* SEE RIGHT OF WAY IMPROVEMENT MANUAL FOR DIMENSIONS.
** UNLESS OTHERWISE APPROVED BY THE ENGINEER.
*** MAXIMUM 2%, MINIMUM 0.5%; USE 2% UNLESS OTHERWISE SHOWN IN CONTRACT OR APPROVED BY THE ENGINEER.
401A—CEMENT CONCRETE PAVEMENT WITH INTEGRAL CURB

401B—CEMENT CONCRETE PAVEMENT WITH EXISTING CURB & GUTTER

401C—HOT MIX ASPHALT ON CEMENT CONCRETE BASE

401D—HOT MIX ASPHALT OVER CRUSHED ROCK BASE

HMA DESIGN CRITERIA:
1. 3 MILLION ESAL'S UNLESS OTHERWISE SPECIFIED IN CONTRACT DOCUMENTS
2. ASPHALT PG 64-22 UNLESS OTHERWISE SPECIFIED IN CONTRACT DOCUMENTS
3. WARM MIX ASPHALT MAY BE USED IN PLACE OF HMA WHERE SHOWN ON THE DRAWINGS

REF STD SPEC SEC 4-04, 5-04, 5-05, 8-04
NOTES:
IF CONC. THICKNESS IS 9 INCH OR GREATER
OPTIONAL KEYWAY MAY BE USED
SEE STD PLANS NO 405c & 405d FOR DETAILS

OPTIONAL KEYWAY
FOR LONGITUDINAL JOINT

402A—ROADWAY CONCRETE PAVEMENT ON CRUSHED ROCK

402B—HOT MIX ASPHALT ON CEMENT CONCRETE ON CRUSHED ROCK

HMA DESIGN CRITERIA:
1. 10 MILLION ESAL'S UNLESS OTHERWISE SPECIFIED IN CONTRACT DOCUMENTS.
2. ASPHALT PG 64-22 UNLESS OTHERWISE SPECIFIED IN CONTRACT DOCUMENTS.
3. WARM MIX ASPHALT MAY BE USED IN PLACE OF HMA WHERE SHOWN ON THE DRAWINGS.

REF STD SPEC SEC 4-04, 5-04, 5-05 & 8-04

CEMENT CONCRETE ALLEY PAVEMENT
403B—FOR SHALLOW EMBANKMENT AREA

NOTES:
1. WHEN ALLEY PAVEMENT IS 15'−0" OR WIDER PLACE CONSTRUCTION JOINT WITH TIE BAR PER STD PLAN NO 405 ALONG CENTERLINE OF ALLEY.
2. FOR ADA ACCESSIBLE ACCESS TO ENTRY IN ALLEY CONSIDER ALTERNATIVE DESIGN, SUBJECT TO APPROVAL BY THE ENGINEER.
3. 8" OR AS SHOWN IN CONTRACT OR APPROVAL BY THE ENGINEER.

REF STD SPEC SEC 8-17, 8-19
**HALF SECTION**
RIGID PAVEMENT WITH ASPHALT CONCRETE SURFACE

- REMOVE ASPHALT OVERLAY
- SAWSUT ASPHALT CONC (REMOVE LOOSENED AREAS)
- EXISTING ASPHALT CONCRETE PAVEMENT

**HALF SECTION**
CEMENT CONCRETE PAVEMENT

- SAWSUT CONCRETE FULL DEPTH
- EXISTING CONCRETE PAVEMENT

**TYPICAL PATCH FOR RIGID PAVEMENT**

- MIN WIDTH FOR RESTORATION**
- HMA (CL 3/4")**
- CEM. CONC. SHALL BE THICKNESS GREATER OF "D" OR 9 INCHES
- STEP EXCAVATION TO AVOID UNDERMINING EX PAVEMENT (TYP)
- COMPACT MINERAL AGGREGATE TYPE 2

**TYPICAL PATCH FOR FLEXIBLE PAVEMENT**

- **DEPTH OF RESTORATION SHALL MEET THE REQUIREMENTS OF "STREET AND SIDEWALK PAVEMENT OPENING AND RESTORATION RULES".
- WIDTH OF RESTORATION SHALL MEET REQUIREMENTS OF STANDARD PLAN 404a.

**NOT TO SCALE**

City of Seattle

PAVEMENT PATCHING

ASPHALT OVER RIGID BASE OF BRICK OR STONE BLOCK PAVEMENT

HALF SECTION

- ** WIDTH OF RESTORATION SHALL MEET REQUIREMENTS OF STANDARD PLAN 404b.
- DEPTH OF RESTORATION SHALL MEET THE REQUIREMENTS OF "STREET AND SIDEWALK PAVEMENT OPENING AND RESTORATION RULES".

