CIVIL / STRUCTURAL
DIRECTIVE DRAWINGS

AUGUST 2019

THESE DIRECTIVE DRAWINGS ARE ISSUED TO ENSURE THE APPLICATION OF UNIFORM STANDARDS FOR THE DESIGN, FABRICATION, INSTALLATION, AND CONSTRUCTION OF SPECIFIC ITEMS OF WORK FOR THE SOUND TRANSIT LINK LIGHT RAIL, SOUNDER, REGIONAL EXPRESS BUS, AND BUS RAPID TRANSIT SYSTEMS, AS DEPICTED HEREIN. IN CONJUNCTION WITH THE DESIGN CRITERIA MANUAL, STANDARD SPECIFICATIONS, AND STANDARD DRAWINGS, THE DESIGNER SHALL VALIDATE AND FINALIZE THE DESIGN DEPICTED ON THESE DIRECTIVE DRAWINGS FOR INCLUSION INTO THE PROJECT CONTRACT DOCUMENTS. THESE DRAWINGS ALSO PROVIDE A BASIS FOR PRESENTATION OF DESIGN INFORMATION.

THESE DRAWINGS DO NOT CONSTITUTE A SUBSTITUTE FOR THE DESIGNER'S INDEPENDENT USE OF ENGINEERING JUDGMENT AND SOUND ENGINEERING PRACTICE, NOR DO THEY RELIEVE THE DESIGNER OF ITS RESPONSIBILITY TO COMPLY WITH THE STANDARD OF CARE.

IF THE DESIGNER IDENTIFIES THAT AN ASPECT OR ASPECTS OF THESE DIRECTIVE DRAWINGS ARE INAPPROPRIATE FOR INCLUSION IN THE FINAL DESIGN, THE DESIGNER SHALL INFORM AND SECURE CONCURRENCE FROM THE SOUND TRANSIT CORRIDOR DESIGN MANAGER OR PROJECT MANAGER AS PART OF DESIGN MILESTONE SUBMITTALS.

CONTACT THE SOUND TRANSIT CORRIDOR DESIGN MANAGER OR PROJECT MANAGER TO OBTAIN CAD FILES OF THE DIRECTIVE DRAWINGS. UPDATING THE DIRECTIVE DRAWINGS IS AN ONGOING PROCESS AND REVISIONS ARE ISSUED REGULARLY. COMMENTS, QUESTIONS, AND IMPROVEMENT IDEAS ARE WELCOMED. PLEASE SEND ALL COMMENTS TO DECM DEPUTY EXECUTIVE DIRECTOR OF DESIGN AND ENGINEERING.
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Project teams shall refer to their executed project contracts for applicable document versions/revisions.
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Uncontrolled document from soundtransit.org
GENERAL NOTES:
1. THESE SECTIONS ARE PROVIDED AS A DIRECTION 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. IN NO EVENT MAY GRANTOR CONSTRUCT PERMANENT STRUCTURES OR STORE FLAMMABLE, EXPLOSIVE, OR HAZARDOUS MATERIALS WITHIN THE EASEMENT AREA. IN THE EVENT GRANTEE DISCOVERS SUCH ITEMS IN THE EASEMENT AREA, GRANTEE MAY IMMEDIATELY REMOVE SUCH ITEMS AT GRANTOR'S EXPENSE. NO OBSTRUCTIONS OF ANY KIND WHATSOEVER, OTHER THAN THOSE IDENTIFIED ABOVE IN THIS SECTION 2 WILL BE ALLOWED WITHIN FIVE FEET OF THE AERIAL GUIDEWAY COLUMNS. GRANTOR MAY NOT USE THE EASEMENT AREA FOR ANY PURPOSE IN THE AREA ABOVE THE AERIAL GUIDEWAY OR THE AREA FIVE FEET BELOW THE BOTTOM OF THE AERIAL GUIDEWAY. VEHICLES CARRYING FLAMMABLE MATERIALS OTHER THAN WITHIN THE VEHICLE'S OWN FUEL TANK, MAY NOT PARK UNDER THE AERIAL GUIDEWAY. GRANTOR MAY OTHERWISE USE THE PROPERTY WITHIN THE EASEMENT AREA WITHOUT WRITTEN PERMISSION OF THE GRANTEE.
4. GRANTOR - PRIVATE PROPERTY OWNER OR AHJ.
5. GRANTEE - SOUND TRANSIT

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 FILES AND FILE CIP MUST FALL WITHIN 2' OR GREATER OF THE TRANSIT WAY. ADJUST WIDTH OUT IF NECESSARY.

LEGEND:
GUIDEWAY EASEMENT (TRANSIT WAY / 1ST 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

NOTE:
GRANTOR'S USE PROHIBITED AROUND COLUMNS AND UNDER GIRDERS, AS NOTED

GUIDEWAY EASEMENT (AT COLUMNS)
SPREAD FOOTING OR PILE FOUNDATION
NTS

GUIDEWAY COLUMN
GRANTOR'S USE PROHIBITED AROUND COLUMNS AND GIRDERS

GUIDEWAY COLUMN SECTION
NTS

GUIDEWAY EASEMENT (AT COLUMNS)
SPREAD FOOTING OR PILE FOUNDATION
NTS

NOTE:
GRANTOR'S USE PROHIBITED AROUND COLUMNS AND UNDER GIRDERS, AS NOTED
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. OVERSIZED HAUL ROUTE MAY REQUIRE GREATER THAN 16.5'-0" DEPENDING ON THE AUTHORITY HAVING JURISDICTION.

