (Sheet IL02)

EXISTING POLE SCHEDULE						
#	STATION	OFFSET	LUMINAIRE	ARM	MOUNTING HT	COMMENT
EX–1	EX	EX	Existing (Leotek GCL2–60G–3R)	EX	EX (35FT)	COR
EX–2	EX	EX	Existing (Leotek GCL2–60G–3R)	EX	EX (35FT)	COR
EX–3	EX	EX	Existing (Leotek GCL2–60G–3R)	EX	EX (35FT)	COR
EX–8	EX	EX	Existing (GE ERS1 45w LED Short Type III)	EX	EX (35FT)	BY PSE
EX–9	EX	EX	Existing (GE ERS1 45w LED Short Type III)	EX	EX (35FT)	BY PSE
EX–11	EX	EX	Existing (Leotek GCL2–60G–3R)	EX	EX (35FT)	COR
EX–12	EX	EX	Existing (Leotek GCL2–60G–3R)	EX	EX (35FT)	COR
EX–13	EX	EX	Existing (Leotek GCL2–60G–3R)	EX	EX (35FT)	COR

CONSTRUCTION NOTES

(1) PSE TO INSTALL NEW GE EVOLVE LED LUMINAIRE ON NEW "MBO" SERIES OCTAGONAL CONCRETE POLE AND ARM AT 35' MOUNTING HEIGHT. POLE AND FOUNDATION SHALL BE INSTALLED PER COR SD 430.

Light Level Target Values*				
Location	Target Light Level	Target Uniformity	Calculation Results	
			Light Level	Uniformity
Intersection of NE 76th St / 188th Av NE	1.5 Fc	4:1	2.0 Fc	3:1
Intersection of 188th Av NE / NE 73rd St	1.5 Fc	4:1	1.1 Fc	3:1
NE 76th St	0.8 Fc	4:1	1.6 Fc	3:1
188th Av NE	1.0 Fc	3:1	1.6 Fc	3:1
NE 73th St	0.8 Fc	4:1	1.2 Fc	3:1
Private Rd	0.8 Fc	4:1	1.9 Fc	3:1
North Frontage Sidewalk	0.56 Fc	4:1	1.4 Fc	3:1
East Frontage Sidewalk	0.70 Fc	4:1	0.8 Fc	4:1
Ne 76th St Mid-block Crosswalk	1.2 Fc	4:1	1.5 Fc	2:1

* City of Redmond Standard

LEGEND

EXISTING	PROPOSED	
#	#	LUMINAIRE NUMBER
	#	CONSTRUCTION NOTE
	#	WIRE RUN
		TYPE I JUNCTION BOX
		TYPE II JUNCTION BOX
		CONDUIT
		LUMINAIRE AND POLE

GENERAL NOTES

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE COR AND STANDARDS AND SPECIFICATIONS.
2. THE LOCATION OF FEATURES SHOWN ARE APPROXIMATE AND SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION START.
3. UTILITY LOCATIONS ARE APPROXIMATE AND SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO ANY ILLUMINATION WORK.
4. ALL WORK SHALL BE CONSISTENT WITH UTILITY AGENCY REQUIREMENTS. THE CONTRACTOR SHALL COORDINATE WITH AFFECTED UTILITY AGENCIES THROUGHOUT THE PROJECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO UTILITIES.
5. CONTRACTOR TO VERIFY SOIL CONDITIONS PRIOR TO CONSTRUCTION.
6. COORDINATE REMOVAL AND RECYCLING OF EXISTING STREETLIGHT WITH CITY INSPECTOR.

NOTE: THIS DEVELOPMENT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE 2019 CITY OF REDMOND STANDARD SPECIFICATION AND DETAILS.

APPROVED FOR CONSTRUCTION

FOR: DIRECTOR OF PUBLIC WORKS
CITY OF REDMOND

DATE:

PLAN CHK ENGR:

STORM:

UTILITY:

FIRE:

TRANS/ENGR:

PLANNING:

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t: 425.883.4134 | f: 425-867-0898
www.tsinw.com

CLIENT/OWNER

MV TRANSIT

PROJECT NAME

MV TRANSPORTATION FACILITY EXPANSION

NAVIX PROJECT NUMBER: 50.601.002

PROJECT ADDRESS

NE 76TH STREET AND 188TH AVENUE NE REDMOND, WA 98052

STAMP

PRELIMINARY
MARY ANN BREILLIN OLSON
STATE OF WASHINGTON
36307
REGISTERED PROFESSIONAL ENGINEER

REVISIONS

REV	ISSUED FOR:	DATE
1	30% PREP	08.23.19

811

SECTION, TOWNSHIP, RANGE:

NE 1/4 OF NW 1/4 OF SECTION 07, TOWNSHIP 25 NORTH, RANGE 06 EAST, W.M.

