GUIDANCE DRAWINGS ARE FOR USE BY DESIGN TEAMS AS REPRESENTATIONS OF THE ARRANGEMENT OR CONFIGURATION OF SPECIFIC COMPONENTS OR THE WAY ACCEPTABLE SOLUTIONS TO CERTAIN DESIGN CHALLENGES HAVE BEEN ADDRESSED. THE GUIDANCE DRAWINGS ARE STARTING POINT OF DESIGN SOLUTIONS AND ARE INTENDED TO BE MODIFIED FOR APPLICATION TO PROJECT CONDITIONS.

THE DESIGNER OF RECORD SHALL REVIEW GUIDANCE DRAWINGS IN CONJUNCTION WITH OTHER CONTRACT DOCUMENTS AND SELECT APPLICABLE GUIDANCE DRAWINGS TO DEVELOP, STAMP, SIGN AND FINALIZE AS PROJECT CONTRACT DOCUMENTS.

SOUND TRANSIT MAKES THE GUIDANCE DRAWINGS AVAILABLE ON AN AS-IS BASIS AND THEY SHALL NOT BE DEEMED TO BE "DESIGN FURNISHED" BY SOUND TRANSIT.

CIVIL / TRACK / STRUCTURAL GUIDANCE DRAWINGS

MARCH 2024

APPLICABILITY OF CURRENT VERSION
SUPersedes August 2019 Version
For Projects that are Baselined after March 29, 2024
DISCLAIMER FOR
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APPLICABILITY FOR
Design and Engineering Design Standards Documents

Project teams shall refer to their executed project contracts for applicable document versions/revisions.
## DRAWING INDEX

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</table>
TREE AND VEGETATION CLEAR ZONE EASEMENT (IF AND ONLY IF THERE ARE TREES AND VEGETATION IN THE AREA) (10' ON SIDES AND UNDER)

16'-6" MINIMUM OVER ROADWAYS AND PARKING LOTS

5'-0" BOT OF GIRDER

EXISTING GROUND

14' MINIMUM OVER WSDOT LIMITED ACCESS (TRANSIT WAY / ST RIGHT-OF-WAY)

NOTE:
- GRANTOR'S USE PROHIBITED AROUND COLUMNS AND UNDER GIRDERS, AS NOTED
- GRANTOR'S USE RESTRICTED AROUND AERIAL GUIDEWAY AND COLUMNS. SEE GENERAL NOTES.

KEY NOTES:
1. OVERSIZE HAUL ROUTE MAY REQUIRE GREATER THAN 16'-6" DEPENDING ON THE AUTHORITY HAVING JURISDICTION.
2. DESIGNER TO CONFIRM THAT FULL EXTENT OF ALL PILES AND PILE CAP MUST FALL WITHIN 2' OR GREATER OF THE TRANSIT WAY. ADJUST WIDTH OUT IF NECESSARY.

LEGEND:
- GUIDEWAY EASEMENT (TRANSIT WAY / ST RIGHT-OF-WAY)
- GRANTOR'S USE LIMITS
- PERMANENT EASEMENT

ABBREVIATIONS:
- DB: DESIGN BUILD
- DDB: DESIGN BID BUILD
- GCCM: GENERAL CONTRACTOR CONSTRUCTION MANAGEMENT
- AHJ: AUTHORITY HAVING JURISDICTION
GENERAL NOTES:
1. THESE SECTIONS ARE PROVIDED AS A GUIDE FOR ESTABLISHING MINIMUM RIGHT-OF-WAY LIMITS ONLY.
2. DIMENSIONS SHOWN ARE FOR GENERAL CONDITIONS AND SHALL BE MODIFIED WHERE ENGINEERING OR REAL ESTATE REQUIREMENTS Dictate.
3. WHEN UTILITIES OR OTHER APPURTENANCES EXTEND BELOW THE GUIDEWAY, ADDITIONAL GRANTOR’S USE PROHIBITIONS MAY BE REQUIRED. COORDINATE WITH ROW ENGINEER.

KEY NOTES:
1. OVERSIZE Haul ROUTE MAY REQUIRE GREATER THAN 16.5’-0” DEPENDING ON THE AUTHORITY HAVING JURISDICTION.

LEGEND:
- GRANTOR’S USE LIMITS
- TREE AND VEGETATION TRIMMING (IF AND ONLY IF THERE ARE TREES AND VEGETATION IN THE AREA)
- GIRDERS
- EXISTING GROUND

AERIAL GUIDEWAY EASEMENT (BETWEEN COLUMNS)
GENERAL NOTES:
1. THIS SECTION IS PROVIDED AS A GUIDE FOR ESTABLISHING MINIMUM RIGHT-OF-WAY LIMITS ONLY.
2. DIMENSIONS SHOWN ARE FOR GENERAL CONDITIONS AND SHALL BE MODIFIED WHERE ENGINEERING OR REAL ESTATE REQUIREMENTS DICTATE.

LEGEND:
- PERMANENT EASEMENT

**TREE AND VEGETATION TRIMMING EASEMENT**
- Varies
- 6" MIN.

**FILL SLOPE EASEMENT**
- Varies
- 2'-0" MIN.
GENERAL NOTES:
1. THESE SECTIONS ARE PROVIDED AS A GUIDE FOR ESTABLISHING MINIMUM RIGHT-OF-WAY LIMITS ONLY.
2. DIMENSIONS SHOWN ARE FOR GENERAL CONDITIONS AND SHALL BE MODIFIED WHERE ENGINEERING OR REAL ESTATE REQUIREMENTS DICTATE.