REF STD SPEC SEC 2-02, 5-04 & 5-05

City of Seattle
NOT TO SCALE
PAVEMENT PATCHING

NOTES:
1. DUE TO POTENTIAL LOSS OF SOIL STRENGTH IN AREAS ADJACENT TO TRENCH OPENINGS, PAVEMENT REMOVAL SHALL BE WIDENED TO INCLUDE THE ZONE OF INFLUENCE.
2. SEE STREET AND SIDEWALK PAVEMENT OPENING AND RESTORATION RULES FOR MORE INFORMATION ON PAVEMENT OPENINGS ZONE OF INFLUENCE.
   HTTP://WWW.SEATTLE.GOV/TRANSPORTATION/STUSE_PAVEMENTOPEN.HTM

MINIMUM FULL DEPTH PAVEMENT REMOVAL LIMITS

ZONE OF INFLUENCE* TRENCH WIDTH ZONE OF INFLUENCE*

PAVEMENT DEPTH

DEPTH (D)

*TYPICALLY D/4

REF STD SPEC SEC 2-02, 2-04

City of Seattle  NOT TO SCALE  PAVEMENT OPENING ZONE OF INFLUENCE

NOTES

1. INSTALL TIE BARS ALONG LONGITUDINAL JOINT BETWEEN FULL PANEL REPLACEMENT AND EXIST CEMENT CONC PAVEMENT. TIE BARS ARE NOT INSTALLED BETWEEN CEMENT CONC PAVEMENT AND HOT MIX ASPHALT SHOULDERS.

2. TIE BARS AND DOWELS ARE NOT REQUIRED:

2.1. WHEN INDICATED ON THE DRAWINGS BY "NO TIE BARS" OR "NO DOWEL BARS".

2.2. WHEN EXISTING PAVEMENT IS LESS THAN A THICKNESS OF 8" OR WHEN THE ENGINEER DETERMINES THE EXISTING CONC NOT TO BE COMPETENT

3. DO NOT PLACE LONGITUDINAL JOINTS OR SKewed JOINTS WITHIN BIKE LANES.

4. WHEN PAVING ADJACENT TO EXISTING PANELS, THE NEW TRANSVERSE JOINTS SHALL BE PLACED TO MATCH JOINT LOCATIONS OF THE EXISTING ADJACENT PAVEMENT UNLESS OTHERWISE DIRECTED BY THE ENGINEER. SEE STD PLAN NO 405C FOR MAXIMUM TRANSVERSE JOINT SPACING.

A* SEE SECTION A-A STANDARD PLAN 405a
B* SEE SECTION B-B STANDARD PLAN 405b

REF STD SPEC SEC 5-05

City of Seattle
NOT TO SCALE
ROADWAY CONCRETE PAVEMENT REPAIR

NEW CEMENT CONC PAVEMENT | EXIST CONCRETE PAVEMENT

SAWED GROOVE:
WIDTH 3/8" MIN. TO 5/8" MAX;
DEPTH 2", WITH JOINT SEALANT;
OR 3/8" PREMOLDED JOINT FILLER

SEE STANDARD PLAN NO 405c
FOR DOWEL BAR SIZE

9"

1/2 CONC PAVEMENT DEPTH

NEW DOWEL BAR

DRILL 3/4" MIN TO 5/8" MAX GREATERTHAN DIA OF DOWEL X 9" LONGHOLE IN EXIST CONCRETE CONC FOR NEW DOWEL BAR (TYP)

SECTION A-A
DOWEL BAR DETAIL

NEW CEMENT CONC PAVEMENT | EXIST CONCRETE PAVEMENT

SAWED GROOVE:
WIDTH 3/8" MIN. TO 5/8" MAX;
DEPTH 2", WITH JOINT SEALANT;
OR 3/8" PREMOLDED JOINT FILLER

1'-3"

1/2 CONC PAVEMENT DEPTH

NEW TIE BAR
3/8" DIAM X 30"

DRILL 3/4" MIN TO 1 1/2" MAX DIA HOLE15" LONG IN EXIST CONCRETE CONC FOR NEW TIE BAR (TYP)

SECTION B-B
TIE BAR DETAIL

NEW CEMENT CONC PAVEMENT | EXIST CONCRETE PAVEMENT

SAWED GROOVE:
WIDTH 3/8" MIN. TO 5/8" MAX;
DEPTH 2", WITH JOINT SEALANT;
OR 3/8" PREMOLDED JOINT FILLER

SAW CUT FULL DEPTH

WITHOUT TIE BAR OR DOWEL
USE ONLY WHEN SHOWN IN
CONTRACT OR APPROVED BY
THE ENGINEER

REF STD SPEC SEC 5-05

City of Seattle | NOT TO SCALE | PAVEMENT REPAIR
DOWEL BAR AND
TIE BAR DETAILS

## Notes:

1. Do not place longitudinal joints or skewed joints within bike lanes.
2. When a joint is within 18 inches of a casting joint, it should be skewed to meet the casting at 90 degrees unless otherwise directed by the engineer or shown on the drawings.
3. See std. plan no. 406 b or drawings for rebar detail around casting 18 inches or greater from joints.
4. Dowel bars shall not be placed within 15 inches of the edge of pavement or a parallel joint.