PROJECT TEAM

REVIEWED BY: J.HEE
DESIGNED BY: M.OLSON

SHEET NAME

ILLUMINATION PLAN

IL01

SHEET NUMBER

19-XXXX

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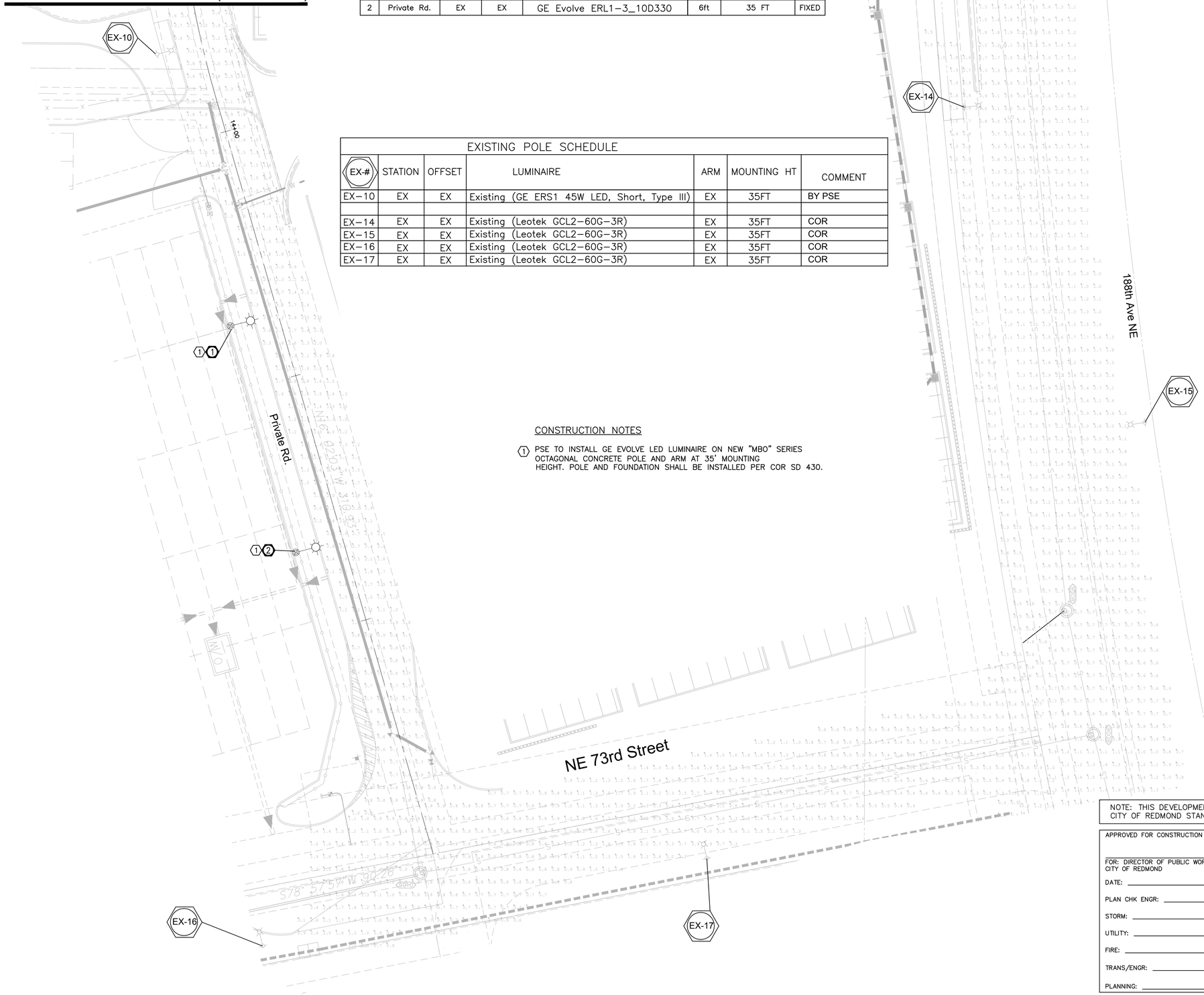
MATCH LINE STA 13+48.5 (Sheet IL01)



