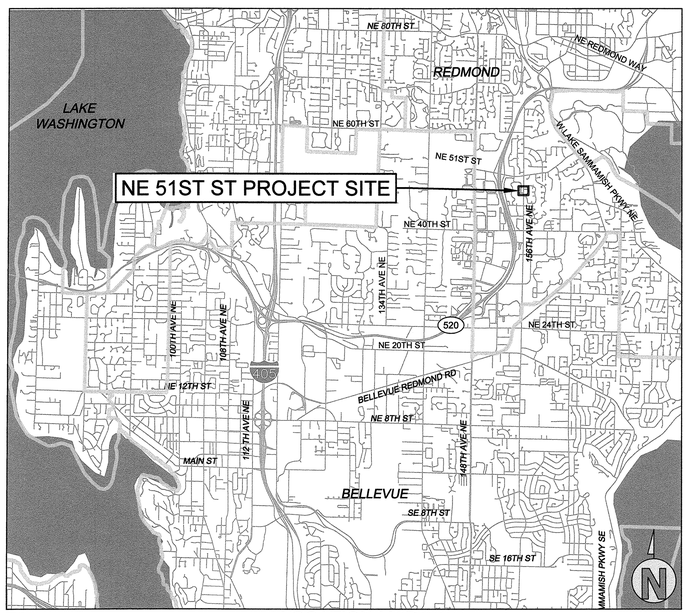
CITY OF REDMOND, WASHINGTON

BOOK II: 156TH AVE NE & 4800 BLOCK PEDESTRIAN SIGNAL

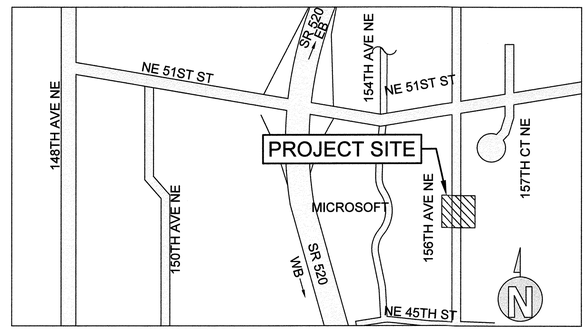
PROJECT NO.: 20021604.01.02.03

TIB 8-1-107(022)-1

BID PLANS



LOCATION MAP
NTS



VICINITY MAP
NTS

CityofRedmond
WASHINGTON

Know what's below.
Call before you dig.

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APPROVED FOR CONSTRUCTION

Gary Schimek 5/13/19

GARY SCHIMEK, P.E.
CITY ENGINEER, CITY OF REDMOND

DATE

IFB PLANS

No.	DATE	BY	CHD	REVISION

CityofRedmond WASHINGTON
15670 N.E. 85TH STREET
P.O. BOX 97010
REDMOND, WA 98073-9710
PH. (425) 556-2701

HUITT-ZOLLARS Seattle
Huitt-Zollars, Inc.
818 Stewart Street, Suite 1120
Seattle, Washington, 98101
Phone (206) 324-5500 Fax (206) 328-1880

TENW
Transportation Engineering NorthWest
Transportation Planning | Design | Traffic Impact & Operations
11400 SE 8th Street, Suite 200, Bellevue, WA 98004 | Office (425) 889-5747
Project Contact: Glen DuBreuil
Phone: 425-250-0882

RAYMOND ERIK BERNTSEN — STATE OF WASHINGTON — 46921 — REGISTERED PROFESSIONAL ENGINEER

LINE IS 1" AT FULL SCALE

DESIGNED BY: J. ARREOLA	ISSUE DATE: 05/08/19
DRAWN BY: J. ARREOLA	JOB NO: R310479.01
CHECKED BY: R. BERNTSEN	DRAWING FILE NO: G0.01.DWG

156TH AVE NE
4800 BLOCK PEDESTRIAN SIGNAL

COVER SHEET

DRAWING No.: G0.01

SHEET No.: 1 OF 13

05/08/19 | 9:17 AM | JARREOLA
J:\R310479.01 - 156TH HAWK SIGNAL FINAL DESIGN\08.4 CD CONSTRUCTION DOCUMENTS (90%)\KC METRO ROUTE 245 WO16 REDMOND 90PCT_CAD\SHEETS\G0.01.DWG

CITY OF REDMOND STANDARD NOTES

GENERAL NOTES

1. COMPLY WITH ALL CITY OF REDMOND REGULATIONS, STANDARD SPECIFICATIONS AND DETAILS.

2. CALL ONE CALL FOR LOCATES TWO (2) WORKING DAYS BEFORE YOU DIG □ 811 OR 1-800-424-5555.

3. NOTIFY THE CONSTRUCTION DIVISION AT (425) 556-2723
   (A) FORTY-EIGHT (48) HOURS PRIOR TO THE START OF WORK,
   (B) WHENEVER LOCATION IS CHANGED AND
   (C) FOR FINAL INSPECTION UPON COMPLETION OF WORK PROVIDE PERMIT NUMBER, LOCATION, TYPE OF WORK, CONTRACTOR NAME AND TELEPHONE NUMBER.

4. PAVEMENT CUTS AND UTILITY INSTALLATIONS WITHIN THE RIGHT-OF-WAY SHALL BE PERFORMED WITH METHODS APPROVED BY THE CITY, TRENCH RESTORATION WITHIN THE RIGHT-OF-WAY SHALL BE AS INDICATED ON STANDARD DETAIL NO. 201, ASPHALT RESTORATION DETAIL PER NO. 202 AND 300, OF THE STANDARD SPECIFICATIONS. ALL OTHER AREAS DISTURBED OR IMPACTED BY CONSTRUCTION ACTIVITIES SHALL BE RESTORED TO AN E□UAL OR BETTER CONDITION.

5. SIGNS, CONES, BARRICADES, AND ALL OTHER TRAFFIC CONTROL DEVICES TO PROTECT AND CONTROL PEDESTRIAN AND VEHICULAR TRAFFIC IN THE CONSTRUCTION AREA SHALL BE USED IN ACCORDANCE WITH THE LATEST REVISION OF THE 'MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS (MUTCD), PART VI', THE CONTRACTOR PERFORMING THE WORK SHALL SUBMIT A TRAFFIC CONTROL PLAN FOR REVIEW AND APPROVAL BY THE TRAFFIC ENGINEER SEVENTY-TWO (72) HOURS PRIOR TO THE START OF THE WORK.

6. VEHICULAR AND PEDESTRIAN ACCESS TO PROPERTIES SHALL BE MAINTAINED AT ALL TIMES AND COORDINATED WITH AFFECTED PROPERTY OWNERS. CONSTRUCTION NOTICES TO BE PROVIDED 2 DAYS PRIOR TO THE START OF WORK. TWO-WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES UNLESS APPROVED OTHERWISE BY THE TRAFFIC ENGINEER.

7. WHERE EXCAVATION IS OCCURRING, BARRICADES ARE RE□UIRED TO SEPARATE THE WORK AREA FROM PREDESTRIANS/PUBLIC CONTRACTOR SHALL POST AND MAINTAIN PROPER BARRICADES AND COMPLY WITH ALL APPLICABLE SAFETY REGULATIONS DURING THE PERIOD OF CONSTRUCTION AS RE□UIRED BY THE ORDINANCES OF THE CITY OF THE LAWS OF THE STATE OF WASHINGTON, INCLUDING RCW 39.04180 & WAS 296-155 PART 'N' FOR THE CONSTRUCTION OF THE TRENCH SAFETY SYSTEMS.

8. EROSION AND SEDIMENT CONTROL SHALL MEET THE RE□UIREMENTS OF THE CLEARING, GRADING AND STORM WATER MANAGEMENT CODE, RCDG 20E.90.10 CONTRACTOR IS RE□UIRED TO PROVIDE PROTECTION OF THE CITY STORM DRAIN SYSTEM. CONCRETE TRUCKS ARE RE□UIRED TO USE A DESIGNATED WASHOUT AREA.

9. IF ANY EXISTING LANDSCAPING AND/OR IRRIGATION SYSTEMS ARE DAMAGED OR REMOVED, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RESTORE TO ORIGINAL CONDITIONS.

10. THE CONTRACTOR IS ALERTED TO THE CITY'S NOISE STANDARDS, RCDG 20D.100. WORK HOURS ARE LIMITED TO THE FOLLOWING:
    SUNDAY OR LEGAL HOLIDAY PROHIBITED UNDER EXTREMELY LIMITED CONDITIONS WORK HOURS MAY BE EXPANDED, AS APPROVED BY THE CITY, FOR WORK THAT CANNOT BE UNDERTAKEN DURING STANDARD WORK HOURS

11. A COPY OF THE APPROVED RIGHT-OF-WAY USE PERMIT IS RE□UIRED TO BE ON SITE AT ALL TIMES.

12. ALL SURVEY MONUMENTS WHICH ARE TO BE DISTRIBUTED OR DISPLACED BY SUCH WORK SHALL BE REFERENCED AND RESTORED, AS PER WAC 332-120, AS THE SAME NOW EXISTS OR MANY HEREAFTER BE AMENDED, AND ALL PERTINENT FEDERAL, STATE AND LOCAL STANDARDS AND SPECIFICATIONS, INCLUDING, BUT NOT LIMITED TO, THE CITY OF REDMOND BENCHMARK SYSTEM'S SECOND ORDER, FIRST CLASS SPECIFICATIONS.

13. DIRECT CORRESPONDENCE TO:

    CITY OF REDMOND
    CITY HALL
    15670 NE 85TH STREET
    REDMOND, WA 98052
    (425) 556-2867
    CONTACT: ERIC DAWSON, P.E.

ROADWAY CONSTRUCTION NOTES

1. ALL WORK SHALL CONFORM TO CITY OF REDMOND STANDARD SPECIFICATIONS AND DETAILS, MARCH 2018 EDITION.

2. THE CITY SHALL EXERCISE FULL CONTROL OF ALL EXCAVATING CONSTRUCTION AND OTHER ENCROACHMENTS INTO CITY RIGHT-OF-WAY. THE CONSTRUCTION ENGINEERING DIVISION OF PUBLIC WORKS SHALL BE NOTIFIED AT LEAST 48 HOURS PRIOR TO COMMENCING CONSTRUCTION.

3. NO OPEN-CUTS CROSSING OF CITY STREETS SHALL BE MADE WITHOUT A RIGHT-OF-WAY USE PERMIT.

4. ALL OPEN-CUTS OF CITY STREETS SHALL BE AS FOLLOWS:
   (A) EXISTING PAVED SURFACE WILL BE SAW-CUT ONE FOOT OUTSIDE EXCAVATION PERIMETER. EXCESS SAW CUTTING DEBRIS SHALL BE REMOVED WITH A VACUUM DEVICE AND DISPOSED OF PROPERLY.
   (B) CONTROLLED DENSITY FILL (CDF) WILL BE RE□UIRED AS BACKFILL MATERIAL. SEE STANDARD DETAIL DRAWING NO. 201 (TYPICAL TRENCH DETAIL).
   (C) SELECT BACKFILL ALTERNATIVE MAY BE APPROVED BY THE CITY IN CERTAIN CIRCUMSTANCES.

5. FINAL RESTORATION OF OPEN-CUT PAVEMENT SECTIONS SHALL MATCH THE EXISTING CONDITION (DEPTH AND MATERIAL). THE MINIMUM STANDARDS ARE AS FOLLOWS:
   (A) ASPHALT PAVEMENTS. REMOVE EITHER SEVENTY (7) INCHES OF CDF OR ASPHALT COLD MIX PATCH AS APPROPRIATE. SAW-CUT AND TRIM EDGES OF EXISTING ROAD SURFACE TO A NEAT LINE AND THEN APPLY ASPHALT TACK COAT. PLACE A 4-INCH MINIMUM COMPACTED THICKNESS OF HOT MIX ASPHALT (HMA) CLASS 1" PG 64-22 612 TREATED BASE. LEVEL TO CONFORM TO ADJACENT SURFACES AND THEN PLACE A 3-INCH MINIMUM COMPACTED THICKNESS OF HMA CLASS ½" PG 64-22. IF THE RESTORATION IS DEEMED INADEQUATE BY THE CITY. THE CONTRACTOR SHALL GRIND AND OVERLAY THE FULL WIDTH OF ROADWAY.
   (B) CEMENT CONC. PAVEMENT. REMOVE NINE INCHES OF PATCHING MATERIAL AND PLACE A 9-INCH THICK SECTION OF CEMENT CONCRETE PAVEMENT.

6. TRENCH CONSTRUCTION OUTSIDE OF THE ROADWAY (LANDSCAPED AREAS, UTILITY STRIPS, ETC.) SHALL BE ACCOMPLISHED AS FOLLOWS:
   (A) A PIPE SHALL BE BEDDED IN GRANULAR MATERIAL MEETING SECTION 9-03.12(3) OF THE STANDARD SPECIFICATIONS.
   (B) BACKFILL SHALL BE COMPACTED TO A MINIMUM OF 85% OF MAXIMUM DENSITY AS DETERMINED BY MODIFIED PROCTOR (ASTN D557) AT OR BELOW OPTIMUM MOISTURE CONTENT USING A MAXIMUM OF ONE-FOOT LIFTS.
   (C) TOPSOIL MEETING SECTION 9-14.1 (1) SHALL BE PLACED ON ALL AREAS RE□UIRING SEED OR SOD TO THE FOLLOWING DEPTH.
      (1) SEED – 4" OF TOPSOIL
      (2) SOD – 3" OF TOPSOIL

7. SHOULDERS DISTURBED BY EXCAVATION SHALL BE RESHAPED TO ORIGINAL CONDITIONS AND SURFACED WITH A MINIMUM 3" THICKNESS OF CRUSHED SURFACING TOP COURSE (PER 9-03.9(3) OF THE STANDARD SPECIFICATIONS. RE□UIRED COMPACTION SHALL OF 90% OF MAXIMUM DENSITY AS DETERMINED BY MODIFIED PROCTOR (ASTM 1557).

8. EXISTING DRAINAGE DITCHES, CULVERTS, ETC., SHALL BE KEPT CLEAN AT ALL TIMES. TEMPORARY DIVERSION OF ANY DRAINAGE SYSTEM SHALL BE NOT PERMITTED WITHOUT PRIOR APPROVAL. ANY DRAINAGE CULVERTS, CATCH BASINS, MANHOLES, ETC., DAMAGED BY EXCAVATION SHALL BE REPAIRED OR REPLACES USING NEW MATERIALS AS DIRECTED.

9. IF, IN THE OPINION OF THE DEPARTMENT OF PUBLIC WORKS, IT APPEARS THAT THE TRAVELED ROADWAY IS, OR MAY BECOME, UNSAFE FOR THE TRAVELING PUBLIC DUE TO WEATHER OR ANY OTHER REASON, ALL WORK SHALL CEASE IMMEDIATELY, AND CLEAN-UP SHALL BE PROMPTLY ACCOMPLISHED.

10. THE LENGTH OF OPEN TRENCH ON STREETS SHALL BE A MAXIMUM OF 200 LINEAL FEET.

11. ALL PIPE PLACED ALONG CITY RIGHT-OF-WAY FOR FUTURE INSTALLATIONS SHALL BE KEPT AT A SAFE DISTANCE FROM THE TRAVELED ROADWAY AND IN SUCH A MANNER AS TO PREVENT ACCIDENTAL ROLLING ONTO ROADWAY OR SIDEWALKS AREAS.

12. FINAL CLEAN-UP, INCLUDING COMPLETE RESTORATION OF SHOULDERS, CLEANING OF DITCHES, CULVERTS AND CATCH BASINS, REMOVAL OF LOOSE MATERIAL FROM BACKSLOPE OF DITCHES, SHALL NOT EXCEED 1500 LINEAL FEET BEHIND EXCAVATING OPERATIONS.

13. THE STREET SURFACE SHALL BE KEPT CONTINUALLY CLEAN WITH A VACUUM SWEEPER OR OTHER APPROVED MEANS.

14. NO EXCESS MATERIAL OR UNSUITABLE MATERIAL SHALL BE WASTED ON CITY RIGHT-OF-WAY WITHOUT APPROVAL.

15. ALL MATERIALS SHALL BE READILY AVAILABLE TO THE JOB SITE AND PROVISIONS SHALL BE MADE TO COMPLETE THE CONSTRUCTION IN ONE CONTINUOUS OPERATIONS. FAILURE TO COMPLY SHALL RESULT IN EXCAVATION BEING HALTED UNTIL SUCH TIME AS THE CONDITIONS ARE CORRECTED.