LEGEND:
- GRANTOR'S USE LIMITS
- PERMANENT EASEMENT
- TRANSIT WAY / ST RIGHT-OF-WAY
- 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.
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/GCM 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

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WALL MAINTENANCE EASEMENT
(NON-GUIDEWAY / RESIDENTIAL)

WALL MAINTENANCE EASEMENT
(GUIDEWAY / COMMERCIAL)
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 DICATE.
3. DESIGNERS TO OBTAIN PERMISSION FROM AHJ BEFORE FINALIZING DESIGN.

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

- FENCE OR RAILING BARRIER
- TOP OF WALL
- ST ROW
- 5'-0" MINIMUM WALL MAINTENANCE EASEMENT
- CEMENT, CONCRETE, GUTTER OR TRENCH DRAIN
- FINISHED GRADE
- PRIVATE PROPERTY
- SUBSURFACE ANCHORS (TYP)
- SUBSURFACE ANCHOR EASEMENT
- 0'-6" MINIMUM FOR DEB, GCCM PROJECTS
- 5'-0" FOR DEB PROJECTS
- 5'-8' FOR DB PROJECTS

SUBSURFACE ANCHORS EASEMENT
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:
- PERSISTENT EASEMENT

TUNNEL EASEMENT
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

UNDERPINNING DETAIL

SUBSURFACE ANCHORS EASEMENT

TEMPORARY CRANE SWING EASEMENT

ST STRUCTURE

CRANE SWING EASEMENT

CRANE BASE

ST RIGHT-OF-WAY

EXISTING BUILDING
**ABBRVIATIONS**

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**MISCELLANEOUS**

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**SYMBOLS**

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**GENERAL NOTES**

1. FOR GENERAL CIVIL NOTES SEE DIR-CZN011.
2. STATIONS SHOWN FOR INSULATED JOINTS ARE TO THE CENTER OF A PAIR OF JOINTS, UNLESS NOTED OTHERWISE. SEE TRACK CHARTS FOR LOCATIONS.
GENERAL NOTES:

1. SEE DRAWING DIR-KAX61 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-KAD351.

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.

9. FOR WALKWAY AND CROSSING DETAILS SEE GUIDANCE DRAWING STD-KAD070.

10. YELLOW CENTERLINE WALKWAY MARKER EQUALLY SPACED BETWEEN OCS POLES. MAXIMUM SPACING IS 50 FEET BETWEEN MARKERS.

FINISHED GRADE (TYP)

8' - 3"

CONCRETE TIE (TYP)

(SEE NOTE 7)

FENCE/ RAILING

(SEE NOTE 6)

WALKWAY BALLAST

12" MIN.

BALLAST

12"

GEOMEMBRANE

SEE NOTE 8

GEOMEMBRANE

SEE NOTE 8

SUPERELEVATED BALLASTED TRACK SECTION

NTS

TANGENT DOUBLE TRACK

NTS

uncontrolled document from soundtransit.org
15'-9" TYPICAL TRACK SPACING

TYPICAL OCS POLE LOCATION

CL TRACK

CL TRACK

UNOBSTRUCTED MAINTENANCE WALKWAY 30"x80" (SEE NOTE 3)

56" MIN FINISHED SURFACE CLEARANCE ENVELOPE

WALKWAY CLEAR OF OCS POLE AND FOUNDATION

GENERAL NOTES:
1. THE TYPICAL MAINLINE TRACK SPACING IS 15'-9". TRACK SPACINGS 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 MAINTENANCE WALKWAY DECK CLEARANCE ENVELOPE, AS MEASURED AT 56" 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 CONSIDER WITH THE MAINTENANCE WALKWAY. THE MAINTENANCE WALKWAY MUST MEET THE MINIMUM REQUIREMENTS FOR EMERGENCY EGRESS AS DEFINED IN THE DCM.
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.

TYPE A: BALLAST CURB TYPE 1

TYPE B

TYPE C

TYPE D: MSE WALL

TYPE E

TYPE F: CIP FILL WALL
CL TRACK

CLEANOUT FRAME AND COVER PER IN.

TOP OF BALLAST OR FINISHED GRADE (TOP)

LOCATION AS INDICATED ON PLANS

RIM GRADE COVER

45° BEND

8" NON-PERFORATED PIPE

8"X8" WYE

E AS SHOWN ON PLANS

PROVIDE PLUG FOR TERMINAL CLEANOUT

NOTE:

1. TERMINAL CLEANOUT SHALL BE PROVIDED AT UPSTREAM END OF ALL UNDERDRAINS.
2. CLEANOUTS SHALL BE LOCATED AT 300 LF (MAX) SPACING.

UNDERDRAIN CLEANOUT DETAIL

SECTION

1/4" ALLEN HEAD BOLTS 1" LONG RECESSED

DETAIL

CONCRETE COLLAR

CLEANOUT COVER AND RING DETAIL

UNDERDRAIN PIPE CONNECTION TO DRAIN PIPE

TYPICAL TRACK UNDERDRAIN DETAIL

SECTION

SOUND TRANSPORT
DIRECTIVE DRAWINGS
TRACKWORK
UNDERDRAIN
DETAILS

CL TRACK

BALLAST

VARIES

FINISH GRADE

BALLAST WALL (SEE CIVIL DRAWINGS FOR DETAILS OF THE WALL)

MIN 6" PERF UNDERDRAIN PIPE.