### Depth (D) of Roadway Concrete Conc. v.s. Dowel Bar Size (Dia #)

<table>
<thead>
<tr>
<th>Depth (D) of Roadway Concrete Conc.</th>
<th>Dowel Bar Size (Dia #)</th>
</tr>
</thead>
<tbody>
<tr>
<td>6&quot; &lt; D &lt; 9&quot;</td>
<td>1&quot;x18&quot;</td>
</tr>
<tr>
<td>9&quot; &lt; D &lt; 11&quot;</td>
<td>1(\frac{1}{4})x18&quot;</td>
</tr>
<tr>
<td>11&quot; &lt; D</td>
<td>1(\frac{1}{2})x18&quot;</td>
</tr>
</tbody>
</table>

---

**Plan View**

Panel Replacement

**Section View**

**Longitudinal Contraction Joint**

- Sawed joint width \( \frac{3}{8} \)" min.
- \( \frac{1}{4} \)" max. with joint sealant or \( \frac{1}{4} \)" premolded joint filler.
- TIE BAR: \( \frac{3}{8} \)" Bar X 30" on 36" centers.
- Drill and grout (when applicable)

**Section View**

**Transverse Contraction Joint**

- Sawed joint width \( \frac{3}{8} \)" min.
- \( \frac{1}{4} \)" max. with joint sealant or \( \frac{1}{4} \)" premolded joint filler.
- TIE BAR: \( \frac{3}{8} \)" Bar X 30" on 36" centers.

---

**Reference:**

Std. Spec Sec 5-05

City of Seattle

NOT TO SCALE

ROADWAY CONCRETE PAVEMENT JOINTS

THROUGH JOINTS

USE ONLY WHEN SHOWN IN CONTRACT OR APPROVED BY THE ENGINEER

3/4" PREMOLDED JOINT FILLER

COAT ENTIRE DOWEL WITH APPROVED BOND BREAKER

DOWEL BAR

EXPANSION CAP ON ALTERNATION FREE ENDS. OPPOSITE FIXED ENDS DO NOT TAP EXPANSION CAPS ONTO DOWELS

CORROSION RESISTANT EPOXY COATING

KEYWAY DETAIL

LONGITUDINAL JOINT WITH KEYWAY

(OPTIONAL FOR 29 INCHES ONLY)

NOTE:

USE OF OPTIONAL KEYWAY MAY BE REVOKED BY THE ENGINEER AT ANY TIME DUE TO QUALITY CONTROL ISSUES WITH MAINTAINING PLACEMENT REQUIREMENTS WITHIN ±1/16 INCH VERTICALLY.

X = 1.5"
Y = 2.5"

(TIE BAR OMITTED FOR CLARITY)

REF STD SPEC SEC 5-05
NOTES:
1. PLACE WIRE MESH AT 3/4 DEPTH OF CEMENT CONCRETE.
2. THE DIMENSIONS OF THE MESH SHALL BE ADJUSTED WHERE PAVEMENT JOINTS ARE ENCOUNTERED.
3. NO REINFORCING STEEL SHALL BE WITHIN 2½ INCHES OF ANY CEMENT CONCRETE SURFACE OR JOINT.

REFERENCES:
1. FRAME & COVER CEMENT CONCRETE REINFORCEMENT DETAIL
2. CITY OF SEATTLE
3. 2014 EDITION CITY OF SEATTLE STANDARD PLANS FOR MUNICIPAL CONSTRUCTION
NOTES:
1. "H" SHALL BE 6" FROM FINISHED ROADWAY GRADE UNLESS OTHERWISE SHOWN ON DRAWINGS.
2. GUTTER SHALL BE SLOPED THE SAME AS ADJACENT PAVEMENT OR 2% MIN, WHICEVER IS GREATER.
3. SEE STD PLAN NO 411 FOR CURB DOWELS

REF STD SPEC SEC 8-04

CONTRACTION JOINT FOR CURB OR CURB & GUTTER

NOTE:
JOINT AND JOINT FILLER FOR CURB OR FOR CURB & GUTTER,
MATCHING PAVEMENT JOINT

THROUGH JOINT FOR CURB OR CURB & GUTTER

NOTE:
JOINT AND JOINT FILLER FOR CURB OR FOR CURB & GUTTER,
MATCHING PAVEMENT JOINT

DOWELS FOR DOWELLED CURB CONSTRUCTION

REF STD SPEC SEC 8-04

City of Seattle  NOT TO SCALE  CURB JOINTS & DOWELS

EXTRUDED ASPHALT CONCRETE CURB

EXTRUDED CEMENT CONCRETE CURB

NOTE:
ALTERNATELY, THE USE OF EPOXY BONDING AGENT, IN PLACE OF #3 DEFORMED BARS, WILL BE ALLOWED.

REF STD SPEC SEC 8-06
8" STRAIGHT BLOCK CURB
(SINGLE SLOPED)

PLAN

SECTION F–F

RADIAL CURB

SECTION G–G

RADIUS CURB TABLE

FOR RADI Greater THAN 10'-0" USE SEGMENTS OF STRAIGHT BLOCK CURB

REF STD SPEC SEC 8-07

City of Seattle  NOT TO SCALE  8" BLOCK AND RADIAL TRAFFIC CURB

TYPICAL SIDEWALK & CURB RAMP DETAIL

NOTES:
1. ¾" THROUGH AND CONTRACTION JOINTS SHALL BE LOCATED AS REQUIRED BY SECTION 8-14.3(6).
2. "V" GROOVE SCORING SHALL MATCH PATTERN IN ADJACENT EXISTING SIDEWALK OR SHALL BE A 2" SQUARE SCORING PATTERN UNLESS OTHERWISE APPROVED BY THE ENGINEER.
3. FOR CURB RAMPS, SEE STANDARD PLAN NO 422.
4. FOR TREE PITS, SEE STANDARD PLAN NO 424.
5. 12" MINIMUM BETWEEN EDGE OF RAMPS AND PLANTING STRIP IS DESIRABLE.
6. ALL SIDEWALK SHALL BE NON-ROADWAY CEM CONC W/ 25% POZZOLANS.