KEY NOTES:
1. FOR DBB/GCCM PROJECTS, ROW LIMIT SHALL START AT THE GREATER OF:
   • 2'-0" MINIMUM FROM FURTHEST EXPOSED POINT OF THE WALL
   • 0'-6" MINIMUM BEYOND THE FURTHEST POINT OF THE WALL.
   FOR DB PROJECTS, ROW LIMIT SHALL START AT THE GREATER OF:
   • 5' TO 8' MINIMUM FROM FURTHEST EXPOSED POINT OF THE WALL
   • 0'-6" MINIMUM BEYOND THE FURTHEST POINT OF THE WALL.
2. EASEMENT SHALL EXTEND THE GREATER OF:
   • 5'-0" MINIMUM FROM THE ST ROW LIMIT
   • 0'-6" MINIMUM BEYOND THE FURTHEST EDGE OF THE FOOTING
3. ROW LIMIT SHALL START AT:
   • 0'-6" MINIMUM BEYOND THE FURTHEST EDGE OF THE FOOTING
4. EASEMENT SHALL EXTEND:
   • 5'-0" MINIMUM FROM THE ROW LIMIT
   • DITCH TO BE LOCATED IN THE EASEMENT AREA

LEGEND:
PERMANENT EASEMENT

SOUND TRANSIT
GUIDANCE DRAWINGS
RIGHT OF WAY
PERMANENT EASEMENTS
4 OF 8
GENERAL NOTES:
1. THESE SECTIONS ARE PROVIDED AS A GUIDE FOR ESTABLISHING MINIMUM RIGHT-OF-WAY LIMITS ONLY.
2. DIMENSIONS ShOWN ARE FOR GENERAL CONDITIONS AND SHALL BE MODIFIED WHERE ENGINEERING OR REAL ESTATE REQUIREMENTS DICTATE.
3. DESIGNERS TO OBTAIN PERMISSION FROM AHJ BEFORE FINALIZING DESIGN.

LEGEND:
- SUBSURFACE ANCHOR EASEMENT
- PERMANENT EASEMENT
- FINISHED GRADE

MSE WALL EASEMENT

5'-6" MINIMUM FOR DBB / GCCM PROJECTS
5'-8" FOR DB PROJECTS

GROUND IMPROVEMENT. ST ROW TO PROVIDE ADDITIONAL REQUIREMENTS IF GROUND IMPROVEMENT OR BENCH AND SLOPE SUPPORTING MSE WALL EXISTS

PRIVATE PROPERTY

SUBSURFACE ANCHORS EASEMENT

5'-0" MINIMUM WALL MAINTENANCE EASEMENT

ST ROW

PROPERTY LINE

FINISHED GRADE

Cement Concrete Gutter or Trench Drain

TOPOF WALL

PROPERTY LINE

PRIVATE PROPERTY

10'-0" MIN

SUBSURFACE ANCHORS (TYP)

FINISHED GRADE

ST ROW

PROPERTY LINE

PRIVATE PROPERTY

0'-6" MINIMUM FOR DBB / GCCM PROJECTS
0'-8" FOR DB PROJECTS

PROPERTY LINE

FINISHED GRADE

FENCE OR RAILING BARRIER

ST ROW
GENERAL NOTES:
1. THIS SECTION IS PROVIDED AS A GUIDE FOR ESTABLISHING MINIMUM RIGHT-OF-WAY LIMITS ONLY.
2. DIMENSIONS SHOWN ARE FOR GENERAL CONDITIONS AND SHALL BE MODIFIED WHERE ENGINEERING OR REAL ESTATE REQUIREMENTS DICTATE.
3. FOR STATION BOXES, CLEARANCES VARY. SEE ROW ENGINEER.

LEGEND:
- PERMANENT EASEMENT

TUNNEL EASEMENT

---

No.
Dated
SN CHK
APP
REVISION

SUBMITTED BY: DATE: REVIEWED BY: DATE: DATE:

CONTRACT No.:
FILENAME:
SCALE:
DRAWING No.:

SHEET No.: REV.

DESIGNED BY:
DRAWN BY:
CHECKED BY:
APPROVED BY:

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FACILITY ID:

SOUND TRANSIT GUIDANCE DRAWINGS

RIGHT OF WAY
PERMANENT EASEMENTS
6 OF 6

RTA/LR - NTS
GENERAL NOTES:
1. THESE SECTIONS ARE PROVIDED AS A GUIDE FOR ESTABLISHING MINIMUM RIGHT-OF-WAY LIMITS ONLY.
2. DIMENSIONS SHOWN ARE FOR GENERAL CONDITIONS AND SHALL BE MODIFIED WHERE ENGINEERING OR REAL ESTATE REQUIREMENTS DICTATE.
3. DESIGNER TO OBTAIN PERMISSION FROM AHJ BEFORE FINALIZING DESIGN.

KEY NOTES:
1. ANCHORS CAN BE SEMI-PERMANENT FOR THE CITY OF SEATTLE REQUIREMENT

LEGEND:
- SUBSURFACE ANCHOR EASEMENT
- FEE TAKE
- CRANE SWING EASEMENT
- TEMPORARY EASEMENT

---

SUBSURFACE ANCHORS EASEMENT

UNDERPINNING DETAIL

FENCE OR RAILING BARRIER
Cement Concrete
Gutter or Trench Drain
Top of Wall
Property Line
Existing Building

ST Row

ST Structure

Crane Swing

ST Right-Of-Way

CRANE SWING EASEMENT

TEMPORARY CRANE SWING EASEMENT

Completed 2/2024

SOUND TRANSIT
GUIDANCE DRAWINGS
RIGHT OF WAY
TEMPORARY EASEMENTS

CONTRACT No.:
FILENAME:
SCALE:
DRAWING No.:
SHEET No.: REV:

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DRAWN BY:
CHECKED BY:
APPROVED BY:

SUBMITTED BY: DATE: REVIEWED BY: DATE:

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GUI-REX201

ST ROW

ST STRUCTURE

CRANE BASE

CRANE SWING PERIMETER

PROPERTY LINE

EXISTING BUILDING

ST FACILITY

VARIES

FENCE OR RAILING BARRIER
Cement Concrete Gutter or Trench Drain
Top of Wall
Property Line

PRIVATE PROPERTY

FASHED GRADE

TOP OF WALL

CRANE SWING EASEMENT

SUBSURFACE ANCHORS (TYP)

FINISHED GRADE

SUBSURFACE ANCHORS (TYP)

0'-6" MINIMUM FOR DBB / GCCM PROJECTS
0'-0" FOR DB PROJECTS

1'-0" MIN
GENERAL NOTES:
1. SEE DRAWING GUI-KAX061 FOR TRACK CENTER SPACING REQUIREMENTS.
2. AT DESIGNATED WALKWAY, WALKWAY BALLAST SHALL BE PLACED MINIMUM OF 12" FROM END OF CONCRETE TIE.
3. 12" BALLAST SHOULDER MINIMUM.
4. DUCTBANK/CONDUIT LOCATION VARIES. SEE STANDARD SYSTEM PLANS AND CONTRACT DRAWINGS FOR DETAILS.
5. FOR CONCRETE TIE DETAILS SEE STD-KAD060.
6. FOR FENCE AND RAILING SEE CONTRACT DRAWING FOR TYPE AND HEIGHT.
7. FOR BALLAST CURB AND WALLS DETAILS SEE STANDARD PLANS AND CONTRACT DRAWINGS.
8. SEE CONTRACT DRAWINGS FOR LIMITS OF GEOMEMBRANE.
10. YELLOW CENTERLINE WALKWAY MARKER EQUALLY SPACED BETWEEN DCS POLES. MAXIMUM SPACING IS 50 FEET BETWEEN MARKERS.
11. NO. 5 BALLAST IS REQUIRED WITHIN THE LIMITS OF WALKWAY. WHERE NO WALKWAY IS PRESENT, USE NO. 4 BALLAST.