SEE CONTRACT DRAWINGS FOR HORIZONTAL OFFSET LOCATION AS INDICATED ON PLANS

RIM GRADE COVER

CONC COLLAR

BALLAST TO BE CONED AROUND RISER PIPE AS REQUIRED TO PERMIT CONSTRUCTION OF CONCRETE COLLAR

SUBGRADE SLOPE RUN (SEE CIVIL DRAWINGS)

FILTER FABRIC FOR DRAIN OVERLAP FABRIC 1' AT TRENCH TOP

8" PVC TEE (OR 8"X8" CROSS)

8" DIA NON-PERF PIPE

CAP END OF WYE

E AS SHOWN ON PLANS

8" DIA NON-PERF PIPE

8"X6" WYE

8" 45° ELBOW

8"X6" WYE (OR 8"X8" CROSS)

8" NON-PERF PIPE

BALLAST ROCK

CONCRETE COLLAR

CLEANOUT COVER AND COVER PER IN.

8" PIPE

BALLAST ROCK

8" PIPE

1'-0"
3" PRECAST CONCRETE SLABS

CL STATIONING REFERENCE PT

6 1/2" MIN EMBEDDED WHITE 12" WIDE STRIPE TO BE SIDE PAINTED AT OF MAINTENANCE WALKWAY PEDESTRIAN CROSSWALK

GENERAL NOTES:
1. FASTENER SPACING 30" ON TANGENT STATION TRACK.
2. PLINTH CONCRETE SHALL BE PLACED IN SEGMENTS. SEGMENTS 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 WS-KAD120 TO WS-KAD128.
8. CENTER PANEL SURFACE AREA VARIES DEPENDING ON INSTALLATION OF RESTRAINING 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.

CONTRACTOR TO CONSTRUCT PLINTH DIRECT FIXATION CONCRETE PEDESTALS CONTINUOUS THROUGH CROSSING LOCATIONS. NO PEDESTAL GAPS

CONCRETE BASE HEIGHT TO SUIT AND TOP OF RAIL SLAB THICKNESS

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

115 RE RAIL

PLAN VIEW

MAINTENANCE WALKWAY PEDESTRIAN CROSSING AT DIRECT FIXATION TRACK

REINFORCEMENT (TYP)

пряжен болты пеp пpeдкeнт пэллeн

3/4" DIAX10 UNC ALLEN HEAD STAINLESS STEEL BOLT X 4" LONG

2" LONG EMBEDDED S.S. ANCHOR INSERT 24X10 UNC THREAD

PLINTH CONCRETE (SEE NOTE 7)

STAINLESS STEEL ANCHOR BOLT LINING IN PRECAST PANEL

ANCHOR DETAIL

RAIL TO CONCRETE RECESS DETAIL

(TYPICAL BOTH SIDE OF TRACK)

NTS

DIRECT FIXATION TRACK CONSTRUCTION MAINTENANCE WALKWAY PEDESTRIAN CROSSING PRECAST CONCRETE PANEL

CONTRACT No.:
FILENAME:
SCALE:
DRAWING No.:
SHEET No.:
REV:
NTS
8/2019
DIRECTIVE DRAWINGS
TRACKWORK

SOUND TRANSIT

DIRECTIVE DRAWINGS
TRACKWORK

DIRECT FIXATION TRACK CONSTRUCTION MAINTENANCE WALKWAY PEDESTRIAN CROSSING PRECAST CONCRETE PANEL

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

CONTRACT No.:
SUBMITTED BY:
DATE:
DATE:
DATE:
SUBMITTED BY:
DATE:
DATE:
SUBMITTED BY:
DATE:
DATE:
SUBMITTED BY:
DATE:
DATE:
GENERAL NOTES:
1. Top of Second Pour Concrete Track Slab should 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°)
**115 RE EMBEDDED TRACK INSTALLATION AT ROAD INTERSECTIONS**

**BILL OF MATERIAL**

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<td>2</td>
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<td>3</td>
<td>RUBBER FLANGEWAY FORMER</td>
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<td>5</td>
<td>ANCHOR PLATES (SEE DWG DIR-KAD245)</td>
<td>4 OR 2 BETWEEN BEAMS</td>
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<td>PLASTIC TIE (SEE DWG DIR-KAD245)</td>
<td>16' CTRG (OR LESS)</td>
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<td>PLASTIC CLIPS COMPLETE WITH BOLTS, STEEL WASHER AND PLASTIC SHEET COVER</td>
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<td>8</td>
<td>BINDER CLIPS</td>
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115 RE EMBEDDED TRACK INSTALLATION AT
EMERGENCY VEHICLES CROSSING AND AT PEDESTRIAN CROSSING

BILL OF MATERIAL

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<td>AS REQUIRED</td>
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<tr>
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<td>RUBBER FLANGEWAY FORMER</td>
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<td>CONCRETE SLAB INCLUDING REINFORCING STEEL (1ST AND 2ND POUR)</td>
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<td>5</td>
<td>ANCHOR PLATES (SEE DWG DIR-KAD245)</td>
<td>4 OR 2 BETWEEN BEAMS</td>
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<tr>
<td>6</td>
<td>PLASTIC TIE (SEE DWG DIR-KAD245)</td>
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<td>7</td>
<td>PLASTIC CLIPS W/ STEEL WASHER</td>
<td>48/BEAM x 2/ANCHOR PLATE</td>
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GENERAL NOTES:
1. FOR TRACK SLAB CONSTRUCTION GENERAL NOTES SEE DWG DIR-KAD220.
2. TOP OF SECOND POUR CONCRETE TRACK SLAB CROSS-SLOPE PER CIVIL DRAWING.