REF STD SPEC SEC 8-14
NOTE:
"H" shall be 6" from finished roadway grade unless otherwise specified.
NOTES:
1. TYPE 422A PERPENDICULAR CURB RAMP SHALL BE USED UNLESS OTHERWISE DIRECTED BY ENGINEER.
2. TWO CURB RAMPS SHALL BE INSTALLED AT EACH CORNER UNLESS OTHERWISE DIRECTED BY ENGINEER. RECOMMENDED MINIMUM DISTANCE BETWEEN TWO ADJACENT CURB RAMPS SHALL BE 3'-0". WHERE SPACE IS RESTRICTED THE MINIMUM DISTANCE BETWEEN TWO ADJACENT CURB RAMPS MAY BE REDUCED TO 1'-0".
3. CURB RAMP SHALL BE CONSTRUCTED WITH COMPANION RAMP ON OPPOSITE SIDE OF THE ROADWAY UNLESS OTHERWISE DIRECTED BY ENGINEER.
4. RAMP CENTERLINE SHALL BE RADIAL/PERPENDICULAR TO THE ALIGNMENT OF THE FACE OF CURB. RAMP SHALL HAVE A MAXIMUM SLOPE 1:12H:1V. AND A MINIMUM WIDTH OF 4'-0". THE CROSS SLOPE OF THE RAMP SHALL BE MAXIMUM OF 50H:1V. RAMP SURFACE SHALL HAVE A HEAVY BROOM BRUSHED SURFACE PARALLEL TO THE CURB. MAXIMUM RAMP LENGTH SHALL BE 15 FEET.
5. DETECTABLE WARNING SIGN SHALL HAVE A TRUNCATED DOME PATTERN AS SHOWN, A MINIMUM WIDTH OF 2'-0" AND SHALL BE PLACED AT THE RAMP BOTTOM STARTING AT THE BACK OF CURB. DETECTABLE WARNING COLOR SHALL BE "FEDERAL SAFETY YELLOW" UNLESS OTHERWISE DIRECTED.
6. UPPER LANDING SHALL BE FULL WIDTH OF THE RAMP AND SHALL HAVE A MINIMUM DEPTH OF 4'-0". SLOPE ON THE UPPER LANDING SHALL BE BETWEEN 0.5% AND 2% AVOID PLACING HANDHOLES, UTILITY CASTINGS OR OTHER OBSTRUCTIONS IN THE UPPER LANDING.
7. LOWER LANDING SHALL BE FULL WIDTH OF THE RAMP AND SHALL EXTEND A MINIMUM 4'-0" BEYOND DETECTABLE WARNING. THE LOWER LANDING SHALL BE THE WIDTH OF THE RAMP AND FALL WOOLLY WITHIN THE LEGAL CROSSWALK, MARKED OR UNMARKED. SLOPE ON THE LOWER LANDING SHALL BE BETWEEN 0.5% AND 2%. GUTTER FLOW LINE SHALL BE SURVEYED BY THE CONTRACTOR PRIOR TO CONSTRUCTION TO ENSURE PONDING OF WATER SHALL NOT OCCUR ON THE LOWER LANDING.
8. WINGS SHALL HAVE A MAXIMUM SLOPE OF 10H:1V. IF UPPER LANDING HAS A DEPTH LESS THAN 4'-0", THE MAXIMUM SLOPE FOR THE WINGS SHALL BE 10H:1V. WINGS SHALL HAVE A BRUSHED FINISH. PARALLEL TO THE CURB. THE CONCRETE WALK THICKENED EDGE ALONG THE CURB SHALL CONTINUE THROUGH EACH WING.
9. POLES, HYDRANTS AND OTHER ABOVE GROUND OBSTRUCTIONS SHALL HAVE A MINIMUM LATERAL CLEARANCE OF 1'-0" FROM THE UPPER LANDING AND RAMP SURFACE.
10. ALL CHANGES IN LEVEL ACROSS JOINTS SHALL BE FLUSH. ANY DIFFERENCE IN ELEVATION OF 3/8 INCH OR GREATER SHALL BE REPAIRED OR REPLACED.
11. ALL SLOPE GRADES SHALL BE MEASURED OFF THE HORIZON-LINE. IF EXISTING SITE CONDITIONS CONFLICT WITH OBTAINING GRADES SHOWN, THE DESIGNER / CONTRACTOR SHALL MAKE MINIMUM ADJUSTMENTS TO THE GRADES SHOWN TO MEET EXISTING SITE CONDITIONS; ADJUSTMENTS ARE SUBJECT TO ENGINEER APPROVAL.

REF STD SPEC SEC 8-14

RAMP SURFACE SHALL HAVE A HEAVY BROOM BRUSHED SURFACE PERPENDICULAR TO CURB.
FOR SCORING, SEE STANDARD PLAN NO 420.