SOUND TRANSIT
GUIDANCE DRAWINGS
TRACKWORK
BALLASTED DOUBLE MAIN TRACK
TYPICAL SECTIONS

---2/2024

GUI-KAX060

DRAWN BY: CHECKED BY: APPROVED BY:

CONTRACT No.: FILENAME: SCALE: DRAWING No.: SHEET No.: REV:

No.DATEDSN CHKAPPREVISION

SUBMITTED BY:DATE:REVIEWED BY:DATE:DATE:

FACILITY ID:

SOUND TRANSIT
GUIDANCE DRAWINGS

---2/2024

GUI-KAX060

DRAWN BY: CHECKED BY: APPROVED BY:

CONTRACT No.: FILENAME: SCALE: DRAWING No.: SHEET No.: REV:

No.DATEDSN CHKAPPREVISION

SUBMITTED BY:DATE:REVIEWED BY:DATE:DATE:

FACILITY ID:

SOUND TRANSIT
GUIDANCE DRAWINGS

---2/2024

GUI-KAX060

DRAWN BY: CHECKED BY: APPROVED BY:

CONTRACT No.: FILENAME: SCALE: DRAWING No.: SHEET No.: REV:

No.DATEDSN CHKAPPREVISION

SUBMITTED BY:DATE:REVIEWED BY:DATE:DATE:

FACILITY ID:
1. The typical mainline track spacing is 15'-9". Track spacing may vary depending upon project specific conditions. The designer of record shall demonstrate the following minimum conditions are met:
   - The maintenance walkway and obstructions shall not intrude into the clearance envelope.
   - The minimum dimension between LRV clearance envelopes, as measured at 80" above the finished surface, shall be 56 inches.

2. Typical section dimension and clearance requirements apply to all track types: ballasted, embedded and direct fixation.

3. Emergency egress location shall coincide with the maintenance walkway. The maintenance walkway must meet the minimum requirements for emergency egress as defined in the Sound Transit Requirements Manual.

LIGHT RAIL GUIDEWAY SECTION
GENERAL NOTES:
1. SEE CONTRACT DRAWINGS FOR WALL TYPE, LOCATION, AND DETAILS.
2. THE FIRST LAYER OF MSE SOIL REINFORCEMENT SHALL BE PLACED BELOW THE TRACK DRAINAGE.

FINISHED GRADE

BALLAST
SUBBALLAST

TRACK UNDERDRAIN
SEE DWG GUI-KAD080

CONCRETE TIE

TYPE A: BALLAST CURB TYPE 1

TYPE C

WALL DRAIN
PER CONTRACT DRAWING

CONCRETE TIE

BALLAST
SUBBALLAST

TYPE B

CONCRETE TIE

BALLAST
SUBBALLAST

TYPE D: MSE WALL

WALL DRAIN
PER CONTRACT DRAWING

CONCRETE TIE

BALLAST
SUBBALLAST

TYPE E

DRAINAGE DITCH

CONCRETE TIE

BALLAST
SUBBALLAST

TYPE F: CIP FILL WALL

WALL DRAIN
PER CONTRACT DRAWINGS

CONCRETE TIE

BALLAST
SUBBALLAST

SEE NOTE 2

SEE DWG GUI-KADO480

FINISHED GRADE

6"
GENERAL NOTES:
1. TOP OF SECOND FOUR CONCRETE TRACK SLAB SHALL BE SLOPED 0% AT ROAD INTERSECTION.
2. SLOPE VARIES W/SUPERELEVATION.

TYPICAL TRACK SECTION AT MIDBLOCK ROAD SECTION (SUPERELEVATED)

TYPICAL TRACK SECTION AT MIDBLOCK ROAD SECTION (SUPERELEVATED 0°)

TYPICAL TRACK SECTION AT ROAD INTERSECTION, AT MIDBLOCK EMERGENCY VEHICLES CROSSING AND AT PEDESTRIAN CROSSING (SUPERELEVATED 0°)
GENERAL NOTES:
1. FASTENER SPACING 30" ON TANGENT STATION TRACK.
2. PLINTH CONCRETE SHALL BE PLACED IN SEGMENTS.
   SECTIONS SHALL BE 4, 5 OR 6 FASTENER LENGTHS.
3. PLINTH SHALL NOT OVERLAP ANY STRUCTURAL JOINTS.
4. OTHER GAPS IN PLINTH SHALL BE LOCATED AS REQUIRED FOR
   STRUCTURAL JOINTS, DRAINAGE AND PASSAGE OF SIGNAL OR
   OTHER CABLES.
5. PLINTH GAPS SHALL NOT BE LOCATED WITHIN THE
   MAINTENANCE WALKWAY PEDESTRIAN CROSSING LOCATION.
6. PRECAST CONCRETE PANELS SHALL BE DESIGNED BY THE
   CONTRACTOR (UNIFORM LL=100PSF). SURFACE FINISH SHALL
   MATCH FINISH AND COLOR OF STATION WALKWAY AREA.
7. SEE DIRECT FIXATION TRACK INSTALLATION DRAWING
   STD-KAD120 TO STD-KAD128.
8. CENTER PANEL SURFACE AREA VARIES DEPENDING ON
   INSTALLATION OF REINFORCING RAILS BETWEEN RUNNING
   RAILS. FIELD PANEL SURFACE AREA VARIES DEPENDING ON
   LOCATION AND LIMITS OF MAINTENANCE WALKWAY PEDESTRIAN
   CROSSING INSTALLATION BETWEEN TRACKS. FOR LOCATION
   AND LIMITS OF MAINTENANCE WALKWAY PEDESTRIAN
   CROSSING INSTALLATION SEE TRACK CHART DRAWINGS.
9. EMERGENCY GAURD RAIL MUST BE INTERRUPTED 2" FROM THE
   ENDS OF THE PEDESTRIAN CROSSING PANEL.