16. FINAL INSPECTION AND APPROVAL:
   (A) ON SITE INSPECTION DURING CONSTRUCTION SHALL BE PROVIDED BY THE CITY OF REDMOND AND/OR SPECIAL INSPECTION EMPLOYED BY THE OWNER AS APPROVED BY THE CITY OF REDMOND.
   (B) THE USE OF NEWLY CONSTRUCTED UTILITIES SHALL NOT BE PERMITTED UNTIL FINAL INSPECTION AND APPROVAL OF THE ENTIRE CONSTRUCTION SITE HAS BEEN MADE UNLESS SPECIAL WRITTEN PERMISSION IS OBTAINED FROM THE DIRECTOR OR PUBLIC WORKS, OR DESIGNATED REPRESENTATIVE.
   (C) PRIOR TO FINAL APPROVAL OF CONSTRUCTION RESTORATION OF THE AREA WILL BE COMPLETE AND A VISUAL INSPECTION OF THE SITE WILL BE MADE BY THE DEPARTMENT OF PUBLIC WORKS, OR DESIGNATED REPRESENTATIVES.

TRAFFIC CONTROL NOTES

1. ALL SIGNS, BARRICADES AND RELATED EQUIPMENT AND THEIR USE MUST BE IN ACCORDANCE WITH PART VI, "TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION AND MAINTENANCE OPERATIONS" OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, AS PREPARED BY THE NATIONAL JOINT COMMITTEE ON UNIFORM TRAFFIC CONTROL DEVICES.

2. A TRAFFIC CONTROL PLAN SHALL BE SUBMITTED TO THE CONSTRUCTION DIVISION FOR REVIEW AND APPROVAL 5 DAYS PRIOR TO THE COMMENCEMENT OF WORK.

3. PARTICULAR ATTENTION SHOULD BE MADE TO THE FOLLOWING ITEMS:
   (A) THERE SHALL BE, AT ALL TIMES, REASONABLE PEDESTRIAN AND VEHICULAR ACCESS TO AND FROM THE PROPERTIES IMPACTED BY THE PROJECT. AT ALL TIMES, SIDEWALKS SHALL BE TRAVERSABLE OR FLAGGERS SHALL ASSIST PEDESTRIANS THROUGH THE WORK □ONE. UNASSISTED CROSSINGS OF 156TH AVE NE SHALL NEVER BE RE□UIRED. WHEN SIDEWALK IS DISTURBED, A TEMPORARY STABLE SURFACE OF COMPACTED CRUSHED GRAVEL, PLYWOOD, OR OTHER SURFACE APPROVED BY THE CITY INSPECTOR, AT LEAST 4 FEET WIDE, SHALL BE PROVIDED.
   (B) DURING NON-WORKING HOURS, THE CONTRACTOR SHALL KEEP THE EXISTING TRAFFIC LANES CLEAR FOR TRAFFIC WITHOUT INTERFERENCE FROM HIS OPERATIONS.
   (C) SIGNS AND BARRICADES SHALL BE SUPPLEMENTED BY FLASHER UNITS, DURING THE HOURS OF DARKNESS, AT CONSTRUCTION SITES IN CLOSE PROXIMITY TO VEHICULAR AND PEDESTRIAN WAYS.
   (D) ANY ASPHALT CONCRETE PAVEMENT, CRUSHING SURFACING, GRAVEL BASE, ASPHALT COLD PATCH MIX OR WATER, RE□UIRED FOR MAINTAINING TRAFFIC DURING THE PROJECT, SHALL BE PLACED BY THE CONTRACTOR IMMEDIATELY UPON RE□UEST BY THE CITY.
   (E) ALL UNATTENDED EXCAVATIONS SHALL BE PROPERLY COVERED, BARRICADED OR FENCES.
   (F) ANY WORK WITHIN THE RIGHT-OF-WAY THAT INVOLVES CLOSING STREETS OR HAMPERING THE FLOW OF TRAFFIC WILL RE□UIRE 48 HOURS ADVANCE NOTIFICATION, EXCEPT IN THE EVENT OF AN EMERGENCY, TO THE FOLLOWING:
      I. FIRE DEPARTMENT, (425)556-2207
      II. POLICE DEPARTMENT (425)556-2500
      III. CONSTRUCTION DIVISION, (425)556-2723
      IV. PUBLIC WORKS RECEPTIONIST, (425)556-2701
      V. METRO, (206)684-1705 OR (24-HOUR NUMBER) (206)684-1111
      VI. LAKE WASHINGTON SCHOOL DISTRICT – BUSINESS HOURS CALL (425)882-5128 AFTER HOURS CALL (425)866-3885.

4. ANY CONSTRUCTION WORK ON A MAJOR ARTERIAL ROADWAY OR WITHIN A CONTROLLED INTERSECTION WHICH WILL IMPACT THE FLOW OF TRAFFIC, MAY BE RE□UIRED TO TAKE PLACE DURING OFF-PEAK HOURS (IE 8:00 PM TO 5:30 AM) OR ON WEEKEND DAYS AS DETERMINED BY THE CITY OF REDMOND. THE NEED FOR CITY INSPECTION OUTSIDE OF NORMAL WORKING HOURS (7:00AM TO 3:30 PM) MAY RE□UIRE THE CONTRACTOR/OWNER TO REIMBURSE THE CITY FOR OVERTIME COSTS IN ACCORDANCE WITH THE POLICY ON OVERTIME RATE REIMBURSEMENTS.

5. AT LEAST ONE LANE IN EACH DIRECTION MUST BE OPEN AT ALL TIMES. NEITHER SOUTHBOUND LANE SHALL BE CLOSED DURING THE HOURS OF 7:00 AM TO 10:00 AM. NEITHER NORTHBOUND LANE SHALL BE CLOSED DURING THE HOURS OF 3:00 PM TO 7:00 PM.

SIDEWALKS

1. SIDEWALK SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 8-14 OF THE STANDARD SPECIFICATIONS AND AS SHOWN ON THE STANDARD DETAILS.

2. SIDEWALK SHALL BE 6-INCH MINIMUM THICKNESS WHERE ADJACENT TO ROLLED CURB SECTION, OTHERWISE MINIMUM THICKNESS SHALL BE 4-INCHES PER CITY OF REDMOND STANDARD DETAIL 303.

3. THE CONCRETE MIX FOR SIDEWALKS SHALL BE AIR ENTRAINED CONCRETE CLASS 3000 IN ACCORDANCE WITH THE RE□UIREMENTS OF SECTION 6.02 OF THE STANDARD SPECIFICATIONS.

4. PLACING AND FINISHING OF SIDEWALK SHALL BE PER SECTION 8-14.3(3) OF THE STANDARD SPECIFICATION. THE SURFACES ARE TO BE STRUCK OFF, TROWLED, LIGHTLY BRUSHED IN TRANSVERSE DIRECTION, THEN JOINED AND EDGED. THE FINISH RE□UIREMENTS INCLUDE:
   (A) JOINTS SHALL BE TOOLED WITH ¼" RADIUS EDGER
   (B) SIDEWALK EDGES TOOLED WITH A ½" RADIUS EDGER
   (C) AFTER SIDEWALK IS GIVEN A TRANSVERSE BRUSH FINISH, THE EDGES OF THE SIDEWALK AND ALL JOINTS SHALL BE LIGHTLY EDGED AGAIN WITH A 4" WIDE EDGING TOOL TO GIVE IT A FINISHED APPEARANCE.
   (D) WHEN REPLACING SECTIONS OF EXISTING SIDEWALK OR WHEN NEW SIDEWALK ADJOINS EXISTING, NEW CONCRETE SHALL BE FINISHED TO MATCH THE EXISTING CONCRETE OR AS DIRECTED BY THE CITY ENGINEER. COLOR AGENT SHALL BE USED IN NEW CONCRETE TO MATCH EXISTING.
   (E) WHEN CASTING ARE LOCATED IN THE SIDEWALK, JOINTS SHALL BE INSTALLED TO CONTROL CRACKING. REBAR SHALL BE INSTALLED AS DIRECTED BY THE CITY TO STRENGTHEN SIDEWALK TO PREVENT CRACKING AT CORNERS OF CASTING AND OTHER BLACKOUTS.

CURB AND GUTTER

1. CURB AND GUTTER SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 8-04 OF THE STANDARD SPECIFICATIONS AND AS SHOWN ON THE CITY OF REDMOND STANDARD DETAIL 304.

2. THE CONCRETE MIX FOR CURB AND GUTTER SHALL BE AIR ENTRAINED CONCRETE CLASS 3000 IN ACCORDANCE WITH RE□UIREMENTS OF SECTION 6.02 OF THE STANDARD SPECIFICATIONS.

3. AFTER THE CONCRETE HAS SET SUFFICIENTLY, THE ROADWAY FACE OF THE CURB FORMS SHALL BE REMOVED AND THE TOP AND FACE OF THE CURB SHALL RECEIVE A LIGHT BRUSH FINISH, AND THE TOP OF THE GUTTER SHALL RECEIVE A BROOM FINISH.

ABBREVIATIONS:

APS	ACCESSIBLE PEDESTRIAN SIGNAL
BOC	BOTTOM OF CURB
CONC	CONCRETE
DWG	DRAWING
E	EAST OR EASTING
EG	EXISTING GRADE
EL.	ELEVATION
EX	EXISTING
FG	FINISH GRADE
FL	FLOW LINE
L	LENGTH
LF.	LINEAR FEET
LT.	LEFT
ME	MATCH EXISTING
MID	MIDDLE
MIN.	MINIMUM
N	NORTH OR NORTHING
PC	POINT OF CURVE
PPB	PEDESTRIAN PUSH BUTTON
PSE	PUGET SOUND ENERGY
PT	POINT OF TANGENT
R	RADIUS
ROW	RIGHT-OF-WAY
RT.	RIGHT
STD.	STANDARD
TOC	TOP OF CURB
TPN	TAX PARCEL NUMBER
TYP.	TYPICAL

EXISTING FEATURES LEGEND:

EXISTING SYMBOLS

- MANHOLE
- CATCH BASIN
- PAVEMENT MARKINGS
- STREET LIGHT
- WATER VALVE
- WATER MANHOLE
- SIGN
- SIGN BRIDGE
- BRIDGE PIER
- TREE
- PIPE
- DITCH
- STRIPING
- R/W

IFB PLANS

No.	DATE	BY	CHD	REVISION

City of Redmond WASHINGTON
15670 N.E. 85TH STREET
P.O. BOX 97010
REDMOND, WA 98073-9710
PH. (425) 556-2701

HUITT-ZOLLARS Seattle
Huitt-Zollars, Inc.
818 Stewart Street, Suite 1120
Seattle, Washington, 98101
Phone (206) 324-5500 Fax (206) 328-1880

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Transportation Engineering NorthWest
Transportation Planning | Design | Traffic Impact & Operations
11400 SE 8th Street, Suite 200, Bellevue, WA 98004 | Office (425) 889-6747
Project Contact: Glen DuBreuil
Phone: 425-250-0582

PROFESSIONAL ENGINEER RAYMOND ERIK BERNTSEN STATE OF WASHINGTON 46911 REGISTERED

LINE IS 1" AT FULL SCALE

DESIGNED BY: J. ARREOLA	ISSUE DATE: 05/08/19
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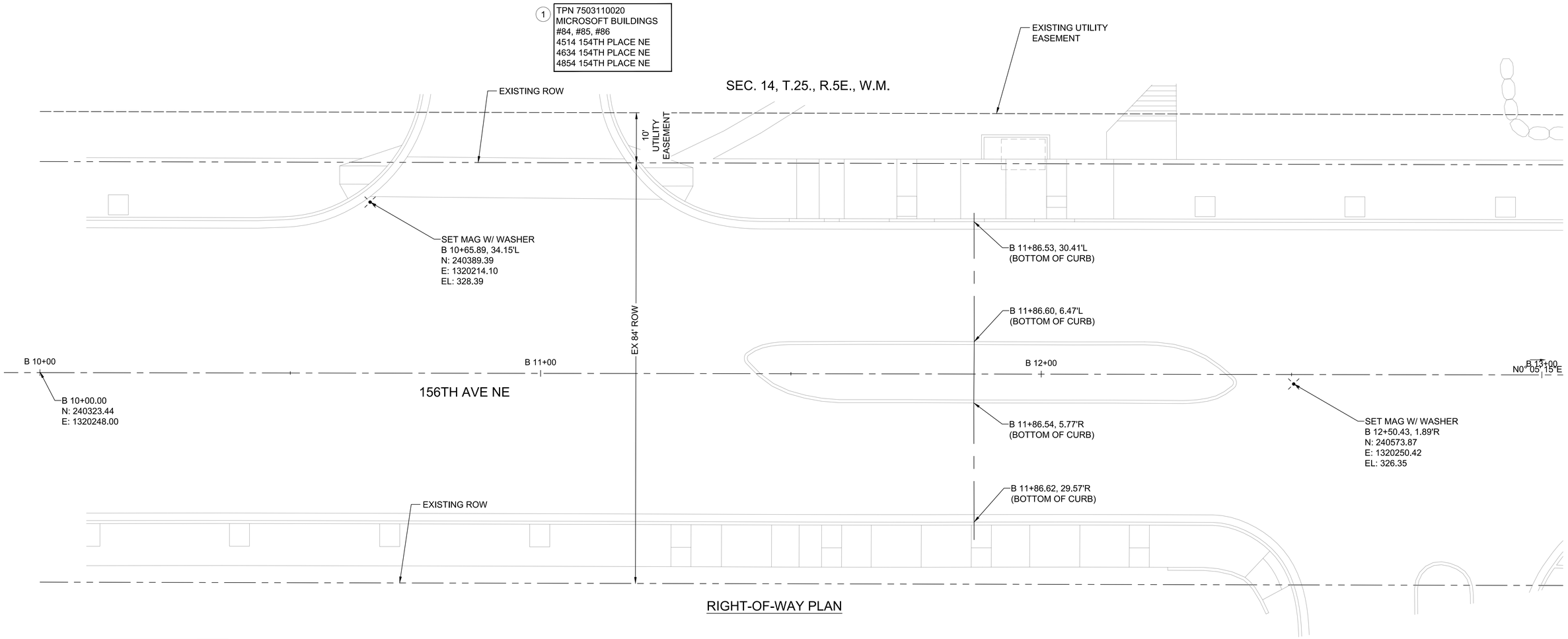
156TH AVE NE
4800 BLOCK PEDESTRIAN SIGNAL

GENERAL NOTES,
LEGEND, AND ABBREVIATIONS

DRAWING No.: G0.02

SHEET No.: 2 OF 13

05/08/19 | 9:17 AM | JARREOLA
J:\R310479.01 - 156TH HAWK SIGNAL FINAL DESIGN\08.4 CD CONSTRUCTION DOCUMENTS (90%)\KC METRO ROUTE 245 WO16 REDMOND 90PCT_CAD\SHEETS\G0.02.DWG



RIGHT-OF-WAY PLAN

2
TPN 1425059129
DIG-KW REDMOND LLC
4850 156TH AVE NE

HORI□ONTAL DATUM: NAD83 (2011) WSRN

WASHINGTON STATE PLANE COORDINATE SYSTEM, NORTH □ONE, NAD83/2011. AS DERIVED BY DIRECT OBSERVATIONS UTILI□ING THE WASHINGTON STATE REFERENCE NETWORK (WSRN).

VERTICAL DATUM: NAVD88

THE VERTICAL DATUM IS DERIVED FROM A CLOSED DIFFERENTIAL LEVEL LOOP.

CITY OF BELLEVUE BENCHMARK "326"

TOP SW BOLT IN SIGNAL POLE BASE STAMPED "BM326". NE CORNER OF 156TH & NE 51ST ST.

ELV=311.268 US FEET

BASIS OF BEARING:

WASHINGTON STATE PLANE COORDINATE SYSTEM, NORTH □ONE

LEGEND

- EXISTING RIGHT-OF-WAY CENTERLINE
- EXISTING RIGHT-OF-WAY LINE
- EXISTING CURB AND GUTTER
- EXISTING UTILITY EASEMENT
- PROPOSED CROSSWALK CENTERLINE

NOTES

1. GROUND SURVEY BASEMAP AND DATUM DESCRIPTION PROVIDED BY LIN AND ASSOCIATES. DATE 01-06-2017.
2. LOCAL CONTROL BY TWO TEMPORARY BENCHMARKS INDICATED ON THIS SHEET. CENTERLINE ALIGNMENT SHALL BE ESTABLISHED FROM THESE BENCHMARKS.