FLUSH

Detector WARNING
(SEE STD PLAN 422a FOR DETAILS)

A  B

THROUGH JOINT

12:1 MAX SLOPE
3'-0" MIN
5'-0" MIN
12:1 MAX SLOPE
3'-0" MIN
15'-0" MAX
15'-0" MAX

PARALLEL CURB RAMP
(TYPE 422b)

USE PARALLEL CURB RAMPS ONLY WHEN SHOWN IN DRAWINGS OR WITH APPROVAL OF ENGINEER.
PARALLEL CURB RAMPS MAY ALSO BE USED ON CURVES; ALL REQUIREMENTS SHALL APPLY.

SECTION A-A
CURB MONOLITHIC WITH RAMP
NEW PAVEMENT BLOCKED OUT FULL DEPTH EXISTING PAVEMENT REMOVED AT FACE OF CURB

SECTION B-B
NON CURB & GUTTER

SECTION A-A
DEPRESSED CURB & GUTTER SEPARATE FROM RAMP

SECTION B-B
WITH CURB & GUTTER

REF STD SPEC SEC 8-14

City of Seattle
NOT TO SCALE
CURB RAMP DETAILS

SEE STD PLAN NO 422a FOR NOTES

CURB RAMP LOCATIONS

SAW CUT IF EXISTING PAVEMENT (TYP.)

PROVIDE BOND BREAKER (UNLESS ASPHALT SURFACING)

12:1 MAX SLOPE

THROUGH JOINT

DETECTABLE WARNING

SILK WALK

SECTION A—A

DEPRESSED CURB & GUTTER SEPARATE FROM RAMP.

PROVIDE BOND BREAKER (UNLESS ASPHALT SURFACING)

6"

THROUGH JOINT

PAVEMENT

1'-6"

THROUGH JOINT

SIDWALK

SECTION B—B

PAVEMENT

CURB AND GUTTER STD PLAN 410B,
WITH VARYING CURB HEIGHT

THROUGH JOINT

CURB AND GUTTER SECTIION PAID SEPARATELY

PERPENDICULAR CURB RAMP
(TYPE 422A WITH CURB AND GUTTER)

NOTES:
1. FOR DETECTABLE WARNING PLATE/TRUNCATED DOMES DETAILS, SEE STANDARD PLAN NO 422a.
2. FOR NOTES AND DETAILS NOT SHOWN, SEE STANDARD PLAN NO 422a.

PERPENDICULAR CURB RAMP PAYMENT LIMIT
ISOMETRIC VIEW

REF STD SPEC SEC 8-14

City of Seattle

NOT TO SCALE

CURB RAMP DETAILS

TYPE A

ROOT BARRIER AT OUTSIDE EDGE OF EXPANDABLE TREE PIT (TYP) — FOR NEW TREE INSTALLATIONS ONLY

THROUGH JOINTS (TYP)

14'

12'

1'

4'

EX CONC CURB 6" (TYP)

SIDEWALK, NON-ROADWAY CEM CONC W/ 25% POZZOLANS

TREE PIT 8'

TYPE B

ROOT BARRIER AT OUTSIDE EDGE OF EXPANDABLE TREE PIT (TYP) — FOR NEW TREE INSTALLATIONS ONLY

THROUGH JOINT THROUGH SIDEWALK

1'-0"

6'-0"

2'

10'-0"

SIDEWALK, NON-ROADWAY CEM CONC W/ 25% POZZOLANS

CURB CEM CONC

THROUGH JOINT (TYP)

NOTES:
1. SEE STD PLAN 420 FOR CW SCORING DETAILS.
2. INSTALL ROOT BARRIER PER STANDARD PLAN NO 100a.

REF STD SPEC SEC 8-02 & 8-14

City of Seattle

For additional sidewalk scoring requirements, see Std Plan No 420.

**Type C**

Tree pit dimensional requirements:
- 24 sq ft min tree pit size
- 6'-0" min rec'd between tree & face of curb
- 3'-0" min rec'd between tree & conc sidewalk
- 5'-6" min conc walking surface

**NOTES:**
1. Installations requiring less than standard min. clearances shall be allowed only with approval by the Engineer.
2. Install root barrier as noted. See standard plan no 100a.
3. See Std Plan No 420 for Cw scoring details.
PERVIOUS CONCRETE SIDEWALK DEPTH TRANSITION AT DRIVEWAYS PROFILE VIEW

APPLY SEPARATION GEOTEXTILE SEC. 9-37, ON BOTTOM AND SIDES. EXTEND GEOTEXTILE ABOVE PERVIOUS CONCRETE FOR SIDEWALK PAVEMENT. AFTER PAVEMENT HAS CURED AND ADJACENT FINISHED GRADE HAS BEEN STABILIZED, CUT SEPARATION GEOTEXTILE AT FINISHED GRADE (TYP.).

PERVIOUS CONCRETE SECTION A

NOTES:
1. DEPTHS SHOWN FOR PAVEMENT SECTIONS ARE COMPACTED DEPTH.
2. SIDEWALK DEPTH AT DRIVEWAY TO MATCH DRIVEWAY PAVEMENT DEPTH.
3. DEPTH OF PERVIOUS CEMENT CONCRETE FOR DRIVEWAYS SHALL BE 6" MIN.
4. 5% MAX. PERVIOUS CEMENT CONCRETE PROFILE GRADE.