CONTRACT TO CONSTRUCT
PLINTH DIRECT FIXATION
CONCRETE PEDESTALS
CONTINUOUS THROUGHOUT
CROSSING LOCATION. NO PEDESTAL GAPS

WHITE 12" WIDE STRIPE
TO BE SIDE PAINTED AT
OF MAINTENANCE
WALKWAY PEDESTRIAN
CROSSWALK

MAINTENANCE WALKWAY PEDESTRIAN CROSSING AT DIRECT FIXATION TRACK

CONTRACTOR SUBMITTED BY: DATE: REVIEWED BY: DATE: APPROVED BY:

DESIGNED BY: DRAWN BY: CHECKED BY:

2/2024

SOUND TRANSIT
GUIDANCE DRAWINGS
TRACKWORK
DIRECT FIXATION TRACK CONSTRUCTION
MAINTENANCE WALKWAY PEDESTRIAN CROSSING
PRECAST CONCRETE PANEL

CONTRACT No.:
FILENAME:
SCALE:
DRAWING No.:
SHEET No.: REV:

SUBMITTED BY: DATE: REVIEWED BY: DATE: APPROVED BY:

DESIGNED BY: DRAWN BY: CHECKED BY:

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GUI-KAD140

FACILITY ID:
NTS

115 RE RAIL

2 1/8" FLANGEWAY
6/2013 ---- ---- ---- NEW - CIVIL, ARCH, SYSTEMS GUIDANCE DWGS
1 8/2019 ---- ---- ---- REVISED - CIVIL DIRECTIVE AND STANDARD DWGS
2 2/2024 ---- ---- ---- 2024 REVISED GUIDANCE DRAWINGS

2" (SEE NOTE 9)
3/4" DIAX10 UNC ALLEN
HEAD STAINLESS
STEEL BOLT X 4" LONG

REINFORCEMENT (TYP)

3" LONG EMBEDDED S.S.
ANCHOR INSERT 3/4"X10
UNC THREAD

RAIL TO CONCRETE RECESS DETAIL
(TYPICAL BOTH SIDE OF TRACK)
NTS

3/4" RECESS
### 115 RE EMBEDDED TRACK INSTALLATION AT ROAD INTERSECTIONS

#### BILL OF MATERIAL

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<th>DESCRIPTION</th>
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<tr>
<td>1</td>
<td>115 RE RAIL</td>
<td>AS REQUIRED</td>
</tr>
<tr>
<td>2</td>
<td>115 RE RAIL BOOT</td>
<td>AS REQUIRED</td>
</tr>
<tr>
<td>3</td>
<td>RUBBER FLANGEWAY FORMER</td>
<td>AS REQUIRED</td>
</tr>
<tr>
<td>4</td>
<td>CONCRETE SLAB INCLUDING REINFORCING STEEL (1ST AND 2ND POUR)</td>
<td>AS REQUIRED</td>
</tr>
<tr>
<td>5</td>
<td>ANCHOR PLATES (SEE DWG GUI-KAD245)</td>
<td>4 OR 2 BETWEEN BEAMS</td>
</tr>
<tr>
<td>6</td>
<td>PLASTIC TIE (SEE DWG GUI-KAD245)</td>
<td>12 CTRS (OR LESS)</td>
</tr>
<tr>
<td>7</td>
<td>PLASTIC CLIPS COMPLETE WITH BOLTS, STEEL WASHER AND PLASTIC SHEET COVER</td>
<td>4/BEAM, 2/ANCHOR PLATE</td>
</tr>
<tr>
<td>8</td>
<td>BINDER CLIPS</td>
<td>AS REQUIRED</td>
</tr>
</tbody>
</table>

#### GENERAL NOTE: 1.
- FOR TRACK SLAB CONSTRUCTION GENERAL NOTES SEE DWG GUI-KAD220.
115 RE EMBEDDED TRACK INSTALLATION AT EMERGENCY VEHICLES CROSSING AND AT PEDESTRIAN CROSSING

BILL OF MATERIAL

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<th>ITEM</th>
<th>DESCRIPTION</th>
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<tr>
<td>1</td>
<td>115 RE Rail</td>
<td>AS REQUIRED</td>
</tr>
<tr>
<td>2</td>
<td>115 RE Rail Boot</td>
<td>AS REQUIRED</td>
</tr>
<tr>
<td>3</td>
<td>Rubber Flangeway Former</td>
<td>AS REQUIRED</td>
</tr>
<tr>
<td>4</td>
<td>Concrete Tie Including Rebars (1st and 1st Pour)</td>
<td>AS REQUIRED</td>
</tr>
<tr>
<td>5</td>
<td>Anchor Plates (See DWG GUI-KAD245)</td>
<td>4 OR BETWEEN BEAMS</td>
</tr>
<tr>
<td>6</td>
<td>Plastic Tie (See DWG GUI-KAD245)</td>
<td>10' CTR (OR LESS)</td>
</tr>
<tr>
<td>7</td>
<td>Plastic Clips w/ Steel Washer</td>
<td>48BM/2 ANCHOR PLATE</td>
</tr>
<tr>
<td>8</td>
<td>Binder Clips</td>
<td>AS REQUIRED</td>
</tr>
</tbody>
</table>

GENERAL NOTES:
1. FOR TRACK SLAB CONSTRUCTION GENERAL NOTES SEE DWG GUI-KAD220.
2. TOP OF SECOND POUR CONCRETE TRACK SLAB CROSS-SLOPE PER CIVIL DRAWING.