10 0 10 20
SCALE IN FEET

IFB PLANS

No.	DATE	BY	CHD	REVISION

City of Redmond WASHINGTON
15670 N.E. 85TH STREET
P.O. BOX 97010
REDMOND, WA 98073-9710
PH. (425) 556-2701

HUITT-ZOLLARS Seattle
Huitt-Zollars, Inc.
818 Stewart Street, Suite 1120
Seattle, Washington, 98101
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Transportation Engineering NorthWest
Transportation Planning | Design | Traffic Impact & Operations
11400 SE 8th Street, Suite 200, Bellevue, WA 98004 | Office (425) 889-6747
Project Contact: Glen DuBreuil
Phone: 425-250-0582

RAYMOND ERIK BERNTSEN
STATE OF WASHINGTON
46911
REGISTERED
PROFESSIONAL ENGINEER

LINE IS 1" AT FULL SCALE

DESIGNED BY: J. ARREOLA	ISSUE DATE: 05/08/19
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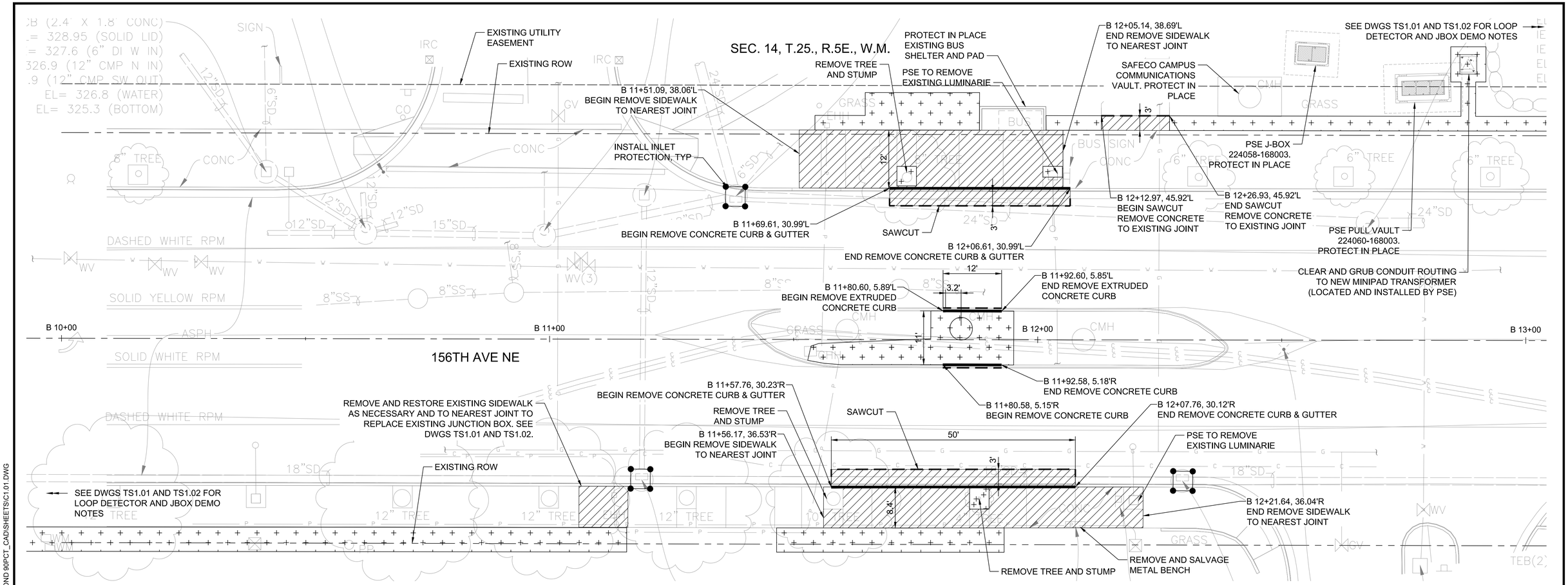
156TH AVE NE
4800 BLOCK PEDESTRIAN SIGNAL

RIGHT-OF-WAY AND CONTROL PLAN

DRAWING No.: G1.01

SHEET No.: 3 OF 13

05/08/19 | 9:17 AM | JARREOLA
J:\R310479.01 - 156TH HAWK SIGNAL FINAL DESIGN\08.4 CD CONSTRUCTION DOCUMENTS (90%)\KC METRO ROUTE 245 WO16 REDMOND 90PCT_CAD\SHEETS\G1.01.DWG



LEGEND

- CLEARING AND GRUBBING
- EXISTING PAVEMENT OR SIDEWALK TO BE REMOVED
- INLET PROTECTION. SEE WSDOT STANDARD PLAN I-40.20-00
- CURB REMOVAL
- SAWCUT

NOTES

1. CONSTRUCTION ACTIVITY LIMITS SHOWN ARE THE MAXIMUM ALLOWED LIMITS. CONTRACTOR SHOULD LIMIT DISTURBED AREA WHERE POSSIBLE TO REDUCE PROJECT IMPACTS.
2. AREAS IMPACTED BY CONSTRUCTION ACTIVITIES INCLUDING BUT NOT LIMITED TO CONCRETE, ASPHALT, GRASSED AREAS AND EXISTING UTILITY SYSTEMS SHALL BE RESTORED TO ORIGINAL CONDITION OR BETTER.
3. CONTRACTOR TO PROTECT UTILITIES AND STRUCTURES TO REMAIN DURING CONSTRUCTION ACTIVITIES.
4. EXCESS SAW CUTTING AND GRINDING SHALL BE REMOVED WITH A VACUUM DEVICE AND DISPOSED OF PROPERLY.
5. SEE DWG L1.01 FOR LANDSCAPE PLAN.
6. SEE DWG C1.03 FOR SIGN REMOVAL AND RELOCATIONS.
7. CONTRACTOR TO AVOID IMPACT TO TREE ROOTS DURING GRADING. NO GRADING IS TO OCCUR IN TREE DRIP LINE. FROM DRIP LINE TO BACK OF PROPOSED SIDEWALK SLOPE AT 1:1 MAX FOR UP TO 10' ON EITHER SIDE OF TREE.
8. SAWCUT LINES TO BE LOCATED 3' OFF OF EXISTING GUTTER LINE UNLESS OTHERWISE NOTED.
9. SEE DWG G0.02 FOR EXISTING FEATURES LEGEND.

SITE PREPARATION PLAN

10 0 10 20
SCALE IN FEET

IFB PLANS

No.	DATE	BY	CHD	REVISION

City of Redmond WASHINGTON
15670 N.E. 85TH STREET
P.O. BOX 97010
REDMOND, WA 98073-9710
PH. (425) 556-2701

HUITT-ZOLLARS Seattle
Huitt-Zollars, Inc.
818 Stewart Street, Suite 1120
Seattle, Washington, 98101
Phone (206) 324-5500 Fax (206) 328-1880

TENW
Transportation Engineering NorthWest
Transportation Planning | Design | Traffic Impact & Operations
11400 SE 8th Street, Suite 200, Bellevue, WA 98004 | Office (425) 889-6747
Project Contact: Glen DuBreuil
Phone: 425-250-0582

RAYMOND ERIK BERNTSEN
STATE OF WASHINGTON
46901
REGISTERED PROFESSIONAL ENGINEER

LINE IS 1" AT FULL SCALE

DESIGNED BY: J. ARREOLA	ISSUE DATE: 05/08/19
DRAWN BY: J. ARREOLA	JOB NO: R310479.01
CHECKED BY: R. BERNTSEN	DRAWING FILE NO: C1.01.DWG

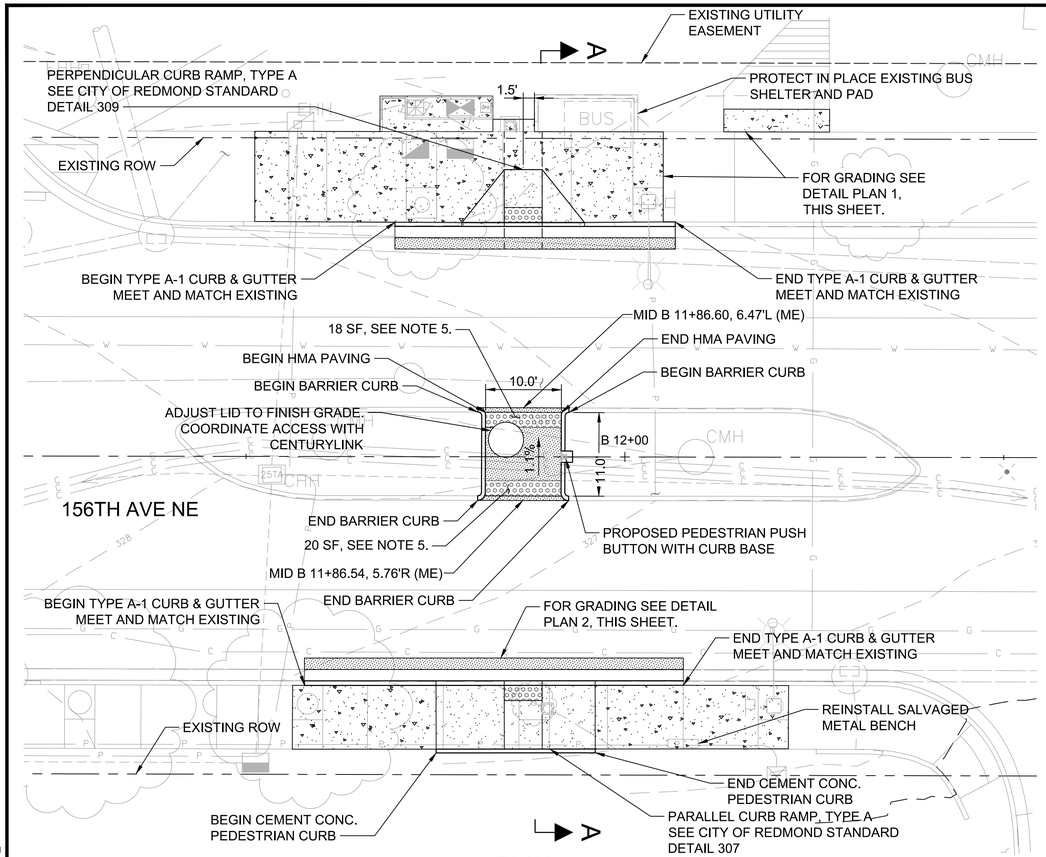
156TH AVE NE
4800 BLOCK PEDESTRIAN SIGNAL

SITE PREPARATION PLAN

DRAWING No.: C1.01

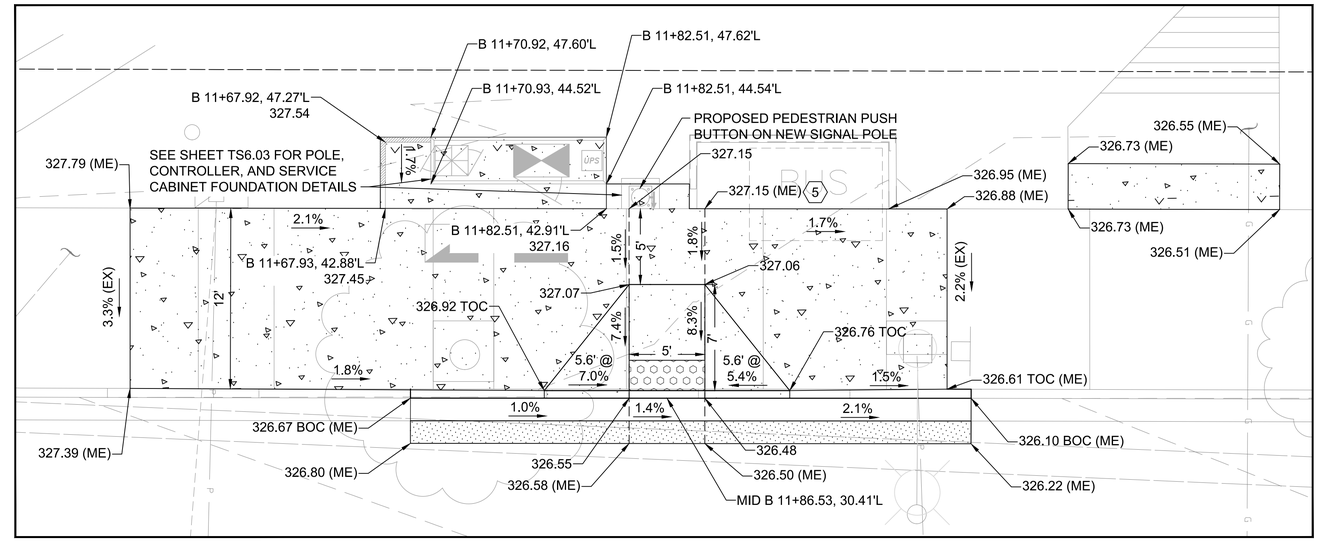
SHEET No.: 4 OF 13

05/08/19 | 4:20 PM | JARREOLA
J:\R310479.01 - 156TH HAWK SIGNAL FINAL DESIGN\08.4 CD CONSTRUCTION DOCUMENTS (90%)\KC METRO ROUTE 245 WO16 REDMOND 90PCT_CAD\SHEETS\C1.01.DWG

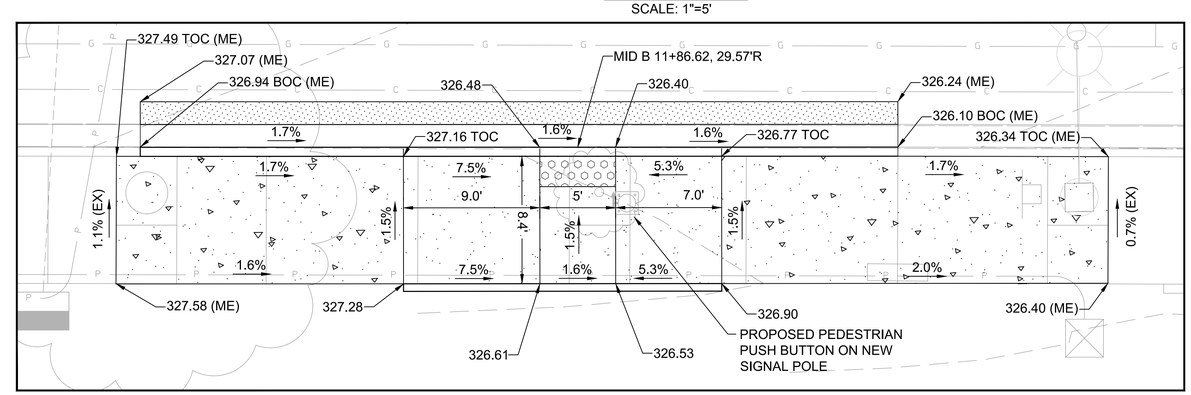


PLAN
SCALE: 1"=10'

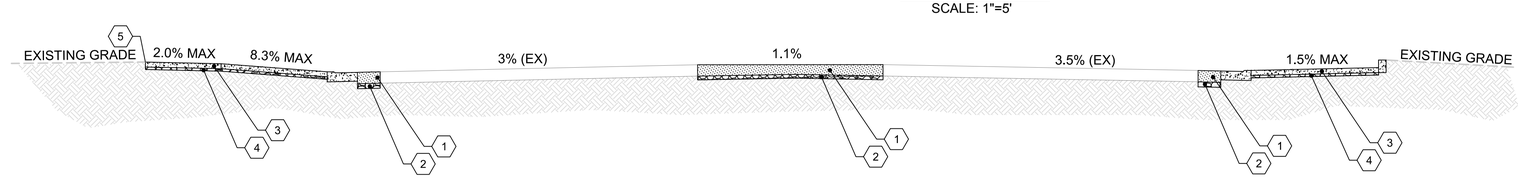
SEC. 14, T.25., R.5E., W.M.



DETAIL PLAN 1
SCALE: 1"=5'



DETAIL PLAN 2
SCALE: 1"=5'



SECTION A-A
SCALE: 1"=5'

LEGEND

- HMA PAVEMENT
- SIDEWALK
- DETECTABLE WARNING SURFACE
- CURB RAMP
- PAVEMENT REPAIR PER CITY OF REDMOND STANDARD DETAIL 301 (9" HMA OVER 3" CSBC)
- CURB AND GUTTER PER CITY OF REDMOND STANDARD DETAIL 304
- CENTERLINE

GENERAL NOTES:

1. TYPE A-1 CURB AND GUTTER PER CITY OF REDMOND STANDARD DETAIL 304.
2. SEE DWG C1.01 FOR PAVING & REMOVAL LIMITS.
3. BARRIER CURB PER CITY OF REDMOND STANDARD DETAIL 304A.
4. SEE DWG TS1.01 FOR TRAFFIC SIGNAL, SIGN, AND ILLUMINATION PLAN.
5. INSTALL LIQUID PLASTIC DETECTABLE WARNING SURFACE OVER ASPHALT. TWSI VANGUARD OR APPROVED EQUAL.
6. SEE DWG TS6.03 FOR CONTROLLER PEDESTAL OR CABINET PAD

CONSTRUCTION NOTES:

1. 9" HMA CL 1/2" 64-22
2. 3" CRUSHED SURFACING BASE COURSE PER WSDOT 9-03.9(3)
3. 4" CLASS 3000 CONCRETE PER WSDOT 6-02
4. 2" CRUSHED SURFACING BASE COURSE PER WSDOT 9-03.9(3)
5. RAMP AND LANDING SLOPES SHALL NOT EXCEED ADA MAXIMUMS INDICATED. LOWER NORTHWEST CORNER OF LANDING IF FIELD ADJUSTMENT IS REQUIRED. GRIND OFF ANY RESULTING LIP ON EAST EDGE OF BUS STOP TRASH CAN PAD.