HOT MIX ASPHALT PAVEMENT SIDEWALK SECTION

CONCRETE PAVER SIDEWALK SECTION

REF STD SPEC SEC 5-04, 5-06

City of Seattle

NOT TO SCALE

ALTERNATIVE WALKWAYS

NOTES:
1. TYPE 430A SHALL BE USED UNLESS OTHERWISE DIRECTED BY ENGINEER. USE OF DRIVEWAY TYPE 430B IS SUBJECT TO ENGINEER APPROVAL.
2. DRIVEWAYS SHALL BE NON-ROADWAY CEM. CONC. HIGH STRENGTH.
3. WING WIDTH ON ARTERIAL STREETS WHERE TRAVEL LANE IS NEXT TO THE CURB SHALL BE 9'-0". OTHERWISE, WING WIDTH SHALL BE 2'-6".
4. "V" GROOVE SCORING SHALL MATCH PATTERN IN ADJACENT EXISTING SIDEWALK.
5. FOR CONCRETE DRIVEWAY CONSTRUCTED WITH CONCRETE SIDEWALK, SEE STANDARD PLAN NO 431.
6. CONCRETE DRIVEWAYS WITH A WIDTH GREATER THAN 15'-0" SHALL HAVE A 3/8" TRANSVERSE CONTRACTION JOINT NEAR THE CENTERLINE OF DRIVEWAY. SEE DETAIL SECTION C-C STANDARD PLAN NO 420.
7. FOR TYPE 430A SLOPE IN THE 6'-0" MINIMUM WIDE AREA CONNECTING TO CW ON EACH SIDE OF THE DRIVEWAY SHALL BE MAXIMUM 2% AND MINIMUM 0.5%. FOR TYPE 430B, SLOPE OF THE DRIVEWAY BETWEEN THE TWO RAMP SECTIONS SHALL BE MAXIMUM 2% AND MINIMUM 0.5%. DRIVEWAY ON THE PRIVATE SIDE OF THE CW MAY BE SLOPED AS NEEDED TO MATCH EXISTING SITE CONDITIONS.
8. RAMP SHALL HAVE A MAXIMUM SLOPE 12H:1V, AND A MINIMUM WIDTH OF 6'-0". THE CROSS SLOPE OF THE RAMP SHALL BE MAXIMUM 50H:1V. RAMP SURFACE SHALL HAVE A HEAVY BROOM BRUSHED SURFACE PERPENDICULAR TO THE CURB.
9. ALL CHANGES IN LEVEL ACROSS JOINTS SHALL BE FLUSH WITH A MAXIMUM DIFFERENCE IN ELEVATION OF 3/4 INCH.
10. ALL SLOPE GRADES SHALL BE MEASURED OFF THE HORIZON-LINE. IF EXISTING SITE CONDITIONS CONFLICT WITH OBTAINING GRADES SHOWN, THE CONTRACTOR SHALL MAKE MINIMUM ADJUSTMENTS TO THE GRADES TO ACCOMMODATE EXISTING SITE CONDITIONS, ADJUSTMENTS ARE SUBJECT TO ENGINEER APPROVAL.

NOTES:
1. DRIVEWAY WIDTH GREATER THAN 15'-0" AND LESS THAN OR EQUAL TO 30' SHALL HAVE TRANSVERSE CONSTRUCTION JOINTS AT ITS CENTER.
2. DRIVEWAY GREATER THAN 30'-0" REQUIRE SDOT APPROVAL AND SHALL HAVE TRANSVERSE CONTRACTION JOINTS EVENLY PLACED SO THE DISTANCE BETWEEN CONTRACTION JOINTS, OR BETWEEN THE EDGE THROUGH JOINTS AND CONTRACTION JOINTS IS NOT GREATER THAN 15'-0".
3. PROVIDE SCORE LINES PER STD PLAN NO 420 AND THE DRAWINGS.

SECTION A-A
* UNLESS OTHERWISE APPROVED BY SDOT.

REF STD SPEC SEC 8-14 & 8-19

City of Seattle  NOT TO SCALE  CEMENT CONCRETE DRIVEWAY PLACED WITH CEMENT CONCRETE SIDEWALK

MULTI PURPOSE TRAIL AT ARTERIAL STREET W/BULB-OUT (TYP)

NOTES:
1. FOR CURB RAMP AND DETECTABLE WARNING DETAILS SEE STANDARD PLAN NO 422.
2. FOR CROSSWALK DETAILS SEE STANDARD PLAN NO 712.
3. FOR BOLLARD DETAIL SEE STANDARD PLAN NO 403.
4. ASPHALT TRAIL CROSS SLOPE MINIMUM 1%, MAXIMUM 2%.
5. CEMENT CONCRETE WARNING PAD THICKNESS TO MATCH ASPHALT THICKNESS OR MINIMUM 6" THICK WHICHEVER IS GREATER.
6. CRUSHED ROCK ON EDGE OF TRAIL AS NEEDED TO DISBURSE DRAINAGE FLOW.
7. ALL CHANGES IN LEVEL ACROSS JOINTS SHALL BE FLUSH WITH A MAXIMUM DIFFERENCE IN ELEVATION OF $\frac{3}{8}$ INCH.
8. ALL SLOPE GRADES SHALL BE MEASURED OFF THE HORIZON-LINE IF EXISTING SITE CONDITIONS CONFLICT WITH OBTAINING GRADES SHOWN, THE CONTRACTOR SHALL MAKE MINIMUM ADJUSTMENTS TO THE GRADES TO ACCOMMEDIATE EXISTING SITE CONDITIONS. ADJUSTMENTS ARE SUBJECT TO APPROVAL BY THE ENGINEER.
9. ALL CEMENT CONCRETE WARNING PADS SHALL BE BRUSHED FINISHED AND $\frac{1}{8}$" GROOVED TO MATCH PATTERN IN ADJACENT OR NEARBY SIDEWALKS.