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

PLASTIC CLIP WITH PROTECTIVE PLASTIC COVER

CONCRETE MIX (SEE NOTE 1)

FIRST POUR CONCRETE TRACK SLAB (SEE NOTE 1)

CONCRETE MIX
(SEE NOTE 1)

RUBBER EXTRUSION RAIL BOOT SEE DETAIL A/DIR-KAD230

RUBBER EXTRUSION FLANGEWAY FORMER SEE DETAIL B/DIR-KAD230

PLASTIC TIE ASSEMBLY FOR DETAIL SEE DWG DIR-KAD245

CONTROL POINT FOR SECOND POUR CONCRETE TRACK SLAB

SURFACE FINISHED X-SLOPE (FIELD SIDE)

10" MIN PLASTIC CLIP WITH PROTECTIVE PLASTIC COVER

FIRST POUR CONCRETE TRACK SLAB

TYPICAL RAIL SEAT AT PLASTIC TIE - DETAIL

SCALE: 4"=1'-0"

TYPICAL RAIL SEAT AT ANCHOR PLATES - DETAIL

SCALE: 4"=1'-0"

TYPICAL RAIL SEAT - SECTION

BETWEEN PLASTIC TIE AND ANCHOR PLATE

SCALE: 4"=1'-0"

FLANGEWAY FORMER DETAIL

TYPICAL RAIL SEAT AT PLASTIC TIE - DETAIL

SCALE: 4"=1'-0"

FLANGEWAY FORMER

SCALE: 4"=1'-0"

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

PLASTIC CLIP WITH PROTECTIVE PLASTIC COVER

CONCRETE MIX (SEE NOTE 1)

FIRST POUR CONCRETE TRACK SLAB (SEE NOTE 1)

CONCRETE MIX
(SEE NOTE 1)

RUBBER EXTRUSION RAIL BOOT SEE DETAIL A/DIR-KAD230

RUBBER EXTRUSION FLANGEWAY FORMER SEE DETAIL B/DIR-KAD230

PLASTIC TIE ASSEMBLY FOR DETAIL SEE DWG DIR-KAD245

CONTROL POINT FOR SECOND POUR CONCRETE TRACK SLAB

SURFACE FINISHED X-SLOPE (FIELD SIDE)

10" MIN PLASTIC CLIP WITH PROTECTIVE PLASTIC COVER

FIRST POUR CONCRETE TRACK SLAB

TYPICAL RAIL SEAT AT PLASTIC TIE - DETAIL

SCALE: 4"=1'-0"

TYPICAL RAIL SEAT AT ANCHOR PLATES - DETAIL

SCALE: 4"=1'-0"

TYPICAL RAIL SEAT - SECTION

BETWEEN PLASTIC TIE AND ANCHOR PLATE

SCALE: 4"=1'-0"

FLANGEWAY FORMER DETAIL

TYPICAL RAIL SEAT AT PLASTIC TIE - DETAIL

SCALE: 4"=1'-0"

FLANGEWAY FORMER

SCALE: 4"=1'-0"
GENERAL NOTES:

1. Control points for profile grade is set to top of low rail elevation.
2. Rail welded shall not be made less than 3 in from the edge of anchor plate or plastic beam.
3. Concrete mix shall be 3000 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 10'-0" O.C. beginning 10' prior to TS and ending 10' after ST for curves ≤ 500.
5. Grading transition of infill concrete at crosswalks as surface flats to valley profile shall be made over a distance of 5'-0" or to the drain - whichever is greatest.
6. Two pairs of anchor plates are to be spaced (3.33') between plastic ties in tangent track and for curves > 500' radius. For curved tracks, use spacing 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. Second 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. For location of conduits, stub up and blockouts for system connections to rail and for two loop wires see ductbank/conduit requirements drawings.
11. Reinforcing steel in the track slab shall be electrically bonded as indicated in the corrosion control drawings.

BILL OF MATERIAL

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<th>DESCRIPTION</th>
<th>QUANTITY</th>
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<tbody>
<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>115 RE BAR ROLL-OFFS REINFORCING STEEL (1ST AND 2ND POUR)</td>
<td>AS REQUIRED</td>
</tr>
<tr>
<td>4</td>
<td>ANCHOR PLATES (SEE DWG DIR-KA245)</td>
<td>4 OR 2 BETWEEN TIES (SEE NOTE 6)</td>
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<td>5</td>
<td>PLASTIC TIE (SEE DWG DIR-KA245)</td>
<td>10' CTRS (OR LESS) (SEE NOTE 4)</td>
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<td>6</td>
<td>PLASTIC CLIP COMPLETE W/ BOLTS STEEL WASHER AND PLASTIC SHEET COVER</td>
<td>4/BEAM, 2/ANCHOR PLATE</td>
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<tr>
<td>7</td>
<td>BINDER CLIPS @ EVERY 20&quot; CC</td>
<td>@ EVERY 30&quot; CC</td>
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TYPICAL SECTION - TANGENT TRACK AT PLASTIC TIE