10 0 10 20
SCALE IN FEET

IFB PLANS

No.	DATE	BY	CHD	REVISION

City of Redmond WASHINGTON
15670 N.E. 85TH STREET
P.O. BOX 97010
REDMOND, WA 98073-9710
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Transportation Planning | Design | Traffic Impact & Operations
11400 SE 8th Street, Suite 200, Bellevue, WA 98004 | Office (425) 889-6747
Project Contact: Glen DuBreuil
Phone: 425-250-0582

RAYMOND ERIK BERNTSEN STATE OF WASHINGTON 46911 REGISTERED PROFESSIONAL ENGINEER

LINE IS 1" AT FULL SCALE

DESIGNED BY: J. ARREOLA	ISSUE DATE: 05/08/19
DRAWN BY: J. ARREOLA	JOB NO: R310479.01
CHECKED BY: R. BERNTSEN	DRAWING FILE NO: C1.02.DWG

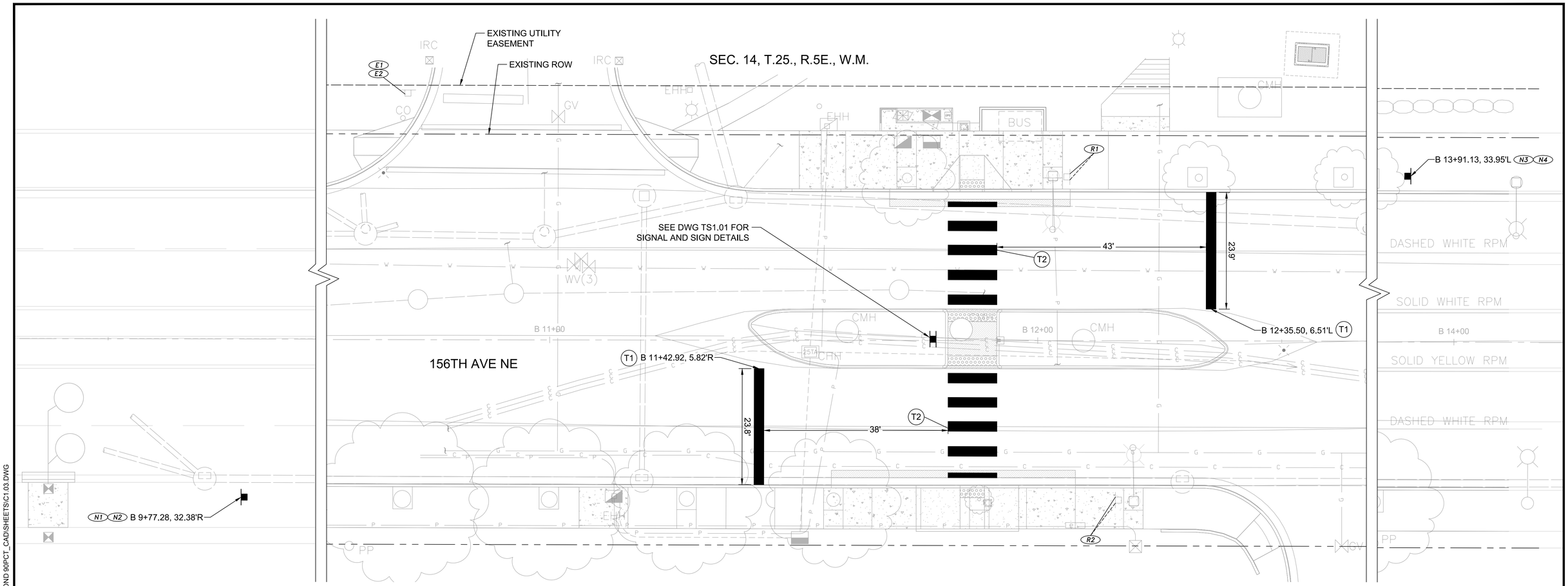
156TH AVE NE
4800 BLOCK PEDESTRIAN SIGNAL

PAVING PLAN, SECTIONS, AND DETAILS

DRAWING No.: C1.02

SHEET No.: 5 OF 13

05/08/19 | 4:20 PM | JARREOLA
J:\R310479.01 - 156TH HAWK SIGNAL FINAL DESIGN\08.4 CD CONSTRUCTION DOCUMENTS (90%)\KC METRO ROUTE 245 WO16 REDMOND 90PCT_CAD\SHEETS\C1.02.DWG



PAVEMENT MARKING PLAN

SCALE: 1"=10'

GENERAL NOTES

1. EXISTING LANE LINES SHALL BE PERMANENTLY REMOVED FROM FROM EACH PROPOSED STOP LINE TO THE NEW CROSSWALK MARKINGS.
2. CONTRACTOR SHALL REPLACE ALL LANE LINE AND MEDIAN PAVEMENT MARKINGS THAT ARE DISTURBED AND INCIDENTAL TO THIS CONSTRUCTION. RAISED PAVEMENT MARKERS SHALL BE INSTALLED PER CITY OF REDMOND STANDARD PLANS 312 AND 429.
3. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING ALL PAVEMENT MARKINGS PER CITY OF REDMOND STANDARDS. CONTRACTOR SHALL LAYOUT ALL PAVEMENT MARKINGS AND THEN CONTACT ALLYSON THOMPSON, SENIOR TRANSPORTATION TECHNICIAN, AT (425) 556-2752, 48-HOURS IN ADVANCE OF INSTALLATION TO VERIFY LAYOUT.

CHANNELIZATION NOTES

MATERIAL: THERMOPLASTIC

(T1) INSTALL WHITE STOP BAR PER CITY OF REDMOND STANDARD DETAIL 311A.

(T2) INSTALL CROSSWALK LINE PER REDMOND STANDARD DETAIL 311B.

NEW SIGN NOTES

(N1) *INSTALL NEW W11-2 SIGN ON NEW POST AT LOCATION SHOWN.*

(N2) *INSTALL NEW W16-9P SIGN ON NEW POST AT LOCATION. MOUNT BELOW W11-2 SIGN.*

(N3) *INSTALL NEW W11-2 SIGN ON NEW POST AT LOCATION SHOWN.*

(N4) *INSTALL NEW W16-9P SIGN ON NEW POST AT LOCATION. MOUNT BELOW W11-2 SIGN.*

RELOCATE SIGN NOTES

(R1) *EXISTING CUSTOM SIGN TO BE SALVAGED REMOVED DURING CONSTRUCTION. REINSTALL BUS SIGN AND SIGN SUPPORT. CONFIRM LOCATION WITH KC METRO PRIOR TO REINSTALLATION.*

(R2) *EXISTING CUSTOM SIGN TO BE SALVAGED REMOVED DURING CONSTRUCTION. REINSTALL BUS SIGN AND SIGN SUPPORT. CONFIRM LOCATION WITH KC METRO PRIOR TO REINSTALLATION.*

EXISTING SIGN NOTES

(E1) *EXISTING CUSTOM SIGN TO REMAIN.*

(E2) *EXISTING R1-1 SIGN TO REMAIN.*

RELOCATE SIGN LEGEND

BUS STOP (EXISTING)
(R1) (R2)

EXISTING SIGN LEGEND

CUSTOM (E1)

R1-1 (E2)

NEW SIGN LEGEND

W11-2 (36"X36") FLUORESCENT YEL-GRN
(N1) (N3)

W16-9P (24"X12") FLUORESCENT YEL-GRN
(N2) (N4)

10 0 10 20
SCALE IN FEET

IFB PLANS

No.	DATE	BY	CHD	REVISION

CityofRedmond WASHINGTON
15670 N.E. 85TH STREET
P.O. BOX 97010
REDMOND, WA 98073-9710
PH. (425) 556-2701

HUITT-ZOLLARS Seattle
Huitt-Zollars, Inc.
818 Stewart Street, Suite 1120
Seattle, Washington, 98101
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TENW
Transportation Engineering NorthWest
Transportation Planning | Design | Traffic Impact & Operations
11400 SE 8th Street, Suite 200, Bellevue, WA 98004 | Office (425) 889-6747
Project Contact: Glen DuBreuil
Phone: 425-230-0582

GODFORD RAYMOND ERIK BERNTSEN STATE OF WASHINGTON 46917 REGISTERED PROFESSIONAL ENGINEER

LINE IS 1" AT FULL SCALE

DESIGNED BY: J. ARREOLA	ISSUE DATE: 04/30/19
DRAWN BY: J. ARREOLA	JOB NO: R310479.01
CHECKED BY: R. BERNTSEN	DRAWING FILE NO: C1.03.DWG

156TH AVE NE
4800 BLOCK PEDESTRIAN SIGNAL

PAVEMENT MARKING AND SIGNAGE PLAN

DRAWING No.: **C1.03**

SHEET No.: 6 OF 13

04/30/19 | 6:32 PM | JARREOLA
J:\R310479.01 - 156TH HAWK SIGNAL FINAL DESIGN\08.4 CD CONSTRUCTION DOCUMENTS (90%)\KC METRO ROUTE 245 WO16 REDMOND 90PCT_CAD\SHEETS\C1.03.DWG

GENERAL NOTES:

1. TWO SIGNIFICANT TREES TO BE REMOVED. REPLACEMENT TREES WILL BE LOCATED ON THE SOUTH SIDE OF NE 51ST ST BETWEEN SR520 AND AND 156TH AVE NE.
2. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING A WORKING IRRIGATION SYSTEM OR PROVIDING WATER AT ALL TIMES. RESTORE THE EXISTING SYSTEM TO PROVIDE ADEQUATE COVERAGE OF NEW AND EXISTING LANDSCAPING IN THE DISTURBED AREAS.

LEGEND

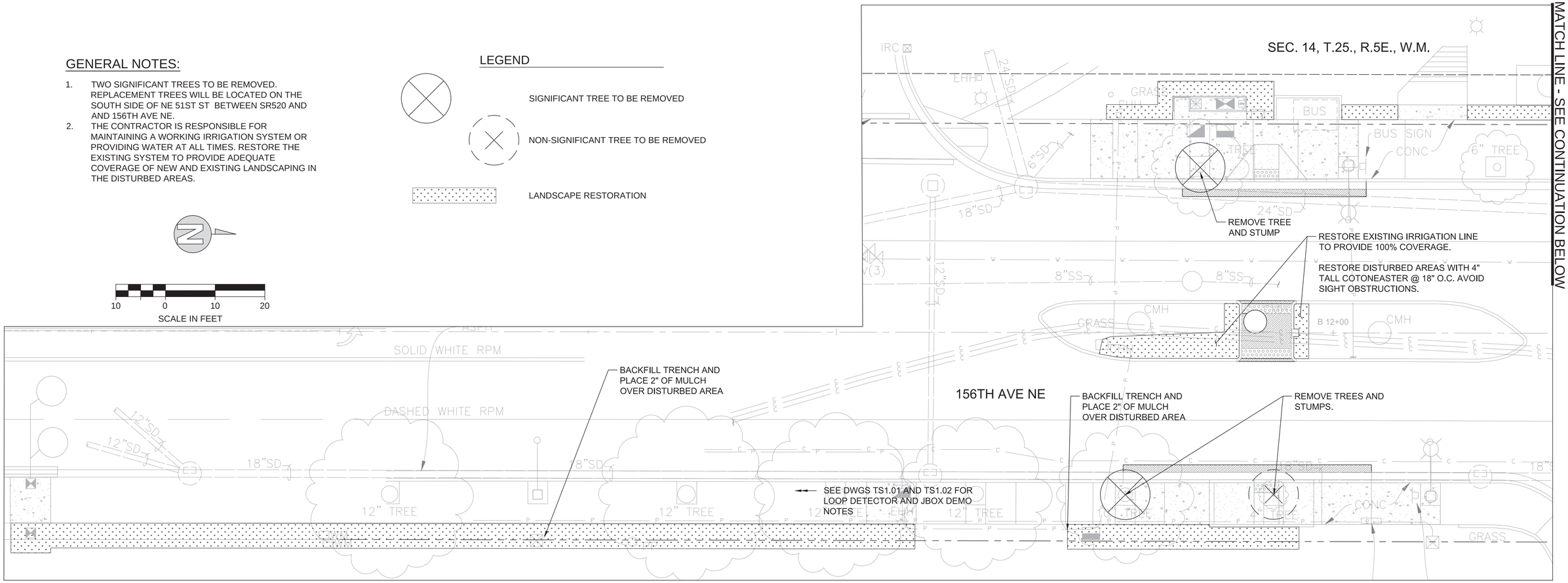
SIGNIFICANT TREE TO BE REMOVED

NON-SIGNIFICANT TREE TO BE REMOVED

LANDSCAPE RESTORATION

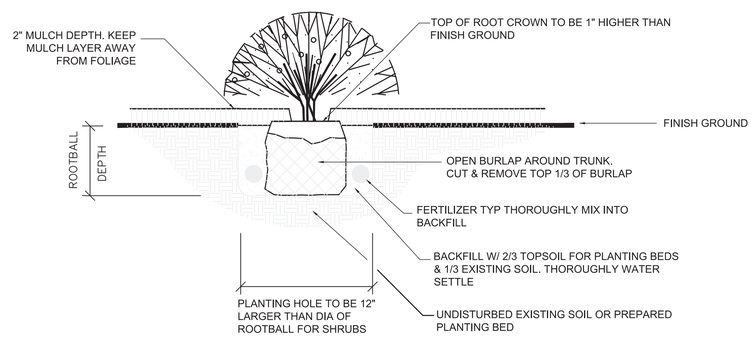
10 0 10 20

SCALE IN FEET



LANDSCAPE PLAN

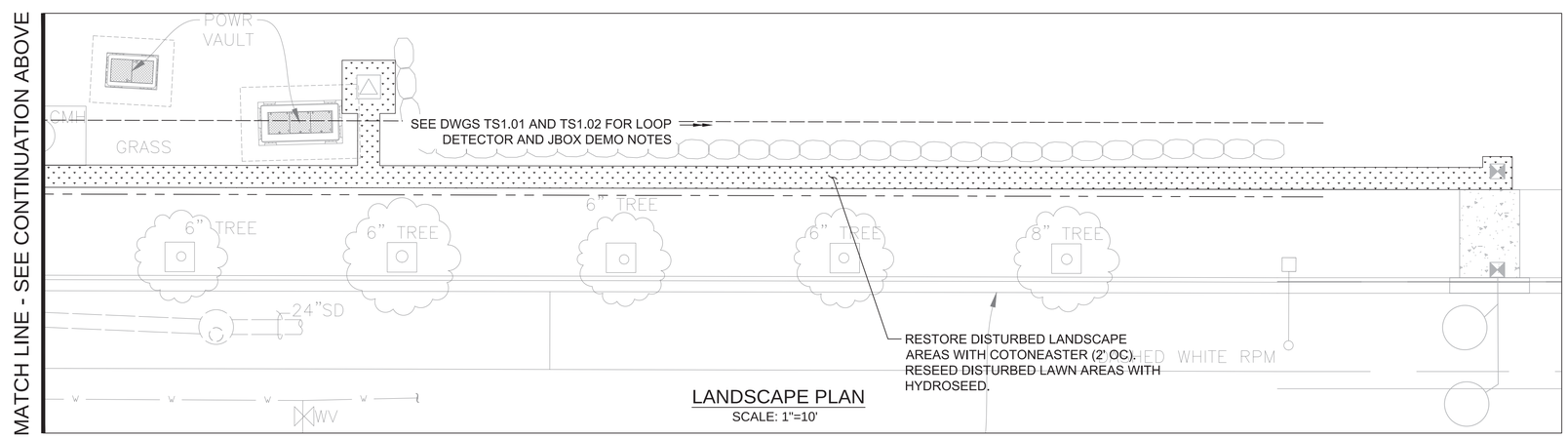
SCALE: 1"=10'



SECTION - SHRUB/GROUNDCOVER PLANTING

SCALE: NTS

1 / L101



LANDSCAPE PLAN

SCALE: 1"=10'

IFB PLANS

No.	DATE	BY	CHD	REVISION

City of Redmond WASHINGTON
15670 N.E. 85TH STREET
P.O. BOX 97010
REDMOND, WA 98073-9710
PH. (425) 556-2701

HUITT-ZOLLARS
Huitt-Zollars, Inc. Seattle
818 Stewart Street, Suite 1120
Seattle, Washington, 98101
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TENW
Transportation Engineering NorthWest
Transportation Planning | Design | Traffic Impact & Operations
11400 SE 8th Street, Suite 200, Bellevue, WA 98004 | Office (425) 889-6747
Project Contact: Glen DuBreuil
Phone: 425-250-0582