CEM CONC WARNING PAD

400 STREET PAVING & APPURTENANCES

STANDARD PLAN NO 432b

REF STD SPEC SEC

City of Seattle

NOT TO SCALE

MULTI-PURPOSE TRAIL AT STREET CROSSING

NOTES:
1. FLIGHTS OF STAIRS SHALL HAVE MAX VERTICAL RISE OF 12' BEFORE A LANDING.
2. AVOID FEWER THAN 2 RISERS PER FLIGHT.
3. STEPS IN FLIGHT MUST HAVE UNIFORM TREAD RUNS AND UNIFORM RISER HEIGHTS
   WITH TOLERANCE OF ±3/8".
4. TREADS SHALL BE 11"MIN, 12"MAX. RISERS SHALL BE 5"MIN, 7"MAX.
5. LANDING BETWEEN FLIGHTS OF RISERS MUST HAVE SAME WIDTH AS STEPS AND A
   MIN LENGTH OF 4'-0".
6. FLIGHTS OF 2' OR MORE STEPS SHALL HAVE HANDRAILS ON BOTH SIDES.
7. HANDRAILS SHALL BE CONTINUOUS ACROSS LANDINGS BETWEEN FLIGHTS OF STEPS.
8. HANDRAILS SHALL BE GALVANIZED AFTER FABRICATION.
9. PIPE MATERIAL SHALL BE ASTM A53.
10. REINFORCING STEEL SHALL BE ASTM A615 OR 60.
11. FOR FORMAL DRAINAGE PICK-UP SEE DETAIL B ON STD PLAN NO 440b (THIS IS
    OPTIONAL AND MUST BE CALLED OUT ON DRAWINGS).
12. PIPE DIAMETERS SHOWN ARE "NOMINAL" DIAMETERS AS GIVEN IN AMERICAN
    INSTITUTE OF STEEL CONSTRUCTION MANUAL.
13. CONCRETE CLASS C30/300.
14. LANDINGS SHALL BE 0.50MIN FOR A MIN OF 4", ADJACENT SIDE WALK MAY BE
    PART OF LANDING IF SLOPE CRITERIA AND SETBACKS FROM HANDRAILS ARE MET.
15. TREAD SURFACE SHALL HAVE GROOVES AT THE NOSE FOR TRACTION.
16. IF LANDINGS IS ELEVATED, LANDINGS SHALL HAVE GUARDRAIL.
17. STAIRWAYS DEVIATING FROM STANDARD PLAN TO ACCOMMODATE CYCLE FEATURES
    MAY BE USED UPON REVIEW.
18. BOTTOM LANDING DIMENSION FROM THE RAILING TO THE NOSE OF THE TREAD
    SHALL BE 2'-0"MIN + 1 TREAD WIDTH.
NOTES:
1. CEMENT CONCRETE SHALL BE CL 3000 TROWEL FINISH
2. NUMBER OF STEPS SHALL SUIT INDIVIDUAL CONDITIONS WITH UNIFORM TREAD AND RISER DIMENSIONS AS FOLLOWS:
   TREADS SHALL BE 11" MIN - 12" MAX
   RISERS SHALL BE 5" MIN - 7" MAX
3. STEP WIDTH SHALL MATCH WIDTH OF EXISTING WALK, BUT SHALL BE NO LESS THAN 2'-6" WIDE
4. ALL STAIRWAYS WITH 2 OR MORE STEPS SHALL INCLUDE A HANDRAIL ON BOTH SIDES. SEE STD PLAN NO 440
5. REINFORCING STEEL ASTM A 615 GR60
6. TREAD SLOPES OUTWARD @ 1%
NOTES:
1. RAILING SHALL BE HOT DIP GALVANIZED AFTER FABRICATION
2. ALL POSTS SHALL BE PLUMS AND RAILS PARALLEL TO THE GROUND
3. PIPE MATERIAL SHALL CONFORM TO ASTM A 53
4. REINFORCING STEEL ASTM A 706 GR 60
5. IF THE CONCRETE WALK SLOPE IS 5% OR GREATER A GRIPPING HANDRAIL IS REQUIRED
6. PIPE DIAMETERS SHOWN ARE "NOMINAL" DIAMETERS AS GIVEN IN AMERICAN INSTITUTE OF STEEL CONSTRUCTION MANUAL

SECTION A--A

DETAIL A

#4 REINFORCING U-BAR AT EACH POST
SEE DETAIL BELOW
4" 16GA GALV STEEL SLEEVE (TYP)
NON-SHRINK GROUT

MOUND FOR DRAINAGE (TYP)