TYPICAL SECTION - TANGENT TRACK AT ANCHOR PLATES
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 CROSSINGS. 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

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

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GROOVE TO ACCOMMODATE PLASTIC CLIP

GROOVE TO ACCOMMODATE PLASTIC CLIP

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<td>SECOND POUR CONCRETE GROUT</td>
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<td>THIRD POUR CONCRETE PAVEMENT INFILL</td>
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<td>RAIL CLIPS</td>
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<td>7</td>
<td>PROTECTIVE PLASTIC CAP</td>
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<td>9</td>
<td>3/4&quot; ANCHOR BOLT COMPLETE</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 - WHICHER IS CLOSER.
4. ANCHOR PLATES ARE TO BE SPACED AT EVERY 3'-4" C.C.
5. FIRST POUR CONCRETE SHALL BE 9" THICK, SECOND POUR CONCRETE SHALL BE AT TOP OF ANCHOR PLATES, AND SHALL BE JUST UNDER BASE OF RAIL AT LOCATION TBD BY FINAL DESIGN.
6. FIRST POUR CONCRETE SLAB TO BE BROKEN FINISHED EXCEPT FOR SMOOTH TROWEL FINISH 8" WIDE EITHER SIDE OF THE RAIL.
7. THIRD POUR CONCRETE TOP SLAB FINISHED TO BE DETERMINED BY FINAL DESIGN.
8. 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

SCALE: 3/4" = 1'-0"

TYPICAL SECTION - TANGENT TRACK

SCALE: 3/4" = 1'-0"

TYPICAL SECTION - TANGENT TRACK

SCALE: 1 1/2" = 1'-0"

SOUND TRANSIT
DIRECTIVE DRAWINGS
TRACKWORK
EMBEDDED TRACK CONSTRUCTION
TYPICAL NON-INSULATED TRACK RAIL FIXATION DETAIL

DIR-KAD235

1801 4th Ave.
Seattle, WA 98121

Ph: 206.553.4000
Fax: 206.553.4141

www.soundtransit.org

SOUND TRANSIT
DIRECTIVE DRAWINGS
TRACKWORK
EMBEDDED TRACK CONSTRUCTION
TYPICAL NON-INSULATED TRACK RAIL FIXATION DETAIL

DIR-KAD235
TYPICAL RAIL SEAT ON ANCHOR PLATE 115 RE RAIL - DETAIL

TYPICAL RAIL SEAT BETWEEN ANCHOR PLATES - DETAIL
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.
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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<th>KEY</th>
<th>QTY</th>
<th>DESCRIPTION</th>
<th>SIZE</th>
<th>FAB. NOTES</th>
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<td>NYLON REINFORCED PLASTIC CLIP</td>
<td>4.00 x 3.75</td>
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<tr>
<td>4</td>
<td>2</td>
<td>PROTECTIVE COVER</td>
<td>4 MIL</td>
<td>PLASTIC SHEET OR TAPE</td>
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<tr>
<td>4</td>
<td>2</td>
<td>7/8&quot; UNC BOLT COMBINED WITH UNC HEX NUT AND FLAT WASHER</td>
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<td></td>
</tr>
<tr>
<td>4</td>
<td>2</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>
<td>5&quot;x3.5&quot;x6'-0&quot;</td>
<td>MAIN COMPONENT</td>
</tr>
<tr>
<td>6</td>
<td>2</td>
<td>CONC. BOLT COMBINED WITH UNC HEX NUT AND SUPPORT PLATE</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

ANCHOR PLATE ASSEMBLY / MATERIAL LIST

<table>
<thead>
<tr>
<th>KEY</th>
<th>QTY</th>
<th>DESCRIPTION</th>
<th>SIZE</th>
<th>FAB. NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>NYLON REINFORCED PLASTIC CLIP</td>
<td>4.00 x 3.75</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>PROTECTIVE COVER</td>
<td>4 MIL</td>
<td>PLASTIC SHEET OR TAPE</td>
</tr>
<tr>
<td>4</td>
<td>2</td>
<td>7/8&quot; UNC BOLT COMBINED WITH UNC HEX NUT AND FLAT WASHER</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>2</td>
<td>STEEL CLIP WASHER</td>
<td>3&quot; x 2&quot; x 1/4&quot;</td>
<td>GALVANIZED STEEL</td>
</tr>
<tr>
<td>7</td>
<td>1</td>
<td>1&quot; STEEL PLATE</td>
<td>6'-12&quot;</td>
<td>DRILL HOLES PER PLAN</td>
</tr>
<tr>
<td>8</td>
<td>4</td>
<td>1/2&quot; DIA STUD</td>
<td>0'-4&quot;</td>
<td>WELDED TO UNDERSIDE OF PLATE</td>
</tr>
<tr>
<td>9</td>
<td>LOT</td>
<td>WELD</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**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 4" long by 4' side 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.

**Section A - NTS**

- 2 1/2" gap between top of drainage channel and top of grate.
- 4" PVC drain connection at 2" (max) on center.
- 25 3/4" (max) on center.
- 1/2" x 2 1/2" flat bars at 2" (max) on center.
- Each end of grate.