STATE OF WASHINGTON — PENELOPE ST. JOHN — NO. 846 EXP. 02/20/20 — LICENSED LANDSCAPE ARCHITECT

LINE IS 1" AT FULL SCALE

DESIGNED BY: P. ST. JOHN	ISSUE DATE: 04/30/19
DRAWN BY: P. ST. JOHN	JOB NO: R310479.01
CHECKED BY: R. BERNTSEN	DRAWING FILE NO: L1.01.DWG

156TH AVE NE
4800 BLOCK PEDESTRIAN SIGNAL

LANDSCAPE PLAN

DRAWING No.: L1.01

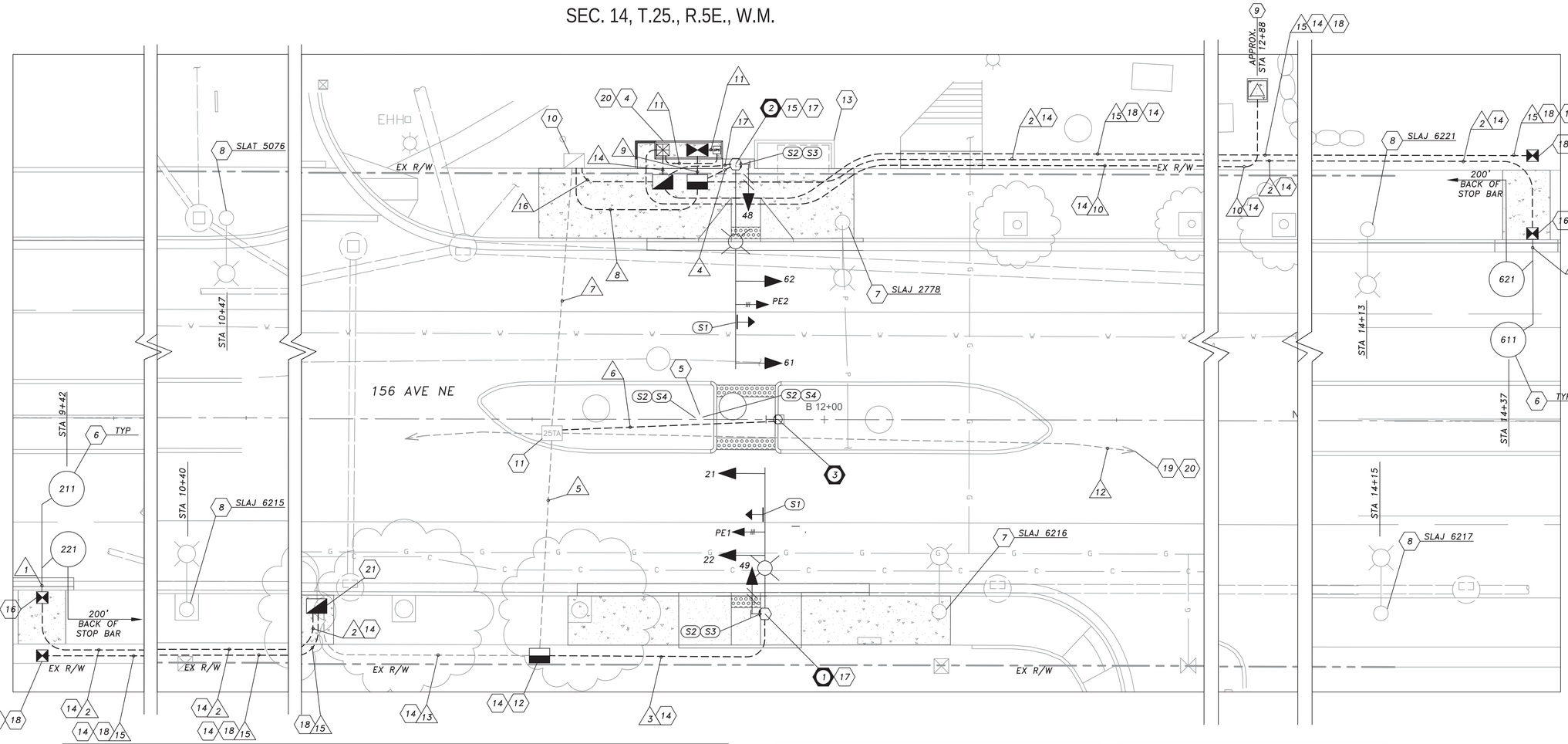
SHEET No.: 7 OF 13

04/30/19 | 6:32 PM | JARREOLA
J:\R310479.01 - 156TH HAWK SIGNAL FINAL DESIGN\08.4 CD CONSTRUCTION DOCUMENTS (90%)\KC METRO ROUTE 245 WO16 REDMOND 90PCT_CAD\SHEETS\L1.01.DWG

SEC. 14, T.25., R.5E., W.M.

SIGNAL PLAN LEGEND

PROPOSED	DESCRIPTION
	TYPE 1 JUNCTION BOX
	TYPE 2 JUNCTION BOX
	TYPE 8 JUNCTION BOX
	VEHICLE SIGNAL HEAD
	CONDUIT
	SIGN ON MAST ARM
	PEDESTRIAN SIGNAL
	EMERGENCY VEHICLE PRE-EMPT
	BATTERY BACKUP
	SIGNAL CONTROLLER CABINET
	ELECTRICAL SERVICE CABINET
	SIGNAL POLE
	SIGN/POST
	PPB POST
	LUMINAIRE
	PEDESTRIAN PUSH BUTTON
	6' ROUND DETECTOR LOOP
	WIRE NOTE
	SIGN NOTE
	POLE NUMBER
	CONSTRUCTION NOTE



SEE SHEET TS1.02 FOR
- SIGNAL AND ILLUMINATION CONSTRUCTION NOTES
- SIGNAL AND ILLUMINATION GENERAL NOTES
- CONDUIT AND WIRING SCHEDULE
- BREAKER SCHEDULE
- UPS SYSTEM SPECIFICATIONS

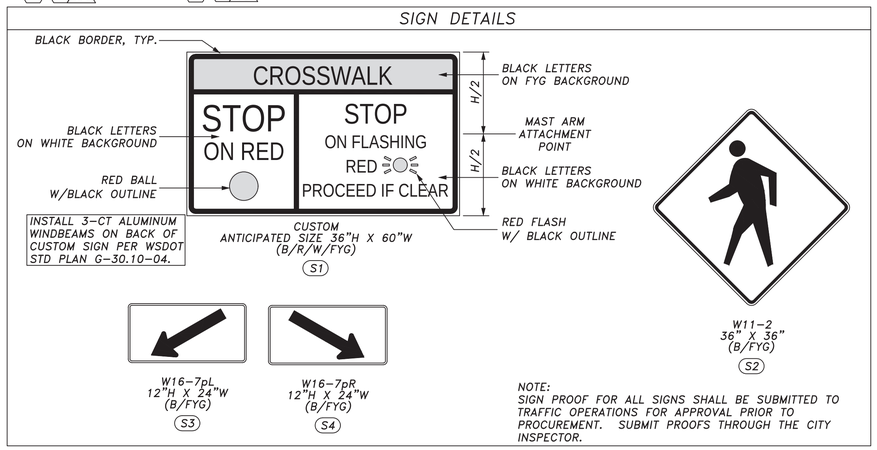
SEE SHEET TS1.03 FOR
- INTERCONNECT SCHEMATIC
- PEDESTRIAN PUSHBUTTON PLACEMENT DETAILS

SEE SHEET TS6.01 FOR
- TRAFFIC SIGNAL POLE CHART

SEE SHEET TS6.02 FOR
- TRAFFIC SIGNAL WIRING DIAGRAM

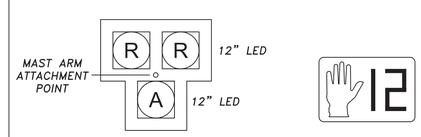
SEE SHEET TS6.03 FOR
- SPECIAL DESIGN CONTROLLER & SERVICE CABINET FOUNDATION DETAILS.

SIGN DETAILS



NOTE:
SIGN PROOF FOR ALL SIGNS SHALL BE SUBMITTED TO TRAFFIC OPERATIONS FOR APPROVAL PRIOR TO PROCUREMENT. SUBMIT PROOFS THROUGH THE CITY INSPECTOR.

SIGNAL DISPLAYS



VEHICLE SIGNAL HEAD NO. 21, 22, 61, 62

LED COUNTDOWN PEDESTRIAN HEAD NO. 48, 49

NOTE: BACK PLATES SHALL BE PROVIDED FOR ALL NEW VECHICULAR SIGNAL HEADS.

SIGNAL PHASE DIAGRAM

ø1	ø2	ø3	ø4
NOT USED	→	NOT USED	↕
NOT USED	←	NOT USED	NOT USED
ø5	ø6	ø7	ø8

VEHICLE MOVEMENT →

PEDESTRIAN MOVEMENT ←→

10 5 0 10 20
SCALE

CITY OF REDMOND
DEPARTMENT OF PUBLIC WORKS

The Electrical Contractor shall obtain a City of Redmond Electrical Permit before commencing any work.

All work shall conform to the City of Redmond Standard Details and Specifications, these plans and the latest edition to the National Electrical Code.

Signature _____ Date _____

IFB PLANS

No.	DATE	BY	CHD	REVISION

City of Redmond WASHINGTON
15670 N.E. 85TH STREET
P.O. BOX 97010
REDMOND, WA 98073-9710
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11400 SE 8th Street, Suite 200, Bellevue, WA 98004 | Office (425) 889-6747
Project Contact: Glen DuBreuil
Phone: 425-250-0582

CHRISTOPHER T. BICKEL STATE OF WASHINGTON 35635 REGISTERED PROFESSIONAL ENGINEER
04-30-2019

LINE IS 1" AT FULL SCALE

DESIGNED BY: TDR	ISSUE DATE: 04/30/2019
DRAWN BY: TDR	JOB NO: TENW #5288
CHECKED BY: GMD	DRAWING FILE NO: TS1.01.DWG

156TH AVE NE
4800 BLOCK PEDESTRIAN SIGNAL

TRAFFIC SIGNAL PLAN

DRAWING No.: **TS1.01**

SHEET No.: 8 OF 13

SIGNAL & ILLUMINATION GENERAL NOTES

1. THE LOCATION OF ALL CONDUIT, JUNCTION BOXES, AND CABINETS SHOWN ON THIS PLAN ARE FOR GRAPHIC REPRESENTATION ONLY AND FINAL LOCATIONS SHALL BE CONFIRMED IN THE FIELD WITH THE ENGINEER OR CITY INSPECTOR.
2. ALL TRAFFIC SIGNAL AND PEDESTRIAN HEADS AND PUSH BUTTONS SHALL BE SECURELY AND COMPLETELY COVERED WHILE NOT IN OPERATION.
3. ALL WORK SHALL BE IN ACCORDANCE WITH CITY OF REDMOND STANDARDS AND SPECIFICATIONS, CURRENT EDITION, UNLESS OTHERWISE SPECIFIED. THE CURRENT EDITION OF THE CITY OF REDMOND STANDARD SPECIFICATIONS AND DETAILS SHALL BE CONSIDERED PART OF THIS CONTRACT. THIS DOCUMENT CAN BE FOUND AT: HTTP://WWW.REDMOND.GOV/INSIDECITYHALL/PUBLICWORKS/STANDARDDETAILS
4. THE LOCATIONS OF FEATURES SHOWN ARE APPROXIMATE AND SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR AS NECESSARY.
5. THE CONTRACTOR SHALL SUBMIT A REQUEST TO THE INSPECTOR FOR MATERIALS APPROVAL MINIMUM THREE WEEKS PRIOR TO THE REQUESTED APPROVAL DATE.
6. ALL WORK SHALL BE CONSISTENT WITH UTILITY AGENCY REQUIREMENTS. THE CONTRACTOR SHALL CONTACT ALL PERTINENT UTILITY AGENCIES 48 HOURS BEFORE COMMENCING WORK, AND SHALL COORDINATE WITH AFFECTED UTILITY AGENCIES THROUGHOUT THE PROJECT.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING UTILITIES. THE CONTRACTOR SHALL NOTIFY THE AFFECTED UTILITY COMPANY AND THE CITY OF REDMOND IMMEDIATELY UPON DAMAGE.
8. EXISTING FEATURES TO REMAIN UNLESS OTHERWISE NOTED.
9. ALL CONDUCTORS FOR SIGNAL HEADS, LOOPS, PEDESTRIAN HEADS, PUSHBUTTONS, AND STREET LIGHTS SHALL BE LABELED IN EACH JUNCTION BOX.
10. PRESERVE AND PROTECT EXISTING TRAFFIC LOOPS UNLESS OTHERWISE INDICATED.
11. CONTRACTOR SHALL PROVIDE AND INSTALL A PERMANENT OR TEMPORARY VIDEO DETECTION SYSTEM AT ANY TIME THAT LOOP DETECTORS ARE NOT FUNCTIONAL.
12. INSTALL A DETECTABLE PULL TAPE IN ALL NEW SPARE CONDUIT
13. ALL NEW ILLUMINATION POLE FOUNDATION LOCATIONS SHALL BE APPROVED BY THE ENGINEER PRIOR TO EXCAVATION.
14. THE EXISTING ILLUMINATION SYSTEM SHALL REMAIN OPERATIONAL UNTIL NEW ILLUMINATION CONFIGURATION IS FULLY FUNCTIONAL.
15. ALL SIGNALIZED CROSSWALKS SHALL BE OPERATIONAL AT ALL TIMES UNLESS FLAGGERS/POLICE ARE PRESENT TO ASSIST PEDESTRIANS.
16. SALVAGE REMOVED SIGNAL EQUIPMENT TO THE CITY AS REQUESTED, INCLUDING TRAFFIC SIGNAL HEADS, TRAFFIC SIGNAL CONTROLLER CABINET, MAST ARM STREET NAME SIGNS, AND OTHER ITEMS AS REQUESTED. CONTRACTOR SHALL DISPOSE OF ITEMS NOT DESIRED BY THE CITY.
17. CONTRACTOR SHALL PROVIDE TENW WITH REDLINE MARKUPS SHOWING ANY AND ALL CHANGES FROM THESE APPROVED PLANS FOLLOWING CONSTRUCTION.
18. NEW SIGNAL POLE BASE PLATES AND FACE OF PUSHBUTTONS SHALL ALIGN WITH THE BEARING OF THE CROSSWALK IT SERVES. FAILURE TO ORIENT POLES/BASE PLATES WITH THE CROSSWALK WILL REQUIRE THE FOUNDATION TO BE REMOVED AND RE-POURED BY THE CONTRACTOR. SEE PEDESTRIAN PUSHBUTTON PLACEMENT DETAILS SHEET TS1.03.
19. CONTRACTOR SHALL CONFIRM PREFERRED TRENCHING/BORING METHOD WITH CITY OF REDMOND PRIOR TO BEGINNING CONSTRUCTION.
20. AS PART OF THE DESIGN PROCESS, THE ENGINEER HAS ATTEMPTED TO CONFIRM THAT THERE ARE NOT CONFLICTS WITH OVERHEAD POWER LINES OR SUBSURFACE UTILITIES. HOWEVER, IT IS POSSIBLE FOR THE EXISTING OR PROPOSED CONDITIONS TO CHANGE PRIOR TO IMPLEMENTATION OF THE SCOPE OF WORK IDENTIFIED ON THESE DOCUMENTS. AS THE FIRST ORDER OF BUSINESS, THE CONTRACTOR SHALL POTHOLE EACH POLE LOCATION TO CONFIRM THAT THERE ARE NOT CONFLICTS WITH SUBSURFACE UTILITIES. ADDITIONALLY, THE CONTRACTOR SHALL CONFIRM THAT THERE IS A APPROPRIATE MINIMUM CIRCUMFERENTIAL CLEARANCE PROVIDED BETWEEN OVERHEAD POWER LINES AND THE PROPOSED LUMINAIRE/SIGNAL POLES PRIOR TO CONSTRUCTION. ADDITIONAL CLEARANCE MAY BE REQUIRED AS DIRECTED BY THE UTILITY. THE CONTRACTOR SHALL CONTACT THE ENGINEER IMMEDIATELY IF A CONFLICT IS DISCOVERED.