PROPOSED POLE SCHEDULE

#	STREET NAME	STATION	POLE OFFSET	LUMINAIRE	ARM LENGTH	MOUNTING HEIGHT	BASE
1	Private Rd.	EX	EX	GE Evolve ERL1-3_10D330	6ft	35 FT	FIXED
2	Private Rd.	EX	EX	GE Evolve ERL1-3_10D330	6ft	35 FT	FIXED

EXISTING POLE SCHEDULE

EX-#	STATION	OFFSET	LUMINAIRE	ARM	MOUNTING HT	COMMENT
EX-10	EX	EX	Existing (GE ERS1 45W LED, Short, Type III)	EX	35FT	BY PSE
EX-14	EX	EX	Existing (Leotek GCL2-60G-3R)	EX	35FT	COR
EX-15	EX	EX	Existing (Leotek GCL2-60G-3R)	EX	35FT	COR
EX-16	EX	EX	Existing (Leotek GCL2-60G-3R)	EX	35FT	COR
EX-17	EX	EX	Existing (Leotek GCL2-60G-3R)	EX	35FT	COR

CONSTRUCTION NOTES

1. PSE TO INSTALL GE EVOLVE LED LUMINAIRE ON NEW "MBO" SERIES OCTAGONAL CONCRETE POLE AND ARM AT 35' MOUNTING HEIGHT. POLE AND FOUNDATION SHALL BE INSTALLED PER COR SD 430.

NOTE: THIS DEVELOPMENT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE 2019 CITY OF REDMOND STANDARD SPECIFICATION AND DETAILS.

APPROVED FOR CONSTRUCTION

FOR: DIRECTOR OF PUBLIC WORKS
CITY OF REDMOND

DATE: _____

PLAN CHK ENGR: _____

STORM: _____

UTILITY: _____

FIRE: _____

TRANS/ENGR: _____

PLANNING: _____

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CLIENT/OWNER

MV TRANSIT

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MV TRANSPORTATION FACILITY EXPANSION

NAVIX PROJECT NUMBER: 50.601.002

PROJECT ADDRESS

NE 76TH STREET AND 188TH AVENUE NE REDMOND, WA 98052

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REGISTERED PROFESSIONAL ENGINEER

REVISIONS

REV	ISSUED FOR:	DATE
1	30% PREP	08.23.19

SECTION, TOWNSHIP, RANGE:

NE 1/4 OF NW 1/4 OF SECTION 07, TOWNSHIP 25 NORTH, RANGE 06 EAST, W.M.

PROJECT TEAM

REVIEWED BY: J.HEE
DESIGNED BY: M.OLSON

SHEET NAME

ILLUMINATION PLAN

IL02

SHEET NUMBER

19-XXXX

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SCALE
1 inch = 20 ft.

NEW POLE SCHEDULE					
#	COORDINATES		LUMINAIRE	MOUNTING HEIGHT	MOUNT TYPE
	X	Y			
1	1,330,724.7	247,646.2	CREE OSQ-A-2ME-K-30K-UL-CO	40FT	SINGLE
2	1,330,681.4	247,497.9	CREE OSQ-A-2ME-K-30K-UL-CO	40FT	SINGLE
3	1,330,829.5	247,498.2	CREE OSQ-A-2ME-K-30K-UL-CO	40FT	SINGLE

CONSTRUCTION NOTES

1. PSE TO INSTALL SINGLE-MOUNT CREE OSQ LED LUMINAIRE ON NEW "MBO" SERIES OCTAGONAL CONCRETE POLE AND ARM AT 40FT MOUNTING HEIGHT. POLE AND FOUNDATION SHALL BE INSTALLED PER COR SD 430.
2. PSE TO INSTALL DOUBLE-MOUNT CREE OSQ LED LUMINAIRE ON NEW "MBO" SERIES OCTAGONAL CONCRETE POLE AND ARM AT 40FT MOUNTING HEIGHT. POLE AND FOUNDATION SHALL BE INSTALLED PER COR SD 430.

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LEGEND

EXISTING	PROPOSED	
	#	LUMINAIRE NUMBER
	#	CONSTRUCTION NOTE
	#	WIRE RUN
		TYPE I JUNCTION BOX
		TYPE II JUNCTION BOX
		ELECTRICAL SERVICE CABINET
		CONDUIT
		LUMINAIRE AND POLE

Proposed Light Fixture		
	Distribution	3R
	Color Temp. (CCT)	3000K
	Model Cree OSQ-A-2ME-K-30K-UL-CO	

NOTE: THIS DEVELOPMENT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE 2019 CITY OF REDMOND STANDARD SPECIFICATION AND DETAILS.