**Section B - NTS**

- Top of rail.
- Bottom of rail boot.
- Bottom of rail.
- 1"S R/W with rail boot.

**Section C - NTS**

- Top of rail.
- Steel angle frame.
- Drain invert elevation minimum 36" below T/R.
TRANSITION PLAN FROM HIGH RESILIENCE FASTENER DF TRACK TO STANDARD FASTENER DF TRACK

TRANSITION ZONE PLINTH GAP
1. ALL ELEVATIONS ARE BASED ON NORTH AMERICAN VERTICAL DATUM.  (NADV88) TO CONVER TO CITY OF SEATTLE DATUM, REFER TO HORIZONTAL AND VERTICAL CONTROL DIAGRAMS.

2. ALL COORDINATES, BEARINGS OR AZIMUTHS AND DISTANCES SHOWN ON THE PLANS ARE BASED ON THE LOCAL DISTANCE SCALE.  HORIZONTAL PROJECTIONS AND FACTORS ARE ESTABLISHED FOR THE PROJECT. TO CONVERT COORDINATES FROM THE LOCAL DATUM PLANES TO NAD83:

   NORTH: SUBTRACT 393,330 FROM THE NORTHING AND EASTING COORDINATES AND APPLY THE COMBINATION FACTOR OF 0.999978298.

   SOUTH: SUBTRACT 100,000 FROM THE NORTHING AND EASTING COORDINATES AND APPLY THE COMBINATION FACTOR OF 0.999965007.

   TACOMA: SUBTRACT 289,000 FROM THE NORTHING AND EASTING COORDINATES AND APPLY THE COMBINATION FACTOR OF 0.999979766.

3. KEY TO LOCAL DATA PLANE ZONES AND DESIGN UNITS:
   NORTH: U-LINK, N-LINK
   CENTRAL: C510, C700, C10, C735, C810
   SOUTH: C735, C810

4. ALL HORIZONTAL AND VERTICAL DISTANCES ARE IN FEET AND FOOT DECA METERS OF A FOOT EXCEPT AS NOTED.

5. STATIONS, OFFSETS AND PROFILES INDICATE THE CONTROL TRACK TOP OF RAIL.  NON-CONTROL TRACKS ARE PROJECTED ACROSS CURVES AND PERPENDICULAR TO CURVES.  THE PROFILE GRADE OF THE NON-CONTROL TRACK IS THE NON-CONTROL TRACK TOP OF RAIL UNLESS OTHERWISE NOTED.

6. NON-CONTROL TRACK TOP OF RAIL ELEVATION SHALL BE TWO FOOT ELEVATION.  THE CONTROL TRACK IS THE RIGHT TRACK WHEN VIEWED IN THE DIRECTION OF INCREASING STATIONING UNLESS OTHERWISE NOTED.

7. ALL GRADIENTS ARE IN PERCENT EXCEPT AS NOTED OTHERWISE.

8. ALL ELEVATIONS ARE BASED ON NORTH AMERICAN VERTICAL DATUM, 1988 (NAVD88).

9. THE NORTHING AND EASTING COORDINATES ARE BASED ON THE LOCAL DISTANCE SCALE.  HORIZONTAL PROJECTIONS AND FACTORS ARE ESTABLISHED FOR THE PROJECT. TO CONVERT COORDINATES FROM THE LOCAL DATUM PLANES TO NAD83:

   NORTH: SUBTRACT 393,330 FROM THE NORTHING AND EASTING COORDINATES AND APPLY THE COMBINATION FACTOR OF 0.999978298.

   SOUTH: SUBTRACT 100,000 FROM THE NORTHING AND EASTING COORDINATES AND APPLY THE COMBINATION FACTOR OF 0.999965007.

   TACOMA: SUBTRACT 289,000 FROM THE NORTHING AND EASTING COORDINATES AND APPLY THE COMBINATION FACTOR OF 0.999979766.

10. THE SITE IS LOCATED 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: U-LINK, N-LINK
   CENTRAL: C510, C700, C10, C735, C810
   SOUTH: C735, C810

11. ALL ELEVATIONS ARE BASED ON NORTH AMERICAN VERTICAL DATUM.  (NADV88) TO CONVER TO CITY OF SEATTLE DATUM, REFER TO HORIZONTAL AND VERTICAL CONTROL DIAGRAMS.

12. ALL COORDINATES, BEARINGS OR AZIMUTHS AND DISTANCES SHOWN ON THE PLANS ARE BASED ON THE LOCAL DISTANCE SCALE.  HORIZONTAL PROJECTIONS AND FACTORS ARE ESTABLISHED FOR THE PROJECT. TO CONVERT COORDINATES FROM THE LOCAL DATUM PLANES TO NAVD88:

   NORTH: SUBTRACT 393,330 FROM THE NORTHING AND EASTING COORDINATES AND APPLY THE COMBINATION FACTOR OF 0.999978298.

   SOUTH: SUBTRACT 100,000 FROM THE NORTHING AND EASTING COORDINATES AND APPLY THE COMBINATION FACTOR OF 0.999965007.

   TACOMA: SUBTRACT 289,000 FROM THE NORTHING AND EASTING COORDINATES AND APPLY THE COMBINATION FACTOR OF 0.999979766.