CONDUIT AND WIRING SCHEDULE

RUN NO.	CONDUIT SIZE	TWISTED PAIR LOOP	VEHICLE LOOPS	PRE EMPT	VEHICLE DISPLAY	VEHICLE DISPLAY SPARE	PED DISPLAY /PPB	PPB	ILLUM	PHOTO CELL	SERVICE POWER	SIGNAL CONTROL POWER	INTER-CONNECT	DETECT MULE TAPE	EQUIP GROUND *	CONDUIT FILL	ALLOW FILL 26%	ALLOW FILL 40%	REMARKS
		#14	2C(SH)	3C(SH)	5C	5C	5C	2C(SH)	#8	#14	4/0	#6	24CT SMFO						
1	2" SCH40 PVC	2														0.180	0.890	---	2 LOOPS
2	2" SCH40 PVC		2												1	0.236	0.890	---	
3	3" SCH40 PVC			1	1	1	1								1	0.546	1.950	---	
	2" SCH40 PVC								2						1	0.168	0.890	---	ILLUM
	2" SCH40 PVC													1		0.020	0.890	---	SPARE
4	3" SCH40 PVC			1	1	1	1								1	0.560	1.950	---	
	2" SCH40 PVC													1		0.020	0.890	---	SPARE
5	EX 3"		2	1	1	1	1								1	0.740	---	3.000	OTHER CONDUCTORS MAY BE PRESENT
	EX 3"								2						1	0.182	---	3.000	OTHER CONDUCTORS MAY BE PRESENT
6	2" SCH40 PVC							1							1	0.146	0.890	---	
7	EX 3"		2	1	1	1	1	1					1		1	0.819	---	3.000	OTHER CONDUCTORS MAY BE PRESENT
	EX 3"								2						1	0.168	---	3.000	OTHER CONDUCTORS MAY BE PRESENT
8	3" SCH40 PVC		2	1	1	1	1	1					1		1	0.819	1.950	---	
	3" SCH40 PVC													1		0.020	1.950	---	SPARE
9	3" SCH40 PVC		4	2	2	2	2	1							1	1.486	1.950	---	
	3" SCH40 PVC												1			0.003	1.950	---	
	3" SCH40 PVC													1		0.020	1.950	---	SPARE
10	3" SCH40 PVC										3					1.116	1.950	---	POWER-SERVICE
11	2" SCH40 PVC											3				0.219	0.890	---	POWER-CONTROLLER
12	EX 2"												1			0.003	---	1.360	OTHER CONDUCTORS MAY BE PRESENT
13	EX 3"		2												1	0.236	---	3.000	OTHER CONDUCTORS MAY BE PRESENT
	EX 3"															0.000	---	3.000	OTHER CONDUCTORS MAY BE PRESENT (SPARE)
14	3" SCH40 PVC								2	3					1	0.231	1.950	---	
	2" SCH40 PVC													1		0.020	0.890	---	SPARE
15	2" SCH40 PVC													1		0.020	0.890	---	SPARE ILLUM
16	2" SCH40 PVC								2						1	0.168	0.890	---	ILLUM
17	2" SCH40 PVC								2	3					1	0.231	0.890	---	ILLUM

*EQUIPMENT GROUND SHALL BE EQUAL TO OR GREATER THAN LARGEST CONDUCTOR SIZE IN THE CONDUIT.

SIGNAL & ILLUMINATION CONSTRUCTION NOTES

1. CONSTRUCT FOUNDATION PER POLE SCHEDULE SHEET TS6.01. FURNISH AND INSTALL TYPE III SIGNAL STANDARD WITH TWO VEHICULAR SIGNAL HEADS, ONE EMERGENCY VEHICLE PRE-EMPT DETECTOR, ONE R10-23 SIGN, AND ONE CUSTOM SIGN ON A 25' MAST ARM. INSTALL ONE TERMINAL CABINET, ONE PEDESTRIAN HEAD, AND ONE POLARA NAVIGATOR PEDESTRIAN PUSHBUTTON ON THE POLE. PEDESTRIAN PUSHBUTTON SHALL FACE SOUTH AND BE PARALLLEL TO THE CROSSWALK DIRECTION. INSTALL ONE NEW LEOTEK 133 LED COBRAHEAD LUMINAIRE ON 8-FT ARM AT 28-FT MOUNTING HEIGHT.
2. CONSTRUCT FOUNDATION PER POLE SCHEDULE SHEET TS6.01. FURNISH AND INSTALL TYPE III SIGNAL STANDARD WITH TWO VEHICULAR SIGNAL HEADS, ONE EMERGENCY VEHICLE PRE-EMPT DETECTOR, ONE R10-23 SIGN, AND ONE CUSTOM SIGN ON A 35' MAST ARM. INSTALL ONE TERMINAL CABINET, ONE PEDESTRIAN HEAD, AND ONE POLARA NAVIGATOR PEDESTRIAN PUSHBUTTON ON THE POLE. PEDESTRIAN PUSHBUTTON SHALL FACE SOUTH AND BE PARALLLEL TO THE CROSSWALK DIRECTION. INSTALL ONE NEW LEOTEK 133 LED COBRAHEAD LUMINAIRE ON 12-FT ARM AT 30-FT MOUNTING HEIGHT.
3. CONSTRUCT FOUNDATION PER POLE SCHEDULE SHEET TS6.01. FOUNDATION SHALL BE INTEGRAL TO THE ADJACENT CURB PER WSDOT STANDARD PLAN J-20.11-02. FURNISH AND INSTALL TYPE PPB POST WITH ONE NEW POLARA NAVIGATOR PEDESTRIAN PUSHBUTTON WITH DUAL ARROWS ON THE POLE. PUSHBUTTON SHALL FACE SOUTH AND BE PARALLEL TO CROSSWALK DIRECTION.
4. INSTALL SPECIAL DESIGN CONTROLLER & SERVICE CABINET FOUNDATION PER DETAIL SHEET TS6.03. INSTALL CITY SUPPLIED SKYLINE SERVICE CABINET (DRAWING NO. 47995-R3) PER CITY OF REDMOND DRAWING NO. 461. INSTALL CITY SUPPLIED TS2 TYPE 1 CONTROLLER CABINET. INSTALL CITY SUPPLIED UPS (ALPHA FXM2000) PER SPECIFICATIONS, SHEET TS1.02. UPS SHALL GOVERN POWER TO SIGNAL CABINET. LOCATION SHOWN IS APPROXIMATE. FINAL LOCATION SHALL BE DETERMINED IN THE FIELD WITH THE CITY INSPECTOR AND ENGINEER PRESENT.
5. INSTALL SIGN POST IN GROUND PER CITY OF REDMOND DETAIL NO 426D. FURNISH AND INSTALL TWO 11-2 SIGNS AND TWO W16-7PR SIGNS ON POST.
6. INSTALL 6' ROUND LOOP DETECTOR PER CITY OF REDMOND DRAWINGS NUMBER 454A, 455, 456, 457, TYP. LOOP PLACEMENT AS SHOWN ON PLANS.
7. EXISTING PSE POLE AND FIXTURE TO BE REMOVED BY PSE. CONTRACTOR TO COORDINATE WITH PSE TO SCHEDULE POLE REMOVAL, INCLUDING COMPLETING ALL FORMS AND PAYMENT OF ALL FEES. PROJECT CONTRACTOR SHALL CONFIRM THAT REMAINING VOID IS FILLED AND COMPACTED APPROPRIATELY. EXISTING FIXTURE SHALL REMAIN OPERATIONAL UNTIL TRAFFIC SIGNAL POLE MOUNTED LUMINAIRES ARE INSTALLED AND OPERATIONAL.
8. EXISTING PSE POLE TO REMAIN. PSE TO REMOVE EXISTING HPS FIXTURE AND REPLACE WITH A NEW GE EVOLVE 120W LED FIXTURE. CONTRACTOR TO COORDINATE WITH PSE TO SCHEDULE FIXTURE REPLACEMENT, INCLUDING COMPLETING ALL FORMS AND PAYMENT OF ALL FEES. FIXTURE REPLACEMENT SHALL NOT OCCUR UNTIL AFTER NEW TRAFFIC SIGNAL POLE MOUNTED LUMINAIRES ARE INSTALLED AND OPERATIONAL.
9. NEW NEW 120/240V SINGLE PHASE TRANSFORMER INSTALLED BY PSE BY CONTRACT WITH THE PROJECT CONTRACTOR. PROPOSED LOCATION SHOWN IS APPROXIMATE. THE CITY OF REDMOND SUBMITTED A REQUEST FOR SERVICE APPLICATION TO PSE IN MARCH 2019 TO CONFIRM THE POWER SOURCE THE LOCATION.

   CONTRACTOR SHALL FURNISH AND INSTALL CONDUIT AND CONDUCTORS TO THE POWER SOURCE. CONTRACTOR SHALL LEAVE SUFFICIENT SLACK IN CONDUCTORS FOR FINAL CONNECTION. THE CONTRACTOR SHALL COORDINATE WITH PSE TO MAKE FINAL CONNECTION TO POWER SOURCE INCLUDING COMPLETING ALL FORMS AND PROVIDING ALL FEES. CONTRACTOR SHALL NOTIFY PSE A MINIMUM OF 16 WEEKS PRIOR TO NEEDING POWER TO THE SERVICE CABINET.
10. EXISTING JUNCTION BOX TO REMAIN. INSTALL NEW CONDUIT TO EXISTING JUNCTION BOX.
11. EXISTING TYPE 25TA PULL VAULT TO REMAIN. INSTALL NEW CONDUIT TO EXISTING TYPE 25TA PULL VAULT.
12. INTERCEPT EXISTING CONDUIT RUN AND INSTALL NEW TYPE 8 JUNCTION BOX. INSTALL NEW CONDUIT TO NEW JUNCTION BOX.
13. MAINTAIN AND PROTECT EXISTING BUS SHELTER.
14. INSTALL CONDUIT/JUNCTION BOX AT BACK OF SIDEWALK. RESTORE ALL IMPACTED LANDSCAPING, IRRIGATION, PATHWAYS/SIDEWALK TO EXISTING CONDITIONS.
15. INSTALL 6" CONCRETE COLLAR AROUND SIGNAL POLE BASE PLATE. CONCRETE COLLAR SHALL BE FLUSH WITH BACK OF SIDEWALK. SEE SHEET TS6.03.
16. INSTALL JUNCTION BOX AT BACK OF CURB, WITHIN SIDEWALK. RESTORE ALL IMPACTED LANDSCAPING, IRRIGATION, PATHWAYS/SIDEWALK TO EXISTING CONDITIONS.
17. SIGNAL POLE FOUNDATION WAS POTHOLED DURING DESIGN AND FOUND TO BE FREE OF OBSTRUCTIONS TO A DEPTH OF 8'. EXCAVATION WAS BACKFILLED WITH PEA GRAVEL.
18. INSTALL JUNCTION BOX AND CONDUIT FOR FUTURE ILLUMINATION SYSTEM USE.
19. INTERCONNECT CONDUIT SYSTEM CONTINUES NORTH TO THE 156 AVE NE/NE 51 ST INTERSECTION SIGNAL CONTROLLER.
20. TERMINATE NEW 24CT SMFO IN BOTH PROPOSED HAWK CONTROLLER AND EXISTING 156 AVE NE/NE 51 ST CONTROLLER. SEE INTERCONNECT SCHEMATIC, SHEET TS1.03.
21. REMOVE EXISTING JUNCTION BOX AND REPLACE WITH NEW TYPE 2 JUNCTION BOX. REMOVE AND RESTORE EXISTING SIDEWALK AS NECESSARY.

UPS SYSTEMS SPECIFICATIONS

AN ALPHA FXM2000 BBS SELF CONTAINED, METERED DISTRIBUTION AND BATTERY BACKUP SYSTEM MANUFACTURED BY ALPHA TECHNOLOGIES, INC. OR CITY OF REDMOND APPROVED EQUAL SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR IN ACCORDANCE WITH THE PROJECT PLANS AT EACH SIGNALIZED INTERSECTION. THE UPS SYSTEM SHALL INCLUDE 6 BATTERIES, ENCLOSURE AND ALL REQUIRED HARDWARE FOR A COMPLETE INSTALLATION.

AN ANODIZED ALUMINUM WEATHERPROOF ENCLOSURE SHALL HOUSE THE BBS AND BATTERIES. ENCLOSURE SHALL BE TIG WELDED CONSTRUCTION WITH WELDING MATERIALS SPECIFICALLY DESIGNED FOR THE MATERIAL TO BE WELDED. THE ENCLOSURE SHALL HAVE A TNEMEC COATING. REFER TO SECTION 6-07 FOR TNEMEC COATING. ENCLOSURE SHALL HAVE FULLY FRAMED SIDE HINGED OUTER DOORS WITH SWAGED CLOSE TOLERANCE SIDES FOR FLUSH FIT WITH DRIP LIP AND CLOSED CELL NEOPRENE FLANGE COMPRESSED GASKETS. FRONT DOOR SHALL INCORPORATE A FULL-LENGTH PIANO HINGE, PAD-LOCKABLE DRAW LATCH (CENTER AREA ON DOOR-LATCH SIDE), AND TWO PAD LOCKABLE WELDED-IN PLACE VANDAL-PROOF TABS (ONE UPPER AREA, ONE LOWER AREA ON DOOR-LATCH SIDE, RATED AT 2000 LBS. EACH). THERE SHALL BE NO EXPOSED NUT, BOLTS, SCREWS, RIVETS OR OTHER FASTENERS ON THE EXTERIOR OF THE ENCLOSURE. MAXIMUM CABINET DIMENSIONS 46" H X 20" W X 10.25" D. WEIGHT 250 LBS WITH BATTERIES. BBS SHALL BE MOUNTED IN AN INTERIOR TILT OUT HOUSING WITH 800 LB RATED STOPS. BATTERY CONNECTORS SHALL BE ANDERSON CONNECTORS WITH SILVER PLATED CONTACTS. BATTERIES SHALL BE INSTALLED IN FIXED POSITION FRAMED TRAYS FOR SEISMIC SAFETY AND BE READILY ACCESSIBLE FOR MAINTENANCE. BATTERIES SHALL BE MOUNTED ALLOWING AIRFLOW FRONT AND BACK. ENCLOSURE SHALL INCLUDE TWO TRANSFER BYPASS SWITCHES, ONE FOR BBS BYPASS THE SECOND FOR AUXILIARY GENERATOR. ALL SWITCHES MUST BE PANEL MOUNTED ON INTERIOR DEAD FRONT PANEL BOARD. UV RESISTANT PLASTIC LAMINATED NAMEPLATES SHALL IDENTIFY ALL CONTROLS AND MAJOR COMPONENTS. A PLASTIC COVERED WIRING DIAGRAM WILL BE ATTACHED TO THE INSIDE OF THE FRONT DOOR. ALL COMPONENTS SHALL BE FACTORY WIRED AND CONFORM TO REQUIRED NEMA, NEC, AND UL STANDARDS. A CHASSIS GROUND POINT SHALL BE PROVIDED. PANEL SHALL BE UL 508 INDUSTRIAL CONTROL PANEL RATED. SHALL BE CONTRACTING AGENCY-APPROVED PRIOR TO BID. MUST MEET THE FOLLOWING SPECIFICATIONS.

- SYSTEM SHALL PROVIDE 700 WATTS OF FULL CONTROL RUN TIME FOR TWO (2) HOURS. IN ADDITION THE SYSTEM SHALL PROVIDE SIX (6) TO EIGHT (8) HOURS OF FLASH.
- BBS BYPASS AND BBS ISOLATION SWITCH.
- DEADFRONT SAFETY PANEL BOARD WITH ALL SWITCHES, INDICATING FUSES, PLUGS, AND ISOLATION FUSES FOR EACH BATTERY PRE-WIRED WITH PHENOLIC NAMEPLATES.
- ALL NAMEPLATES SHALL BE SCREWED ON PHENOLIC ENGRAVED TYPE.
- ALL WIRE TERMINATING LUGS SHALL BE FULL WRAP AROUND TYPE.
- ALL BATTERIES SHALL BE CAPTIVE SPACED FROM EXTERNAL CAPTIVE SIDES IN EARTHQUAKE PROOF BUCKETS.
- CABINET VENTILATION SHALL BE BY (QTY. 4) 4" X ¼" LOUVERS TOP AND BOTTOM WITH ENCAPSULATED BUG SCREENS, CLEANABLE FILTERS AND A 100CFM FAN TO COMPLETELY EXCHANGE AIR 25 TIME MINIMUM PER MINUTE.
- ALL DC TERMINALS AND CONNECTIONS SHALL INCORPORATE SAFETY COVERS SUCH THAT THE SAFETY COVERS ARE IN PLACE FOR EVERY NORMAL MAINTENANCE MODE.
- EVENT COUNTERS & TOTAL RUN TIME COUNTER.
- TIME OF DAY CAPABILITY TO OPERATE THE SIGNAL IN CYCLE MODE OR FLASHING MODE.