TYPICAL SECTION - TANGENT TRACK AT PLASTIC TIE

TYPICAL SECTION - TANGENT TRACK AT ANCHOR PLATES
GENERAL NOTES:
1. CONTROL POINTS FOR PROFILE GRADE IS SET TO TOP OF LOW RAIL ELEVATION.
2. RAIL WELDS SHALL NOT BE MADE LESS THAN 3" FROM THE EDGE OF ANCHOR PLATE OR PLASTIC BEAM.
3. CONCRETE MIX SHALL BE 5000 PSI, REINFORCING SHALL BE GRADE 60 ASTM A615 DEFORMED BARS.
4. PLASTIC TIES ARE TO BE SPACED AT 10'-0" O.C. IN TANGENT AND FOR CURVES > 500' RADIUS. SPACING SHALL BE 5'-0" O.C. BEGINNING 10' PRIOR TO TS AND ENDING 10' AFTER TS FOR CURVES ≤ 500'.
5. GRADING TRANSITION OF INFILL CONCRETE AT CROSSWALKS FOR SURFACE FLATS TO VALLEY PROFILE SHALL BE MADE OVER A DISTANCE OF 5'-0" OR TO THE DRAIN - WHEREVER IS CLOSER.
6. TWO PAIRS OF ANCHOR PLATES ARE TO BE SPACED (3.33') BETWEEN PLASTIC TIES IN TANGENT TRACK AND FOR CURVES GREATER THAN 500' RADIUS. CURVED TRACKS WITH RADIUS LESS THAN OR EQUAL TO 500 RADIUS, SPACE ONE PAIR OF ANCHOR PLATES BETWEEN PLASTIC TIES.
7. FIRST POUR CONCRETE BASE SLAB SHALL BE AT TOP OF PLASTIC TIE AND SLIGHTLY RAISED TO BOTTOM OF RAIL BASE BOOT BETWEEN THE PLASTIC TIES TO LOCK THE RAIL IN PLACE.
8. FIRST POUR CONCRETE BASE SLAB TO BE ROUGH BROOM FINISHED EXCEPT FOR SMOOTH TROWEL FINISH (8" WIDE) EITHER SIDE OF RAIL BOOT.
9. SECOND POUR CONCRETE TOP SLAB TO BE STAMPED OR COLORED AND SKID RESISTANT FINISH. FOR DETAILS SEE URBAN DESIGN DRAWINGS.
10. REINFORCING STEEL IN THE TRACK SLAB SHALL BE ELECTRICALLY BONDED AS INDICATED IN THE CORROSION CONTROL DRAWINGS.
11. FOR LOCATION OF CONDUITS, STUB UP AND BLOCKOUTS FOR SYSTEM CONNECTIONS TO RAIL AND FOR TWO LOOP WIRES SEE DUCTBANK/CONDUIT REQUIREMENTS DRAWINGS.

BILL OF MATERIAL

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<td>1</td>
<td>115 RE RAIL</td>
<td>AS REQUIRED</td>
</tr>
<tr>
<td>2</td>
<td>115 RE RAIL BOOT</td>
<td>AS REQUIRED</td>
</tr>
<tr>
<td>3</td>
<td>REBAR FOR FIRST AND SECOND POUR</td>
<td>AS REQUIRED</td>
</tr>
<tr>
<td>4</td>
<td>ANCHOR PLATES (SEE DWG GUI-KAD245)</td>
<td>(SEE NOTE 6)</td>
</tr>
<tr>
<td>5</td>
<td>PLASTIC TIE (SEE DWG GUI-KAD245)</td>
<td>(SEE NOTE 6)</td>
</tr>
<tr>
<td>6</td>
<td>BINDER CLIPS @ EVERY 20&quot; CC</td>
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</table>

TYPICAL SECTION - TANGENT TRACK AT PLASTIC TIE

TYPICAL SECTION - TANGENT TRACK AT ANCHOR PLATES
CONTROL POINT FOR SECOND POUR CONCRETE TRACK SLAB SURFACE FINISHED X-SLOPE (FIELD SIDE)

SECOND POUR CONCRETE TRACK SLAB (SEE NOTE 1)

PLASTIC CLIP WITH PROTECTIVE PLASTIC

HIGH STRENGTH NYLON REINFORCED PLASTIC CLIP

SMOOTH TROWELED FINISH BOTH SIDES OF RAIL BOOT

ROUGH BROOM FINISH SURFACE

BINDER CLIPS @ EVERY 20" CC

TOP OF RAIL

GAUGE

SECOND POUR CONCRETE TRACK SLAB (SEE NOTE 1)

PLASTIC CLIP WITH PROTECTIVE PLASTIC

CONTROL POINT FOR SECOND POUR CONCRETE TRACK SLAB SURFACE FINISHED X-SLOPE (FIELD SIDE)

SECOND POUR CONCRETE TRACK SLAB SURFACE FINISHED X-SLOPE (GAUGE SIDE)

FIRST POUR CONCRETE TRACK SLAB (SEE NOTE 1)

ANCHOR PLATE ASSEMBLY FOR DETAIL SEE DWG GUI-KAD245

ANCHOR (TYP)

1/2" DIA x 4" STUD ANCHOR (TYP)

ANCHOR PLATE ASSEMBLY FOR DETAIL SEE DWG GUI-KAD245

2% TOP OF RAIL

GAUGE

SECOND POUR CONCRETE TRACK SLAB (SEE NOTE 1)

PLASTIC CLIP WITH PROTECTIVE PLASTIC

CONTROL POINT FOR SECOND POUR CONCRETE TRACK SLAB SURFACE FINISHED X-SLOPE (GAUGE SIDE)

SECOND POUR CONCRETE TRACK SLAB SURFACE FINISHED X-SLOPE (FIELD SIDE)

FOR SURFACE FINISH SEE NOTE 9 ON GUI-KAD220

TYPICAL RAIL SEAT ON ANCHOR PLATES - DETAIL

SCALE: 4" = 1'-0"

TYPICAL RAIL SEAT ON PLASTIC TIE - DETAIL

SCALE: 4" = 1'-0"

GENERAL NOTE:
1. FOR TRACK SLAB CONSTRUCTION GENERAL NOTES SEE DWG GUI-KAD220.

TYPICAL RAIL SEAT - SECTION BETWEEN PLASTIC TIE AND ANCHOR PLATE

SCALE: 3" = 1'-0"
GENERAL NOTES:
1. ALLOW FOR DRAINAGE TO PASS THROUGH RAIL BOOT SPlice.
2. SHAPE OF EXTRUDED RAIL-Rubber Boot IS APPROXIMATE. FINAL SHAPE SHALL BE DESIGNED BY BOOT SUPPLIER.
3. INTERIOR SECTION OF CUFF SHALL CONFORM TO EXTERIOR SECTION OF BOOt.
4. RAIL Boot ENDS TO BE CUT SQUARE AND TWO SECTIONS BUTTED TOGETHER.
5. NO RAIL Boot JOINT WILL BE ALLOWED ON TRACKS AT ROAD INTERSECTIONS, AT EMERGENCY VEHICLES CROSSING AND AT PEDESTRIAN CROSSING. RAIL Boot SHALL BE CONTINUOUS THROUGHOUT THE LENGTH OF THE CROSSINGS WHERE FLANGEWAY FORMERS ARE TO BE INSTALLED.