13. ALL ELEVATIONS ARE BASED ON North American Vertical Datum.  (NADV88) TO CONVER TO City of Seattle Datums, REFER TO Horizontal and Vertical Control Diagrams.

14. ALL COORDINATES, BEARINGS OR AZIMUTHS AND DISTANCES SHOWN ON THE PLANS ARE BASED ON THE LOCAL DISTANCE SCALE.  HORIZONTAL PROJECTIONS AND FACTORS ARE ESTABLISHED FOR THE PROJECT. TO CONVERT COORDINATES FROM THE LOCAL DATUM PLANES TO NAVD88:

   NORTH: SUBTRACT 393,330 FROM THE NORTHING AND EASTING COORDINATES AND APPLY THE COMBINATION FACTOR OF 0.999978298.

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   TACOMA: SUBTRACT 289,000 FROM THE NORTHING AND EASTING COORDINATES AND APPLY THE COMBINATION FACTOR OF 0.999979766.

15. ALL ELEVATIONS ARE BASED ON North American Vertical Datum.  (NADV88) TO CONVER TO City of Seattle Datums, REFER TO Horizontal and Vertical Control Diagrams.

16. ALL COORDINATES, BEARINGS OR AZIMUTHS AND DISTANCES SHOWN ON THE PLANS ARE BASED ON THE LOCAL DISTANCE SCALE.  HORIZONTAL PROJECTIONS AND FACTORS ARE ESTABLISHED FOR THE PROJECT. TO CONVERT COORDINATES FROM THE LOCAL DATUM PLANES TO NAVD88:

   NORTH: SUBTRACT 393,330 FROM THE NORTHING AND EASTING COORDINATES AND APPLY THE COMBINATION FACTOR OF 0.999978298.

   SOUTH: SUBTRACT 100,000 FROM THE NORTHING AND EASTING COORDINATES AND APPLY THE COMBINATION FACTOR OF 0.999965007.

   TACOMA: SUBTRACT 289,000 FROM THE NORTHING AND EASTING COORDINATES AND APPLY THE COMBINATION FACTOR OF 0.999979766.
GENERAL NOTES:
1. PROVIDE EMERGENCY RAILING AT ALL ELEVATED STRUCTURE PERIMETER LOCATIONS EXCEPT WHERE ACOUSTIC PANELS ARE REQUIRED.
2. ALL MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE SOUND TRANSIT STANDARD SPECIFICATIONS, DATED 2018.
3. THESE DETAILS ESTABLISH A GENERAL CONFIGURATION FOR DESIGN OF EMERGENCY RAILING. THE DETAILS DO NOT ENCOMPASS GEOMETRY AT ALL LOCATIONS. IT HAS BEEN PROVIDED TO CONTRACTOR FOR GENERAL DETAILING INFORMATION ONLY.
4. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF EMERGENCY RAILING LAYOUT/CONFIGURATIONS FOR ITS FULL LENGTH.
5. ALL MEMBERS SIZES, DIMENSIONS, AND NUMBERS ON THE DRAWING ARE FOR REFERENCE ONLY. THE ENGINEER OF RECORD SHALL REVIEW AND CONFIRM ALL THE NUMBERS BY CALCULATION FOR THE SPECIFIC PROJECT.
6. MATERIAL SPECIFICATIONS:
   - WT-SHAPES: ASTM A992
   - PLATES: ASTM A36
   - ANCHOR BOLTS:
     - HEAVY HEX HEADED ANCHOR BOLTS: ASTM F1154 GRADE 55
     - HEX NUTS: ASTM A563
     - WASHERS: ASTM F436
7. ALL STEEL SHALL BE GALVANIZED IN ACCORDANCE WITH THE CONTRACT SPECIFICATIONS, UNLESS NOTED OTHERWISE.
8. THE CONTRACTOR SHALL REPAIR ALL GALVANIZED STEEL SURFACES DAMAGED BY FIELD OPERATIONS, BY PAINTING THE DAMAGED AREAS CONFORMING TO ASTM A780/A780M.
9. CUTTING SHALL BE DONE BY SAWING OR MILLING AND ALL CUTS SHALL BE TRUE AND SMOOTH.
10. WELDING SHALL BE DONE IN ACCORDANCE WITH AWS D1.1. SIZE OF FILLET WELDS SHALL BE 5" MINIMUM EXCEPT WHERE NOTED.
11. MAXIMUM SPACING OF EMERGENCY RAILING STANCHIONS SHALL BE 4'-0". ADJUST SPACING OF STANCHIONS AT EXPANSION JOINTS AND OCS POLE SUPPORTS.
12. ALL VERTICAL ELEMENTS SHALL BE INSTALLED PLUMB. PROVIDE TURNBUCKLES AT A NOMINAL 60' SPACING.
13. MATCH EMERGENCY RAILING EXPANSION JOINTS WITH TRACK SLAB EXPANSION JOINTS.
14. PRETENSION IN EACH CABLE SHALL NOT BE SMALLER THAN 120 LBS BUT NOT HIGHER THAN 150 LBS.
15. ANCHOR BOLTS ARE DESIGNED TO BE COMPATIBLE WITH FUTURE INSTALLATION OF ACOUSTIC PANELS WITH A HEIGHT UP TO 8'-4" ABOVE TOP OF LOW RAIL AND WITH STANCHIONS SPACED NO GREATER THAN 4'-0" APART.
16. STANDPIPE LOCATION AND MOUNTING DETAILS ARE FOR ILLUSTRATION ONLY.