SERVICE 1 BREAKER SCHEDULE
NEW SVC AT HAWK SIGNAL

CIRCUIT	VOLTAGE	BREAKER	CONTACTOR
MAIN	120/240	2P-200 AMP	---
SIGNAL	120	1P-50 AMP	---
ILLUM A	240	2P-15 AMP	30 AMP
ILLUM B (SPARE)	240	2P-15 AMP	30 AMP
ILLUM C (SPARE)	240	2P-15 AMP	30 AMP

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Signature _____ Date _____

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Project Contact: Glen DuBreuil
Phone: 425-250-0582

CHRISTOPHER T. BIGELOW STATE OF WASHINGTON 35635 REGISTERED PROFESSIONAL ENGINEER
04-30-2019

LINE IS 1" AT FULL SCALE

DESIGNED BY: TDR	ISSUE DATE: 04/30/2019
DRAWN BY: TDR	JOB NO: TENW #5288
CHECKED BY: GMD	DRAWING FILE NO: TS1.02.DWG

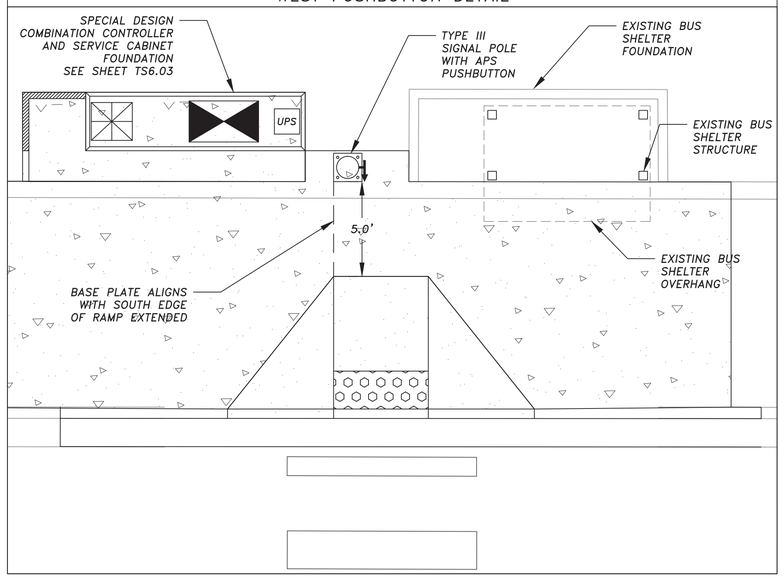
156TH AVE NE
4800 BLOCK PEDESTRIAN SIGNAL

TRAFFIC SIGNAL PLAN

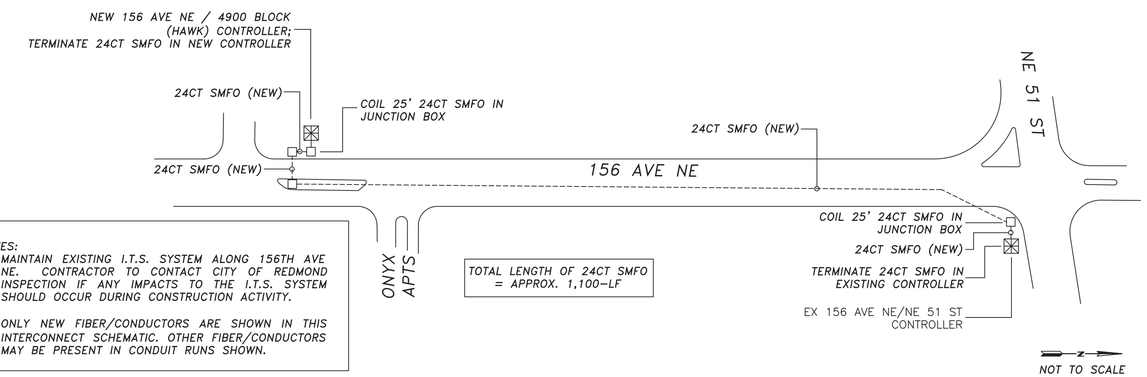
DRAWING No.: TS1.02

SHEET No.: 9 OF 13

WEST PUSHBUTTON DETAIL

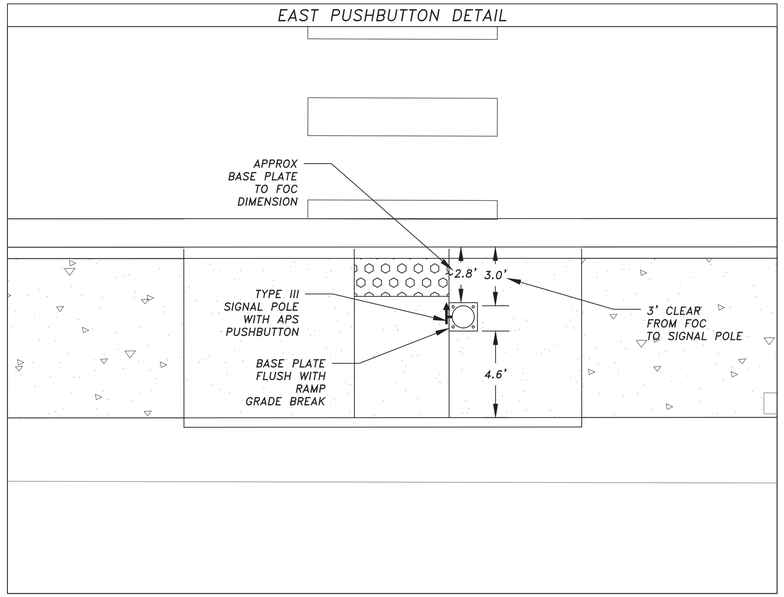


INTERCONNECT SCHEMATIC

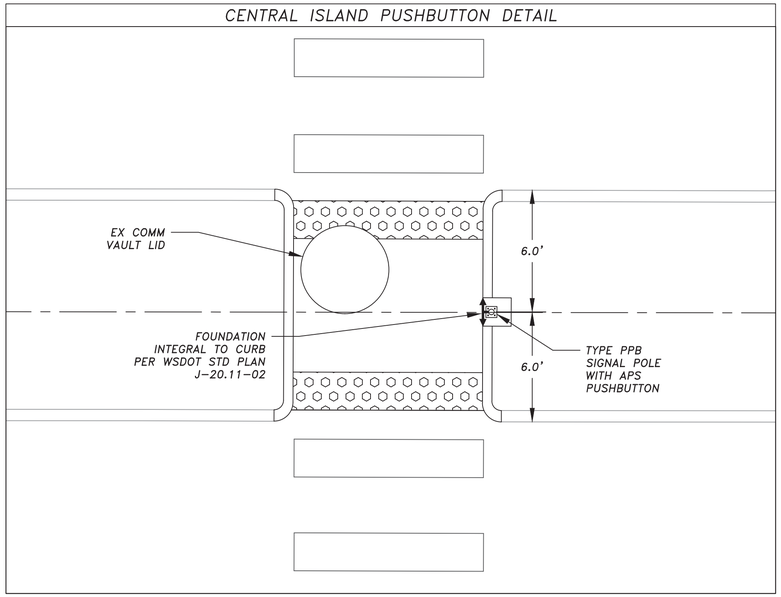


NOTES:
1. MAINTAIN EXISTING I.T.S. SYSTEM ALONG 156TH AVE NE. CONTRACTOR TO CONTACT CITY OF REDMOND INSPECTION IF ANY IMPACTS TO THE I.T.S. SYSTEM SHOULD OCCUR DURING CONSTRUCTION ACTIVITY.
2. ONLY NEW FIBER/CONDUCTORS ARE SHOWN IN THIS INTERCONNECT SCHEMATIC. OTHER FIBER/CONDUCTORS MAY BE PRESENT IN CONDUIT RUNS SHOWN.

EAST PUSHBUTTON DETAIL

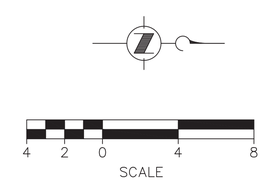


CENTRAL ISLAND PUSHBUTTON DETAIL



PUSHBUTTON PLACEMENT NOTES

1. SIGNAL CONTRACTOR AND CONCRETE CONTRACTOR SHALL COORDINATE TO ENSURE THAT THE RELATIONSHIPS SHOWN BETWEEN THE SIGNAL POLE AND ADA RAMP ARE MAINTAINED.
2. PEDESTRIAN PUSHBUTTON SHALL BE ORIENTED SUCH THAT THE FACE OF THE PUSHBUTTON IS PARALLEL WITH THE CROSSWALK THAT IT SERVES.
3. SIGNAL CONTRACTOR AND CONCRETE CONTRACTOR SHALL CONFIRM THAT THE PUSHBUTTON IS NO GREATER THAN 10-INCHES HORIZONTAL CLEARANCE FROM ANY FACE OF CURB OR VERTICAL OBSTRUCTION.



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Project Contact: Glen DuBreuil
Phone: 425-250-0582

CHRISTOPHER T. BIGELOW STATE OF WASHINGTON 36635 REGISTERED PROFESSIONAL ENGINEER
04-30-2019

LINE IS 1" AT FULL SCALE

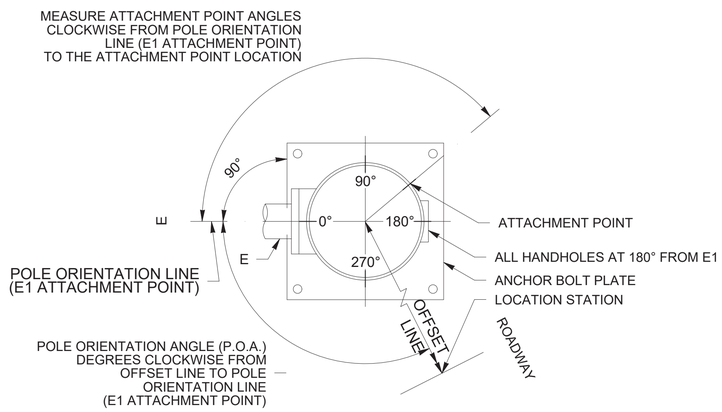
DESIGNED BY: TDR	ISSUE DATE: 04/30/2019
DRAWN BY: TDR	JOB NO: TENW #5288
CHECKED BY: GMD	DRAWING FILE NO: TS1.03.DWG

156TH AVE NE
4800 BLOCK PEDESTRIAN SIGNAL

INTERCONNECT SCHEMATIC &
PEDESTRIAN PUSHBUTTON PLACEMENT DETAILS

DRAWING No.: **TS1.03**

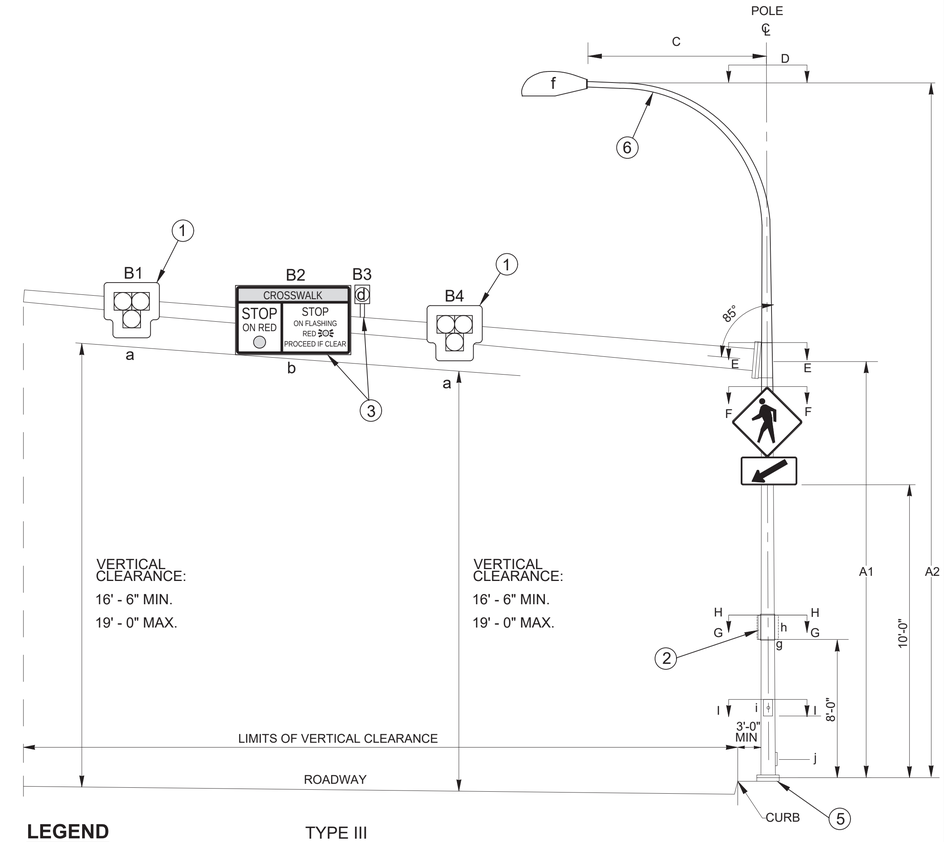
SHEET No.: 10 OF 13



POLE ORIENTATION AND ATTACHMENT POINT DETAIL

NOTES

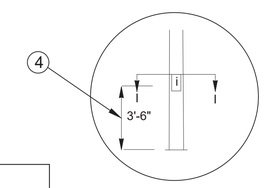
1. MOUNTING COUPLING INSTALLED AT OFFSET DISTANCE INDICATED IN CHART.
2. FIELD INSTALLED ORIENTATION TO BE APPROVED BY ENGINEERS.
3. NO TENONS REQUIRED FOR PREEMPT DETECTOR OR SIGNS.
4. FROM THE PEDESTRIAN WAITING SURFACE TO CENTER OF PEDESTRIAN PUSH BUTTON.
5. ALL POLE LOCATIONS TO BE APPROVED BY ENGINEER.
6. SEE SPECIAL PROVISIONS FOR LUMINAIRE ARM TYPE.



TYPE III
SIGNAL STANDARD

LEGEND

a. VEHICLE SIGNAL HEAD
b. SIGN
c. [NOT USED]
d. PRE-EMPT DETECTOR
e. [NOT USED]
f. LUMINAIRE
g. PEDESTRIAN SIGNAL HEAD
h. TERMINAL CABINET
i. PEDESTRIAN PUSH BUTTON ASSEMBLY
j. HANDHOLE



SIGNAL STANDARD DETAIL CHART

STD. No. (X)	FIELD LOCATION					POLE TYPE	MOUNTING HEIGHT (FT)		SIGNAL MAST ARM DATA: OFFSETS (FT) (Z) (POLE TO ATTACHMENT POINT)					SIGNAL MAST ARM DATA: WINDLOAD AREAS (FT) $(X)(Y)^2$					CALCULATED POLE XYZ (FT^3)	LUMINAIRE ARM (FT)	POLE ATTACHMENT POINT ANGLES (DEG.)						FOUNDATION DEPTH (FT)*			REMARKS
	STATION	OFFSET	LT.	RT.	P.O.A.		A1	A2	B1	B2	B3	B4		B1	B2	B3	B4			C	D	E	F	G	H	I	3' RD.	3' SQ.	4' RD.	
1	11+90.0	33.5'		X	0	III	18.0'	28.0'	24.0	17.0***	14.0	10.0		8.7	20.0	---	8.7		636	8	0	0	270	270	90	270	8**	---	---	FDN PER WSDOT J-26.10-03
2	11+85.0	43.5'	X		0	III	16.5'	30.0'	34.0	27.0***	24.0	20.0		8.7	20.0	---	8.7		1,010	12	0	0	270	270	90	270	8**	---	---	FDN PER WSDOT J-26.10-03
3	11+92.0	0.0'		X	0	PPB																				0	---	---	---	FDN PER WSDOT J-20.11-02

*ASSUMES 3,000PSF LATERAL BEARING PRESSURE, PER RECOMMENDATIONS BY GOLDER ASSOCIATES, INC. DATED MARCH 25, 2019.

**FOUNDATION LOCATION POTHOLED TO A DEPTH OF 8' IN MARCH 2019 AND BACKFILLED WITH PEA GRAVEL. NO OBSTRUCTIONS WERE OBSERVED.