APPLY ADHESIVE SEALANT TO THE INTERIOR SURFACE OF CUFF

APPLY ADHESIVE SEALANT TO THE INTERIOR SURFACE OF CUFF

CONTROL POINT FOR SECOND POUR CONCRETE TRACK SLAB SURFACE FINISHED X-SLOPE (GAUGE SIDE)

CONTROL POINT FOR SECOND POUR CONCRETE TRACK SLAB SURFACE FINISHED X-SLOPE (GAUGE SIDE)

GROOVE TO ACCOMMODATE PLASTIC CLIP

GROOVE TO ACCOMMODATE PLASTIC CLIP

20"  12"  RAIL BOOT/Joint (SEE NOTE 4 & 5)

12" MIN 12" MIN

RAIL W/ RAIL BOOT

BINDER CLIPS

RAIL BOOT / FLANGEWAY FORMER

BINDER CLIP

NATURAL RAIL INFLUECE

FLANGEWAY FORMER

GROOVE TO ACCOMMODATE PLASTIC CLIP

GROOVE TO ACCOMMODATE PLASTIC CLIP

BINDER CLIPS

2 BINDER CLIPS PER CUFF

RAIL BOOT (SEE NOTE 2)

CUFF (SEE NOTE 3)

RAIL BOOT (SEE NOTE 2)

CUFF (SEE NOTE 2)

20"  12"  RAIL BOOT/CUFF OVERLAP

12" MIN 12" MIN

RAIL IN RAIL BOOT

TOP OF RAIL

RAIL W/ RAIL BOOT

BINDER CLIPS

2 BINDER CLIPS PER CUFF

RAIL BOOT (SEE NOTE 2)

CUFF (SEE NOTE 2)

RAIL BOOT (SEE NOTE 2)

CUFF (SEE NOTE 2)

20"  12"  RAIL BOOT/CUFF OVERLAP

12" MIN 12" MIN

RAIL IN RAIL BOOT

TOP OF RAIL

RAIL W/ RAIL BOOT

BINDER CLIPS

2 BINDER CLIPS PER CUFF

RAIL BOOT (SEE NOTE 2)

CUFF (SEE NOTE 2)

RAIL BOOT (SEE NOTE 2)

CUFF (SEE NOTE 2)

20"  12"  RAIL BOOT/CUFF OVERLAP

12" MIN 12" MIN

RAIL IN RAIL BOOT

TOP OF RAIL

RAIL W/ RAIL BOOT

BINDER CLIPS

2 BINDER CLIPS PER CUFF

RAIL BOOT (SEE NOTE 2)

CUFF (SEE NOTE 2)

RAIL BOOT (SEE NOTE 2)

CUFF (SEE NOTE 2)
**BILL OF MATERIAL**

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<td>1 1/2 RE TEE RAIL</td>
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<td>2</td>
<td>FIRST POUR CONCRETE SLAB</td>
<td>AS REQUIRED</td>
</tr>
<tr>
<td>3</td>
<td>SECOND POUR CONCRETE CEMENTITIOUS GROUT</td>
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<td>4</td>
<td>THIRD POUR CONCRETE PAVEMENT INFILL</td>
<td>AS REQUIRED</td>
</tr>
<tr>
<td>5</td>
<td>ANCHOR PLATES (3/4&quot;x6&quot;x12&quot;)</td>
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<tr>
<td>6</td>
<td>RAIL CLIPS</td>
<td>AS REQUIRED</td>
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<tr>
<td>7</td>
<td>PROTECTIVE PLASTIC CAP</td>
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<tr>
<td>8</td>
<td>EPOXY GROUT</td>
<td>AS REQUIRED</td>
</tr>
<tr>
<td>9</td>
<td>1/4&quot; ANCHOR BOLT COMPLETE</td>
<td>AS REQUIRED</td>
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**GENERAL NOTES:**

1. CONTROL POINTS FOR PROFILE GRADE IS SET TO TOP OF LOW RAIL ELEVATION.
2. RAIL WELDS SHALL NOT BE MADE LESS THAN 3" FROM THE EDGE OF ANCHOR PLATE.
3. GRADING TRANSITION OF INFILL CONCRETE AT CROSSWALKS FOR SURFACE FLATS TO VALLEY PROFILE SHALL BE MADE OVER A DISTANCE OF 5'-0" OR TO THE DRAIN - WHICHEVER IS CLOSER.
4. ANCHOR PLATES ARE TO BE SPACED AT EVERY 3'-4" C.C.
5. FIRST POUR CONCRETE SHALL BE 8" THICK, SECOND POUR CONCRETE SHALL BE AT TOP OF ANCHOR PLATES, AND SHALL BE JUST UNDER BASE OF RAIL AT LOCATION BETWEEN ANCHOR PLATES.
6. THIRD POUR CONCRETE TOP SLAB FINISHED TO BE DETERMINED BY FINAL DESIGN.
7. FOR LOCATION OF CONDUITS, STUB UP AND BLOCK OUT FOR SYSTEM CONNECTIONS TO RAIL, SEE DUCTBANK/CONDUITS REQUIREMENT DRAWINGS.