LARGE SCALE ELEVATION
SCALE: 1" = 1'-0"
NOTE:
- USE GALV ASTM F436 WASHERS AT EACH NUT LOCATION.
- GR 55 GALV ASTM F1554 3/4"Ø
- 3/4"Ø STD PIPE 3' LONG
- TYP 3/16" TURNBUCKLE CABLE WITH ALL-THREAD ROD ONE END COUPLED WITH 2 NUTS AND 2 WASHERS, SEE NOTE 1

EMERGENCY RAILING STANCHION

NOTE:
- COUPLING NUTS & ANCHOR BOLTS SHALL BE DESIGNED BY THE DESIGNER

GENERAL NOTES:
1. WIRE ROPE SHALL BE INITIALLY TENSIONED TO 150 LBS. TENSIONING SEQUENCE FOR EACH SEGMENT OF AERIAL GUIDEWAY (EXP JT TO EXP JT) SHALL BE TOP WIRE ROPE TO STANCHION TURNBUCKLE TO ONE END OF COUPLING NUT WITH ALL-THREAD ROD TO FUTURE STANCHION. TENSIONING SEQUENCE SHALL BE PERFORMED SO THAT THE STANCHION HAS A MINIMUM OF 150 LBS OF UNDERSLING LOADING.
2. ALL MEMBER SIZES, DIMENSIONS, AND NUMBERS ON THE DRAWING ARE FOR REFERENCE ONLY. THE ENGINEER OF RECORD SHALL VERIFY AND CONFIRM ALL THE NUMBERS BY CALCULATION FOR THE SPECIFIC PROJECT.

DETAIL

SCALE: 3" = 1'-0"

TYPICAL EMERGENCY RAILING SECTION

SCALE: 1" = 1'-0"

COUPLING NUTS & ANCHOR BOLTS AT FUTURE STANCHION

SCALE: 3" = 1'-0"
GENERAL NOTES:

1. THESE DETAILS ESTABLISH GENERAL CONFIGURATION FOR DESIGN OF ACOUSTIC BARRIER. THE DETAILS DO NOT ENCOMPASS GEOMETRY AT ALL LOCATIONS. IT HAS BEEN PROVIDED TO CONTRACTOR FOR GENERAL DETAILING INFORMATION ONLY. CORRESPONDING ACOUSTIC PANELS SHALL MEET ALL CRITERIA IN ACCORDANCE WITH CORRESPONDING CONTRACT SPECIFICATION.

2. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF ACOUSTIC BARRIER LAYOUT / CONFIGURATIONS FOR ITS FULL LENGTH.

3. ALL ACOUSTIC PANEL STANCHIONS SHALL BE INSTALLED PLUMB.

4. ALL STEEL SHALL BE GALVANIZED IN ACCORDANCE WITH THE CONTRACT SPECIFICATIONS, UNLESS NOTED OTHERWISE.

5. THE STANDPIPE SYSTEM AND THE ACOUSTIC PANEL SYSTEM SHALL BE ATTACHED TO THE STANCHION IN SUCH A WAY AS TO ALLOW FOR THE REMOVAL OF ONE SYSTEM WITHOUT IMPACTING OR REQUIRING THE REMOVAL OF THE OTHER.

6. THIS STANDARD ACOUSTICAL PANEL STANCHION SYSTEM IS DESIGNED FOR ACOUSTIC PANELS WITH A HEIGHT UP TO 8'-4" ABOVE TOP OF LOW RAIL AND WITH A WEIGHT UP TO 25 PSF.

7. ALL MEMBER SIZES, DIMENSIONS, AND NUMBERS ON THE DRAWING ARE FOR REFERENCE ONLY. THE ENGINEER OF RECORD SHALL VERIFY AND CONFIRM ALL THE NUMBERS BY CALCULATION FOR THE SPECIFIC PROJECT.
GENERAL NOTES:
1. ALL MEMBER'S SIZES, DIMENSIONS, AND NUMBERS ON THE DRAWING ARE FOR REFERENCE ONLY. THE ENGINEER OF RECORD SHALL VERIFY AND CONFIRM ALL THE NUMBERS BY CALCULATION FOR THE SPECIFIC PROJECT.

NOTE: USE GALV ASTM F436 WASHERS AT EACH NUT LOCATION.

*SHALL BE DESIGNED BY THE DESIGNER

#4 STIRRUPS AT EACH STANCHION, TYP. *
EMERGENCY RAILING LAYOUT AT RAIL LUBRICATOR SUPPORT PLAN

Scale: 1" = 1'-0"

EMERGENCY RAILING LAYOUT AT INTERIOR CORNER

Scale: 1 1/2" = 1'-0"

EMERGENCY ACCESS THROUGH EMERGENCY RAILING

Scale: 3/4" = 1'-0"

PLAN - EMERGENCY RAILING TERMINATION

Scale: 1 1/2" = 1'-0"

DETAIL

Scale: 3/4" = 1'-0"

GENERAL NOTE:
1. All member's sizes, dimensions, and numbers on the drawing are for reference only. The engineer of record shall verify and confirm all the numbers by calculation for the specific project.