APPROVED FOR CONSTRUCTION

FOR: DIRECTOR OF PUBLIC WORKS
CITY OF REDMOND

DATE: _____

PLAN CHK ENGR: _____

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PROJECT NAME

MV TRANSPORTATION FACILITY EXPANSION

NAVIX PROJECT NUMBER: 50.601.002

PROJECT ADDRESS

NE 76TH STREET AND 188TH AVENUE NE REDMOND, WA 98052

STAMP

REVISIONS

REV	ISSUED FOR:	DATE
1	30% PREP	08.23.19

SECTION, TOWNSHIP, RANGE:

NE 1/4 OF NW 1/4 OF SECTION 07, TOWNSHIP 25 NORTH, RANGE 06 EAST, W.M.

PROJECT TEAM

REVIEWED BY: J.HEE
DESIGNED BY: M.OLSON

SHEET NAME

ILLUMINATION PLAN

IL03

SHEET NUMBER

19-XXXX

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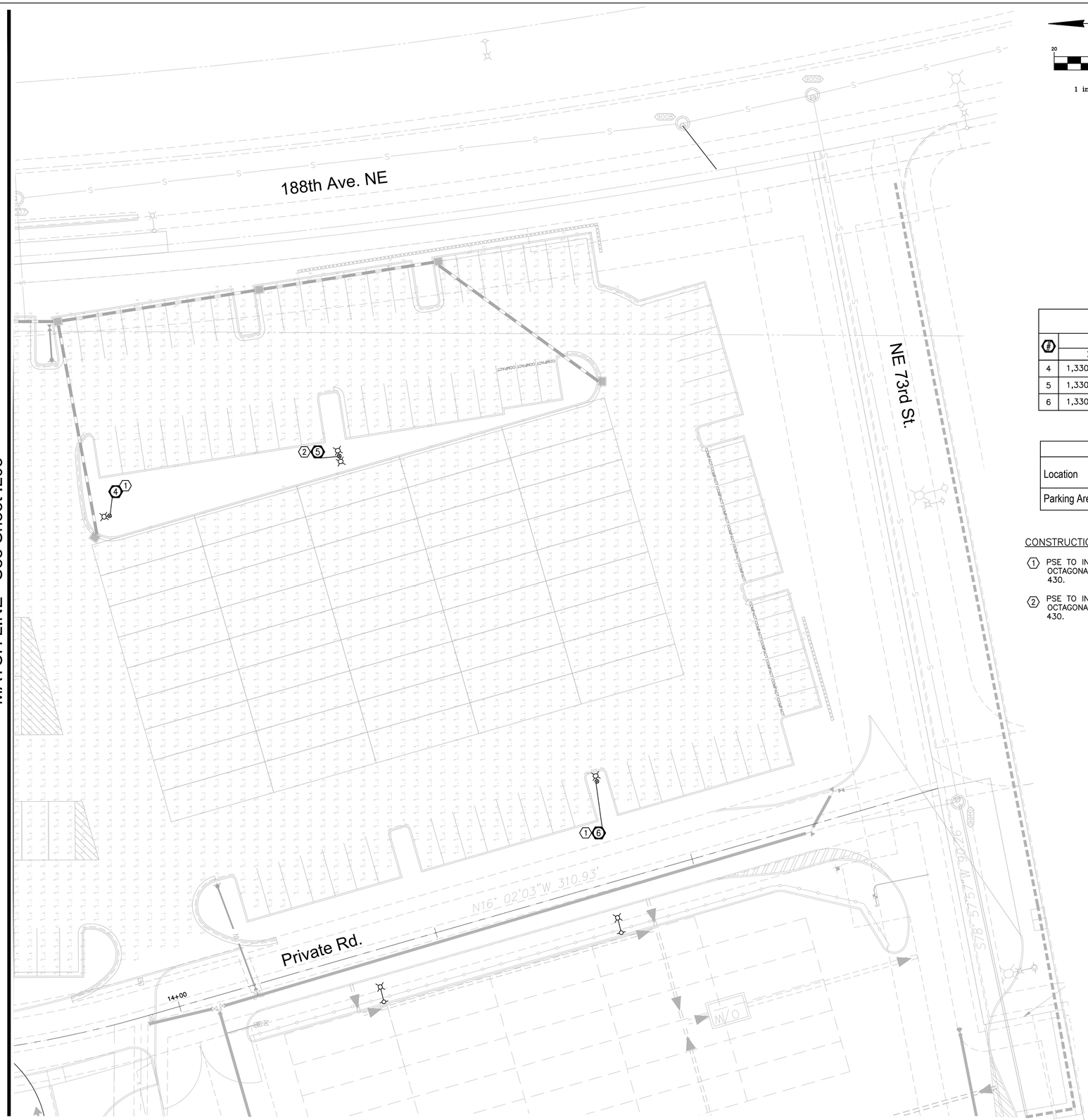