**NON-INSULATED TRACK INSTALLATION PLAN VIEW**

**TYPICAL SECTION - TANGENT TRACK A**

**TYPICAL SECTION - TANGENT TRACK B**
**Typical Rail Seat on Anchor Plate 115 RE Rail - Detail**

- **Control Point for Third Pour Concrete**: Surface finished X-slope (Field Side)
- **Third Pour Concrete**: Protective Cap
- **3/4" Steel Plate w/ Slotted Holes**
- **Epoxy Grout**
- **2" Concrete Formed Flangeway**
- **Control Point for Third Pour Concrete, Surface Finished X-Slope (Gauge Side)**
- **Third Pour Concrete**
- **Concrete Formed Flangeway**
- **Control Point for Third Pour Concrete, Surface Finished X-Slope (Gauge Side)**
- **Top of Rail**

**Typical Rail Seat Between Anchor Plates - Detail**

- **Control Point for Third Pour Concrete**: Surface finished X-slope (Field Side)
- **Third Pour Concrete**: Protective Cap
- **3/4" Steel Plate w/ Slotted Holes**
- **Epoxy Grout**
- **2" Concrete Formed Flangeway**
- **Control Point for Third Pour Concrete, Surface Finished X-Slope (Gauge Side)**
- **Third Pour Concrete**
- **Concrete Formed Flangeway**
- **Control Point for Third Pour Concrete, Surface Finished X-Slope (Gauge Side)**
- **Top of Rail**
GENERAL NOTES:
1. REINFORCING STEEL IN THE TRACK SLAB SHALL BE ELECTRICALLY BONDED ACROSS EXPANSION AND CONTRACTION JOINTS AS INDICATED IN THE CORROSION CONTROL DRAWING.
2. CONTRACTION JOINT SPACING SHALL MATCH AND COINCIDE WITH LEVELING BEAM OR PLASTIC TIE LOCATIONS.

NOTE:
- SAW CUTTING SHOULD STOP 2" BEFORE EDGE OF RAIL BOOT TO PREVENT DAMAGE TO RAIL BOOT
- TERMINATE ALL REINFORCEMENT AT JOINT
- SAWED CONTRACTION JOINT
- 1/2" EXPANSION JOINT MATERIAL
- 1/2" ISOLATION JOINT IN TRACK SLAB
- CONSTRUCTION JOINT IN TRACK SLAB
- TRANSVERSE EXPANSION JOINT WHERE OCCURS
- LONGITUDINAL CONSTRUCTION JOINT WHERE OCCURS
GENERAL NOTES:
1. DIMENSION IS DEPENDENT UPON RAIL BOOT, PLASTIC CLIP AND BOLT TO BE USED BY THE CONTRACTOR. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE RESIDENT ENGINEER PRIOR TO FABRICATION OF PLASTIC TIES AND ANCHOR PLATES.
2. DETAILS OF PLASTIC TIE AND ANCHOR PLATE ON THIS DRAWING ARE PROVIDED AND PROPERTY OF IRON HORSE ENGINEERING COMPANY.

PLASTIC TIE ASSEMBLY / MATERIAL LIST

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<tr>
<td>2</td>
<td>4</td>
<td>PROTECTIVE COVER</td>
<td>4 MIL</td>
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<tr>
<td>3</td>
<td>4</td>
<td>ST. UNC BOLT COMBINED WITH UNC HEX NUT AND FLAT WASHER</td>
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<td></td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>STEEL CLIP WASHER</td>
<td>3&quot; x 2&quot; x 1/4&quot;</td>
<td>GALVANIZED STEEL</td>
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<td>5</td>
<td>1</td>
<td>RECYCLED PLASTIC BEAM WITH STRUCTURAL STEEL SECTION REINFORCEMENT</td>
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<td>3</td>
<td>UNC BOLT COMBINED WITH UNC HEX NUT AND SUPPORT PLATE</td>
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ANCHOR PLATE ASSEMBLY / MATERIAL LIST

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<tr>
<td>4</td>
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<td>GALVANIZED STEEL</td>
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<tr>
<td>5</td>
<td>1</td>
<td>STEEL PLATE</td>
<td>8&quot; x 12&quot;</td>
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<td>4</td>
<td>1/2&quot; DIA STUD</td>
<td>1/2&quot;</td>
<td>WELDED TO UNDERSIDE OF PLATE</td>
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GENERAL NOTES:
1. SUBMIT SHOP DRAWINGS OF STEEL ANGLE FRAME AND GRATING PRIOR TO FABRICATION. FRAME AND GRATE SHALL BE GALVANIZED STEEL.
2. CONCRETE SURFACE SHALL BE SLOPED AND SHAPED LOCALLY TO MATCH TOP OF STEEL GRATING'S ANGLE SUPPORT FRAMING.
3. SLOT BOTTOM OF BOOT AT CENTER OF DRAIN TO ALLOW BOOT DRAINAGE. SLOT SHALL BE 6" LONG BY 4" WIDE AT GAUGE SIDE. SEAL WITH ELASTOMERIC GROUT OR SEALANT THE OPEN CAVITIES OF THE RAIL BOOT IN THE DOWNSTREAM SIDE OF THE SLOT.
4. BOLT GRATES TO FRAME.
HIGH RESILIENCE DF FASTENERS @ 30" CENTERS
TRANSITION ZONE 21 (3 SETS OF 7) FASTENERS @ 24" CENTERS = 40'-0"
STANDARD DF FASTENERS @ 30" CENTERS

TRANSITION PLAN FROM HIGH RESILIENCE FASTENER DF TRACK TO STANDARD FASTENER DF TRACK

CL NB TRACK

30"
10"
8"
6"
4"
24" TYP SPACING

HIGH RESILIENCE DF FASTENER CL
2'-4" PLINTH
3/4" CHAMFER, TYP
68°

GENERAL NOTE:
1. FOR DF TRACKS UNDER HIGH RESILIENT FASTENER AND STANDARD FASTENER SEE DWGS STD-KAD100 AND STD-KAD102.
GENERAL NOTES

ALL ELEVATIONS ARE BASED ON NORTH AMERICAN VERTICAL DATUM, 1988 (NAVD88), TO CONFORM TO CITY OF SEATTLE DATUM, REFER TO HORIZONTAL AND VERTICAL CONTROL DIAGRAMS.

ALL COORDINATES, BEARINGS OR AZIMUTHS AND DISTANCES SHOWN ON THE PLANS ARE BASED ON FOUR LOCAL DATUM PLANES, NORTH, CENTRAL, SOUTH AND TACOMA, AS ESTABLISHED FOR THE PROJECT. TO CONVERT COORDINATES FROM THE LOCAL DATUM PLANES TO NAD83:

NORTH: SUBTRACT 300,000 FROM THE NORTHING AND EASTING COORDINATES AND APPLY THE COMBINATION FACTOR OF 0.99965007.

CENTRAL: SUBTRACT 200,000 FROM THE NORTHING AND EASTING COORDINATES AND APPLY THE COMBINATION FACTOR OF 0.999965007.