SECTION B--B

DETAIL C

GRIFFING HANDRAIL (1/4" STD STEEL PIPE) SEE NOTE 5

SECTION C--C

DETIAL B

GRIFFING HANDRAIL (1/4" STD STEEL PIPE) SEE NOTE 5

REF STD SPEC SEC 8-14 & 8-18

NOTES:
1. RAILING SHALL BE HOT DIP GALVANIZED AFTER FABRICATION
2. ALL POSTS AND BALUSTERS SHALL BE PLUMB AND RAILS PARALLEL TO GRADE
3. PIPE MATERIAL SHALL CONFORM TO ASTM A53
4. REINFORCING STEEL ASTM A706 OR 80
5. IF THE CONCRETE WALK SLOPE IS 5% OR GREATER A GRIPPING HANDRAIL IS REQUIRED
6. PIPE DIAMETERS SHOWN ARE "NOMINAL" DIAMETERS AS GIVEN IN AMERICAN INSTITUTE OF STEEL CONSTRUCTION MANUAL

SECTION A-A
ROLL FORMED SECTIONS

**MEMBER**

<table>
<thead>
<tr>
<th>TYPE</th>
<th>BRACE RAIL &amp; TOP RAIL</th>
<th>LINE &amp; BRACE POST</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ROUND</td>
<td>H-COLUMN</td>
</tr>
<tr>
<td></td>
<td>ID PIPE INCHES</td>
<td>WEIGHT PER FT POUNDS</td>
</tr>
<tr>
<td>1</td>
<td>1.25</td>
<td>1.35</td>
</tr>
<tr>
<td>3</td>
<td>2.27</td>
<td></td>
</tr>
</tbody>
</table>

**MEMBER**

<table>
<thead>
<tr>
<th>TYPE</th>
<th>END, CORNER &amp; PULL POSTS</th>
<th>GATE POST ROUND</th>
<th>ALL POSTS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ROUND</td>
<td>H-COLUMN</td>
<td>ROUND</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>5.79</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>2</td>
<td>3.65</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>2</td>
<td>3.65</td>
<td>3</td>
</tr>
<tr>
<td>6</td>
<td>2</td>
<td>5.79</td>
<td>3</td>
</tr>
</tbody>
</table>

**NOTES**:  
1. ALL CONCRETE POST BASES SHALL BE 10" MINIMUM DIAMETER, CL3000  
2. POSTS SHALL BE SPACED AT 10'-0" MAXIMUM INTERVALS UNLESS OTHERWISE DIRECTED BY THE ENGINEER  
3. TOP OR BOTTOM TENSION WIRES SHALL BE PLACED WITHIN THE LIMITS OF THE FIRST FULL FABRIC WEAVE  
4. THE ILLUSTRATIVE DETAIL SHOWN HEREON SHALL NOT BE CONSTRUED AS LIMITING TO HARDWARE DESIGN OR POST SELECTION FOR ANY PARTICULAR FENCE TYPE  
5. CONCRETE OR GROUT AROUND POST AT GROUND LINE SHALL BE MOUNTED FOR DRAINAGE  

REF STD SPEC SEC 8-12

City of Seattle

NOT TO SCALE

CHAIN LINK FENCE

NOTES:
1. FENCE FABRIC SHALL BE SECURED TO GATE FRAMES WITH KNUCKLED SELVAGE ALONG TOP EDGE FOR TYPES 4&6 CHAIN LINK FENCE INSTALLATIONS
2. MINIMUM POST LENGTH:
   TYPES 1&3: 8'-0"
   TYPES 4&6: 6'-0"
3. CONCRETE OR GROUT AROUND POST AT GROUND LINE SHALL BE MOUNDED FOR DRAINAGE

REF STD SPEC SEC 8-12

City of Seattle NOT TO SCALE CHAIN LINK GATES

NOTES:
1. IF THE SLOPE OF THE TEMPORARY CROSSING IS 5% OR GREATER, A GRIPPING HANDRAIL SHALL BE ADDED THAT COMPLIES WITH ADA STANDARDS.
2. ENDS OF THE TEMPORARY CROSSING SHALL BE SLOPED TO ALLOW ADA ACCESS.
3. SURFACE OF WALKWAY SHALL BE SKID RESISTANT.
4. THE RAMP SHALL BE CONSTRUCTED OF TEMPORARY PAVEMENT OR COMPACTED GRAVEL EMBANKMENT OR AS APPROVED BY ENGINEER.
5. THE TEMPORARY WALKWAY COULD BE RECESSED FOR THE WALKING SURFACE TO BE FLUSH WITH ADJACENT GRADE.

SECTION A-A
* UNLESS APPROVED BY SEATTLE DEPARTMENT OF TRANSPORTATION

TABLE

<table>
<thead>
<tr>
<th>BRIDGE LENGTH</th>
<th>PLANK SIZE</th>
<th>NAIL SIZE</th>
</tr>
</thead>
<tbody>
<tr>
<td>10'-0&quot; OR LESS</td>
<td>2&quot;X12&quot;</td>
<td>20 PENNY</td>
</tr>
<tr>
<td>11'-0&quot; TO 14'-0&quot;</td>
<td>3&quot;X12&quot;</td>
<td>40 PENNY</td>
</tr>
<tr>
<td>15'-0&quot; TO 20'-0&quot;</td>
<td>4&quot;X12&quot;</td>
<td>60 PENNY</td>
</tr>
</tbody>
</table>

LUMBER: DOUGLAS FIR #2 OR BETTER
POST & RAILS S4S
PLANKS - ROUGH