NEW POLE SCHEDULE					
#	COORDINATES		LUMINAIRE	MOUNTING HEIGHT	MOUNTING TYPE
	X	Y			
4	1,330,800.8	247,341.7	CREE OSQ-A-2ME-K-30K-UL-CO	40FT	SINGLE
5	1,330,823.3	247,255.4	CREE OSQ-A-2ME-K-30K-UL-CO	40FT	DOUBLE
6	1,330,701.5	247,158.8	CREE OSQ-A-2ME-K-30K-UL-CO	40FT	SINGLE

Light Level Target Values				
Location	Target Light Level	Target Uniformity	Results	
			Light Level	Uniformity
Parking Area	0.8 Fc	10:1	1.0 Fc	10:1

CONSTRUCTION NOTES

1. PSE TO INSTALL NEW CREE SINGLE-MOUNT OSQ LED LUMINAIRE ON NEW "MBO" SERIES OCTAGONAL CONCRETE POLE. POLE AND FOUNDATION SHALL BE INSTALLED PER COR SD 430.
2. PSE TO INSTALL NEW CREE DOUBLE-MOUNT OSQ LED LUMINAIRE ON NEW "MBO" SERIES OCTAGONAL CONCRETE POLE. POLE AND FOUNDATION SHALL BE INSTALLED PER COR SD 430.

NOTE: THIS DEVELOPMENT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE 2019 CITY OF REDMOND STANDARD SPECIFICATION AND DETAILS.

APPROVED FOR CONSTRUCTION

FOR: DIRECTOR OF PUBLIC WORKS
CITY OF REDMOND

DATE: _____

PLAN CHK ENGR: _____

STORM: _____

UTILITY: _____

FIRE: _____

TRANS/ENGR: _____

PLANNING: _____

THIS APPROVAL IS FOR THE DESIGN CONCEPT ONLY. THESE PLANS APPEAR TO BE IN CONFORMANCE WITH THE CITY OF REDMOND DESIGN STANDARDS FOR CONSTRUCTION. THIS APPROVAL SHALL NOT BE CONSTRUED AS AUTHORIZING CONSTRUCTION NOT IN ACCORDANCE WITH APPLICABLE CITY STANDARDS. THE CITY RESERVES THE RIGHT TO REQUIRE REVISIONS TO THE APPROVED PLANS TO ASSURE CONFORMANCE WITH CITY OF REDMOND DESIGN STANDARDS FOR CONSTRUCTION AT ANY TIME THAT IT IS DISCOVERED THAT THE PROPOSED CONSTRUCTION DOES NOT OTHERWISE MEET THE APPLICABLE CONSTRUCTION STANDARDS. THE OWNER IS REQUIRED TO PROVIDE DESIGNS AND PLANS IN ACCORDANCE WITH APPLICABLE CITY STANDARDS AND ASSURES THAT CONSTRUCTION IS ACCOMPLISHED IN ACCORDANCE WITH THOSE STANDARDS. THE OWNER AND/OR DESIGN ENGINEER AND/OR DEVELOPER MAY BE REQUIRED TO MAKE NECESSARY APPROVED FIELD REVISIONS TO CORRECT ANY ERRORS OR OMISSIONS FOUND ON THE APPROVED PLAN.

TSI
Transportation Solutions, Inc.
8250 165th Avenue NE | Suite 100
Redmond, WA 98052-6628
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www.tsinw.com

CLIENT/OWNER

MV TRANSIT

PROJECT NAME

MV TRANSPORTATION FACILITY EXPANSION

NAVIX PROJECT NUMBER: 50.601.002

PROJECT ADDRESS

NE 76TH STREET AND 188TH AVENUE NE REDMOND, WA 98052

STAMP

PRELIMINARY
MARY ANNE BREILING OLSON
STATE OF WASHINGTON
36307
REGISTERED PROFESSIONAL ENGINEER

REVISIONS

REV	ISSUED FOR:	DATE
1	30% PREP	08.23.19

811

SECTION, TOWNSHIP, RANGE:

NE 1/4 OF NW 1/4 OF SECTION 07, TOWNSHIP 25 NORTH, RANGE 06 EAST, W.M.

PROJECT TEAM

REVIEWED BY: J.HEE
DESIGNED BY: M.OLSON

SHEET NAME

ILLUMINATION PLAN

IL04

SHEET NUMBER

19-XXXX

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