SOUTH: SUBTRACT 100,000 FROM THE NORTHING AND EASTING COORDINATES AND APPLY THE COMBINATION FACTOR OF 0.999997515.

TACOMA: SUBTRACT 100,000 FROM THE NORTHING AND EASTING COORDINATES AND APPLY THE COMBINATION FACTOR OF 0.999978298.

EAST SUBTRACT 30000 22.5 FROM THE NORTHING AND EASTING COORDINATES AND APPLY THE COMBINATION FACTOR OF 0.99965007.

KEY TO LOCAL DATA PLANES AND DESIGN UNITS:

NORTH: U-LINK, N-LINK

CENTRAL: C510, C700, C10, C735, C810

SOUTH: C755, C440

TACOMA: C910

ALL HORIZONTAL AND VERTICAL DISTANCES ARE IN FEET AND/OR DECIMALS OF A FOOT EXCEPT AS NOTED.

STATUTORY OFFSETS AND PROFILES INDICATE THE CONTROL TRACK TOP OF RAIL UNLESS OTHERWISE NOTED. THE CONTROL TRACK IS THE RIGHT TRACK WHEN VIEWED IN THE DIRECTION OF INCREASING STATIONING UNLESS OTHERWISE NOTED.

NON-CONTROL TRACK TOP OF RAIL ELEVATION SHALL BE EQUAL TO THE ADJACENT CONTROL TRACK TOP OF RAIL UNLESS OTHERWISE NOTED. THE PROFILE GRADE OF THE NON-CONTROL TRACK IS PROJECTED RADIALY IN CURVED SECTIONS AND PERPENDICULAR IN TANGENT SECTIONS FROM THE PROFILE GRADE OF THE CONTROL TRACK.

ALL GRADIENTS ARE IN PERCENT, EXCEPT AS NOTED OTHERWISE.

TOP OF RAIL SHALL MEAN TOP OF LOW RAIL IN SUPERELEVATED SECTIONS, EXCEPT AS NOTED OTHERWISE.

TRACK PROFILES ARE CARRIED ON THE LOW RAIL THROUGH HORIZONTAL CURVES AND SPRINGS. THE LENGTHS OF LINES ARE BASED ON THE CENTERLINE OF TRACK ALIGNMENT, EXCEPT AS NOTED OTHERWISE.

PROFILE GRADE LINE AND BY RAISING THE OUTSIDE RAIL AN AMOUNT EQUAL TO THE ACTUAL SUPERELEVATION EXCEPT AS NOTED OTHERWISE.

EXISTING AND NEW UTILITIES, SURFACE AND SUBSURFACE, ARE NOT SHOWN ON CIVIL DRAWINGS. FOR UTILITY LOCATIONS SEE SURFACE DRAINAGE AND UTILITY DRAWINGS.

NON-CONTROL TRACK TOP OF RAIL ELEVATION SHALL BE EQUAL TO THE ADJACENT CONTROL TRACK TOP OF RAIL UNLESS OTHERWISE NOTED. THE PROFILE GRADE OF THE NON-CONTROL TRACK IS PROJECTED RADIALY IN CURVED SECTIONS AND PERPENDICULAR IN TANGENT SECTIONS FROM THE PROFILE GRADE OF THE CONTROL TRACK.

UTILITY LOCATES CALL MINIMUM 2 AND MAXIMUM 10 BUSINESS DAYS BEFORE YOU DIG
1-800-424-5555

SOUND TRANSIT R/W NO.

W/N NO. 22/CHAIN
**UTILITY SYMBOLS**

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<td>PIPE SEWER COMBINED</td>
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**UTILITY NOTES**

1. WHERE SPACE ALLOWS, UTILITY FACILITIES ARE SHOWN TO SCALE.
2. THE LOCATIONS OF THE EXISTING UTILITIES ARE APPROXIMATE AND WHERE COMPUTED FROM INFORMATION PROVIDED BY PUBLIC AND PRIVATE UTILITY AGENCIES, LIMITED FIELD SURVEY, AND SITE VERIFICATION. CONTRACTOR SHALL VERIFY AND UPDATE THIS INFORMATION AND PERFORM DETAILED SURVEY AS REQUIRED TO DETERMINE THE ACTUAL LOCATIONS OF UTILITY FACILITIES.
3. MAINTAIN BUILDING SERVICE CONNECTIONS TO ABUTTING PROPERTIES AT ALL TIMES. WATER SERVICES AND NOT SHOWN.
4. THESE SYMBOLS AND ABBRIVATIONS HAVE BEEN ADOPTED FOR USE IN SOUND TRANSIT DESIGN FOR THE LIGHT RAIL TRANSIT SYSTEM AND MAY NOT BE IN COMPLETE AGREEMENT WITH THOSE SYMBOLS AND ABBRIVATIONS NORMALLY UTILIZED BY INDIVIDUAL UTILITY COMPANIES, AND LOCAL JURISDICTIONS.
5. ALL ELEVATIONS ARE BASED ON NORTH AMERICAN VERTICAL DATUM, 1988 (NAVD88). FOR LOCAL JURISDICTIONS, THESE SYMBOLS AND ABBRIVATIONS HAVE BEEN ADOPTED FOR USE IN SOUND TRANSIT DESIGNS.
6. WHERE POTHOLING HAS BEEN PERFORMED TO DETERMINE THE DEPTH TO EXISTING UTILITIES, THE DEPTH OF COVER ALONG WITH THE DATE THAT THE POTHOLING WAS PERFORMED IS NOTED ON THE DRAWING.
7. UTILITY LOCATES

**UTILITY LOCATES**

CALL MINIMUM 2 AND MAXIMUM 10 BUSINESS DAYS BEFORE YOU DIG
1-800-424-5555
NOTES:
1. STRUCTURAL PROTECTION MAY INCLUDE INSTALLATION OF PIPE CASING OR CONCRETE COVER SLAB.

ZONE PREFERRED CONFIGURATION

1. RELOCATE UTILITY (PREFERRED) OR PROVIDE STRUCTURAL PROTECTION (SEE NOTE 1).

2. RELOCATE UTILITY OR PROVIDE STRUCTURAL PROTECTION (SEE NOTE 1).

3. NO MODIFICATION REQUIRED UNLESS SPECIAL CONCERN DUE TO AGE, CONDITION, REPLACEMENT FREQUENCY, ACCESS, OR RISK.