***INSTALL 3-CT ALUMINUM WINDBEAMS ON BACK OF CUSTOM SIGN PER WSDOT STD PLAN G-30.10-04.

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04-30-2019

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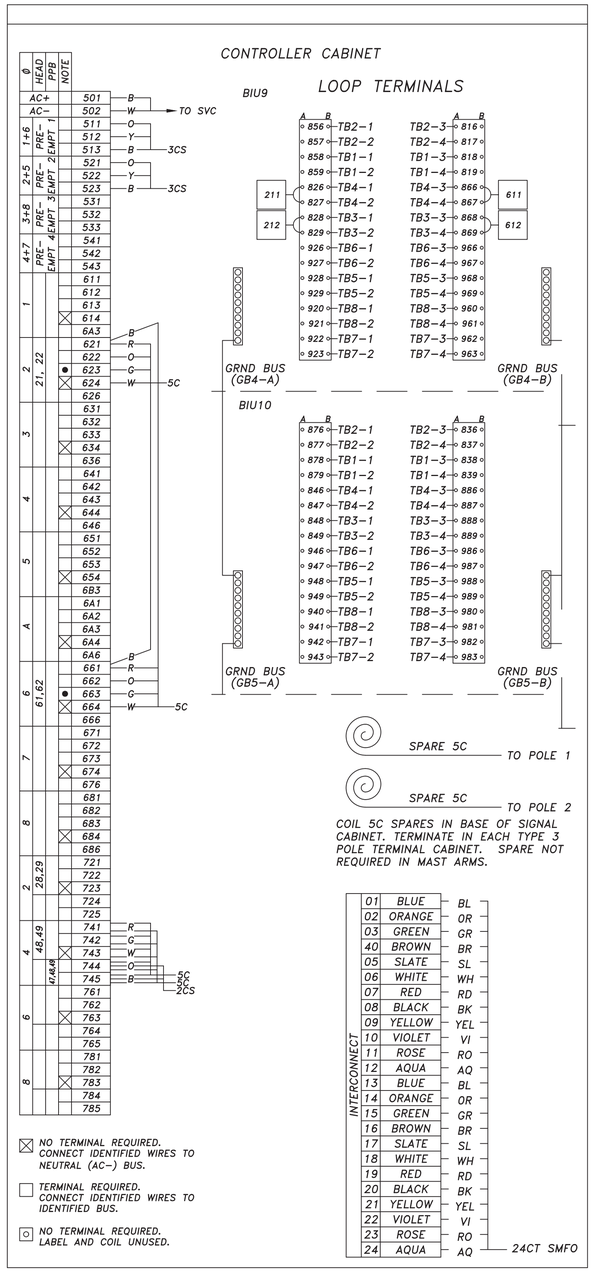
CHECKED BY: GMD	DRAWING FILE NO: TS6.01.DWG

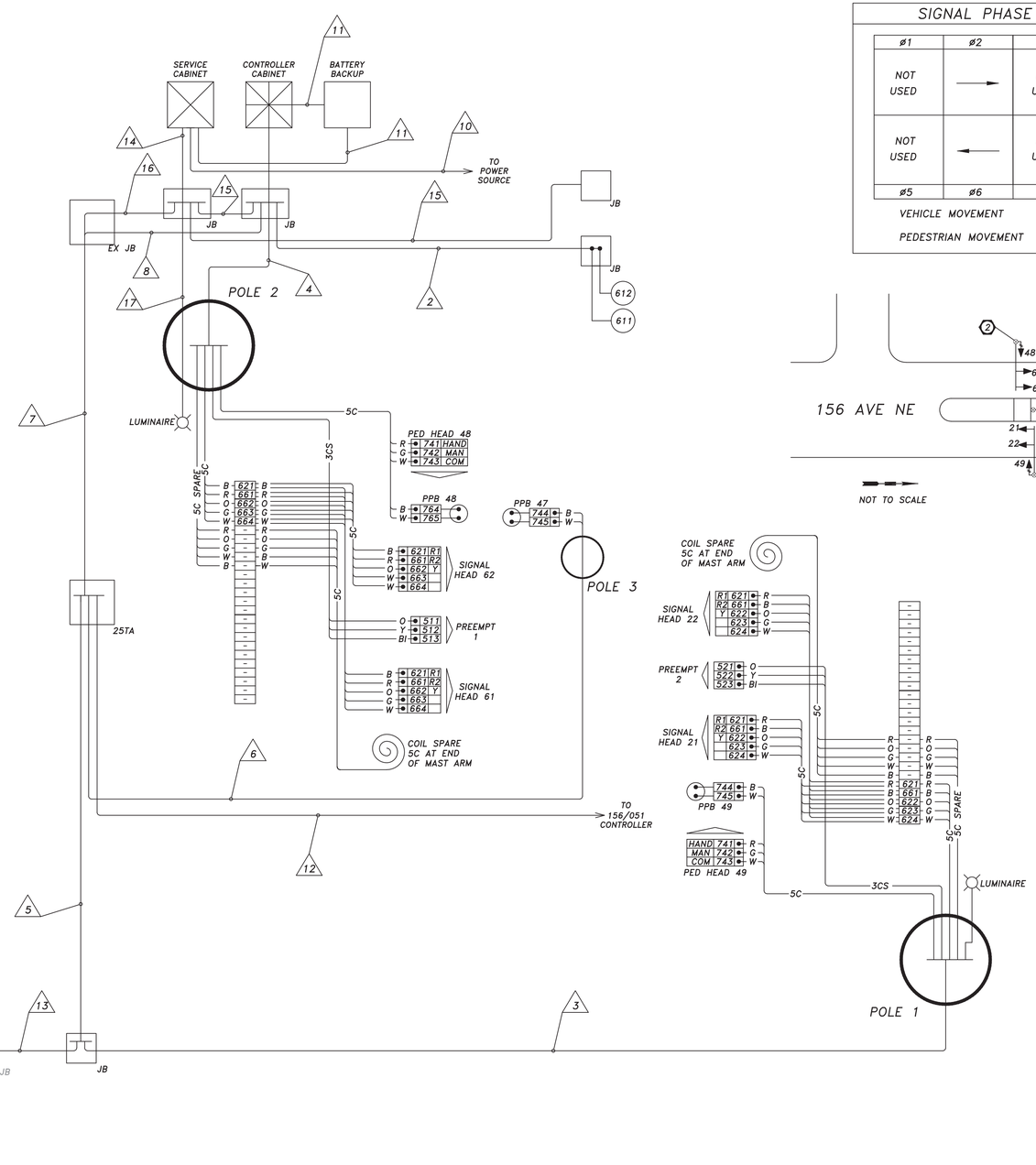
156TH AVE NE
4800 BLOCK PEDESTRIAN SIGNAL

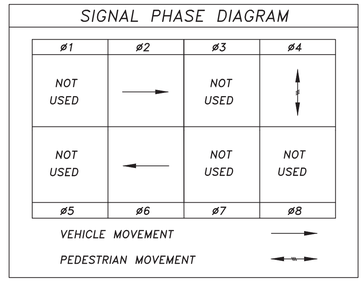
TRAFFIC SIGNAL POLE CHART

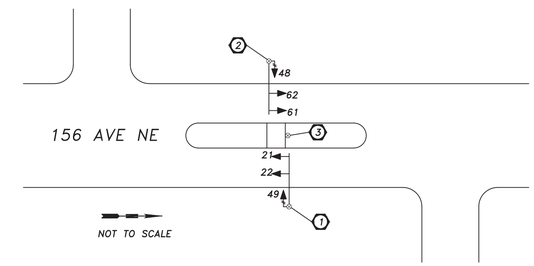
DRAWING No.: **TS6.01**

SHEET No.: 11 OF 13









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04-30-2019

LINE IS 1" AT FULL SCALE

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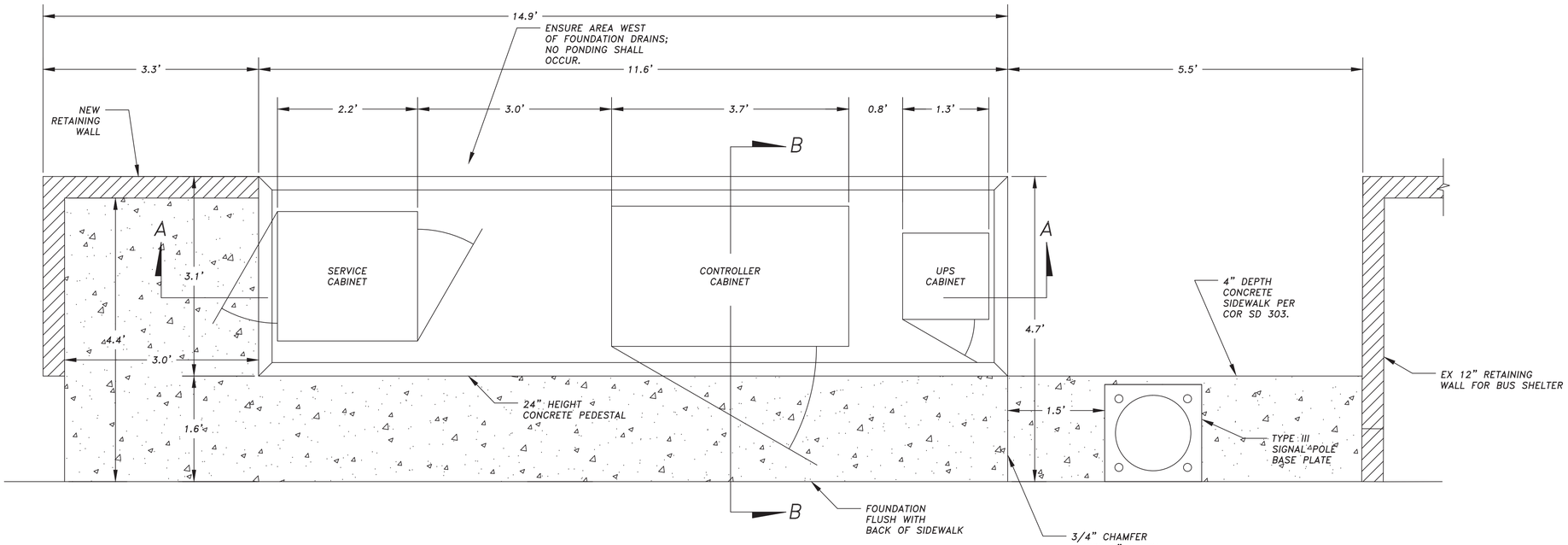
CHECKED BY: GMD	DRAWING FILE NO: TS6.02.DWG

156TH AVE NE
4800 BLOCK PEDESTRIAN SIGNAL

TRAFFIC SIGNAL
WIRING DIAGRAM

DRAWING No.: **TS6.02**

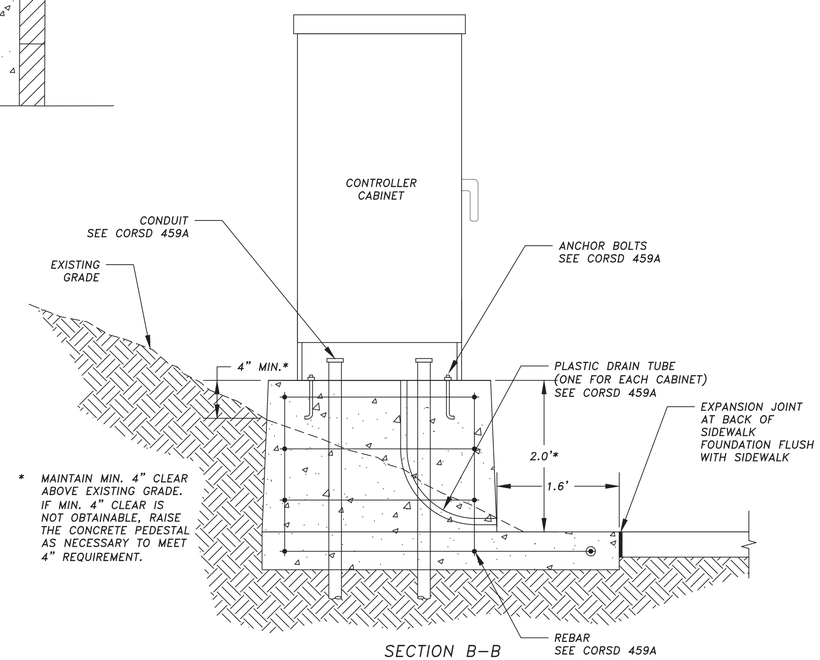
SHEET No.: 12 OF 13



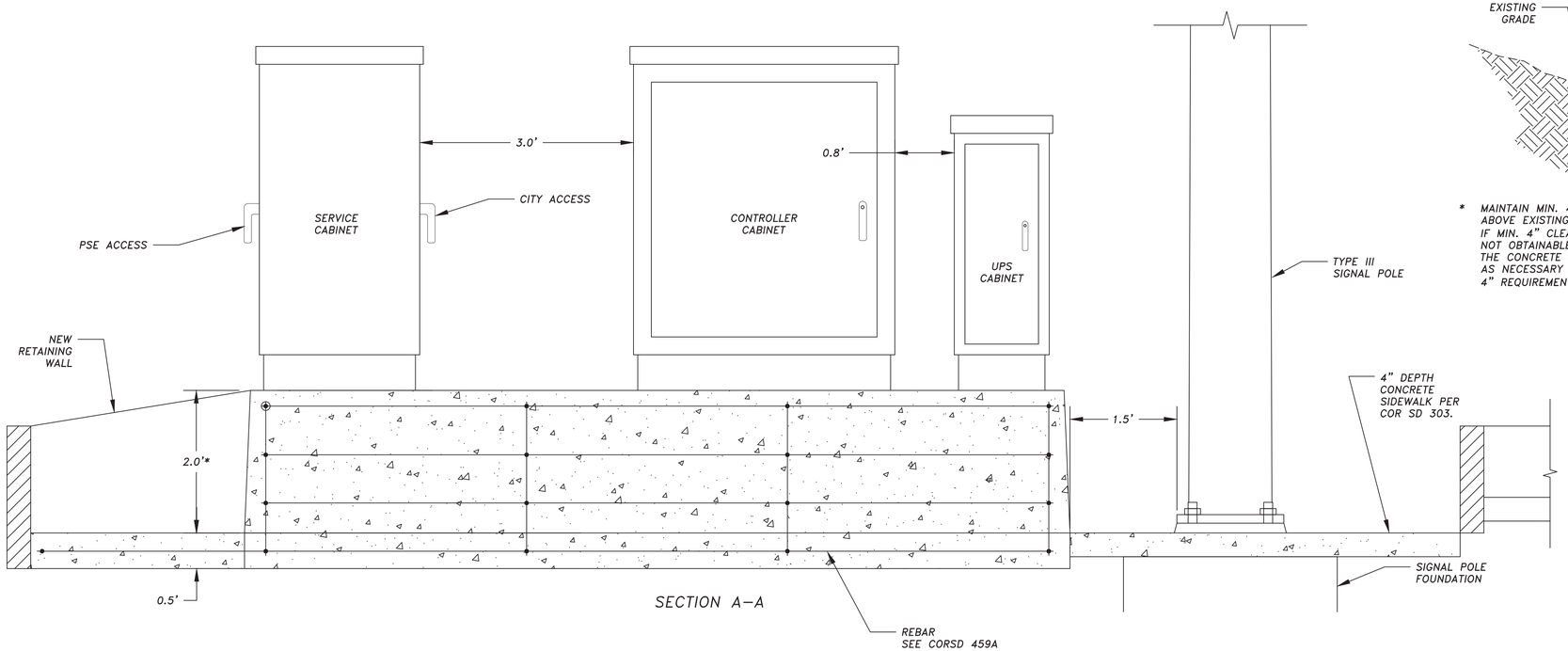
CONTROLLER AND SERVICE CABINET FOOTPRINT

CONTROLLER & SERVICE CABINET NOTES

1. CABINET FOUNDATION SHALL ADHERE TO CITY OF REDMOND DETAIL NO. 459A TO EXTENT POSSIBLE, EXCEPT AS NOTED HEREIN.
2. REFERENCE CITY OF REDMOND DETAIL NO 459A FOR SPECIFICATIONS REGARDING CONCRETE, REBAR, DRAIN TUBE, ANCHOR BOLTS, ETC.



SECTION B–B



SECTION A–A

IFB PLANS

No.	DATE	BY	CHD	REVISION

City of Redmond WASHINGTON
15670 N.E. 85TH STREET
P.O. BOX 97010
REDMOND, WA 98073-9710
PH. (425) 556-2701

HUITT-ZOLLARS Seattle
Huitt-Zollars, Inc.
818 Stewart Street, Suite 1120
Seattle, Washington, 98101
Phone (206) 324-5500 Fax (206) 328-1880

TENW
Transportation Engineering NorthWest
Transportation Planning | Design | Traffic Impact & Operations
11400 SE 8th Street, Suite 200, Bellevue, WA 98004 | Office (425) 889-6747
Project Contact: Glen DuBreuil
Phone: 425-250-0582

CHRISTOPHER T. BICKEL STATE OF WASHINGTON 35635 REGISTERED PROFESSIONAL ENGINEER
04-30-2019

LINE IS 1" AT FULL SCALE

DESIGNED BY: TDR	ISSUE DATE: 04/30/2019
DRAWN BY: TDR	JOB NO: TENW #5288
CHECKED BY: GMD	DRAWING FILE NO: TS6.03.DWG

156TH AVE NE
4800 BLOCK PEDESTRIAN SIGNAL

SPECIAL DESIGN CONTROLLER & SERVICE CABINET FOUNDATION DETAILS

DRAWING No.: **TS6.03**

SHEET No.: 13 OF 13