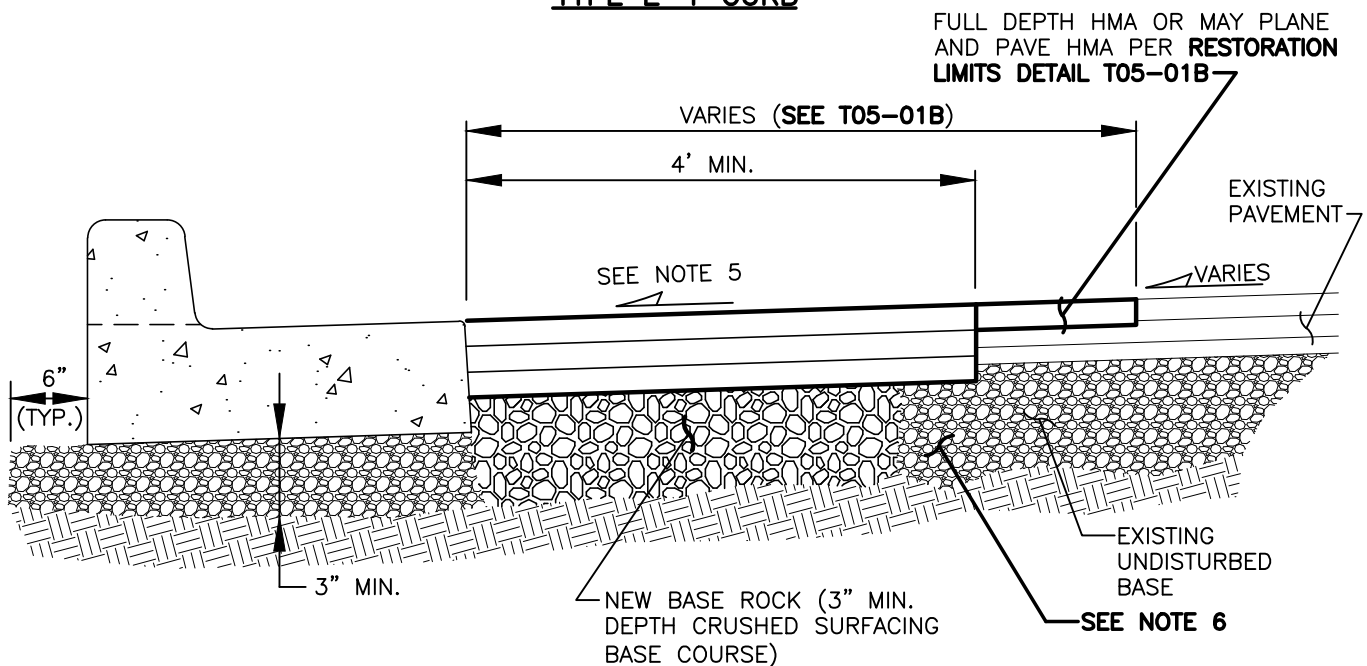


TYPE E-1 CURB



TYPE A-1 CURB AND GUTTER

NOTES:

1. SEE **CONCRETE CURBS DETAIL T01-01A** FOR CURBS.
2. SEE **STANDARD TRENCH RESTORATION NOTES (PAGE 1 OF 2) T05-04A** FOR HMA AND BASE ROCK THICKNESS CHARTS. MINIMUM LIFT THICKNESS SHALL BE 0.15'. MAXIMUM LIFT THICKNESS SHALL BE 0.35' FOR BASE COURSES AND 0.25' FOR WEARING COURSE.
3. THE EDGES OF ALL EXISTING ASPHALT SURFACES SHALL BE CLEANED AND A TACK COAT SHALL BE APPLIED PER THE STANDARD SPECIFICATIONS. ALL JOINTS SHALL BE SEALED WITH HEATED PAVING ASPHALT AND SANDED DAY OF PAVING.
4. COMPACT SUBGRADE AND CRUSHED SURFACING BASE COURSE TO 95% MAXIMUM DRY DENSITY (3" MIN. DEPTH).
5. MATCH EXISTING PAVEMENT CROSS SLOPE FROM CENTERLINE. SLOPES STEEPER THAN 4% WILL NOT BE ALLOWED WITHOUT SPECIFIC CITY APPROVAL.
6. SAWCUT AND REMOVE THE FULL EXISTING DEPTH OF ASPHALT A MIN. OF 6" OUT FROM THE NEW BASE ROCK SECTION. THIS REMOVAL MAY BE EXTENDED OUT TO THE LANE LINE INSTEAD OF PLANING.

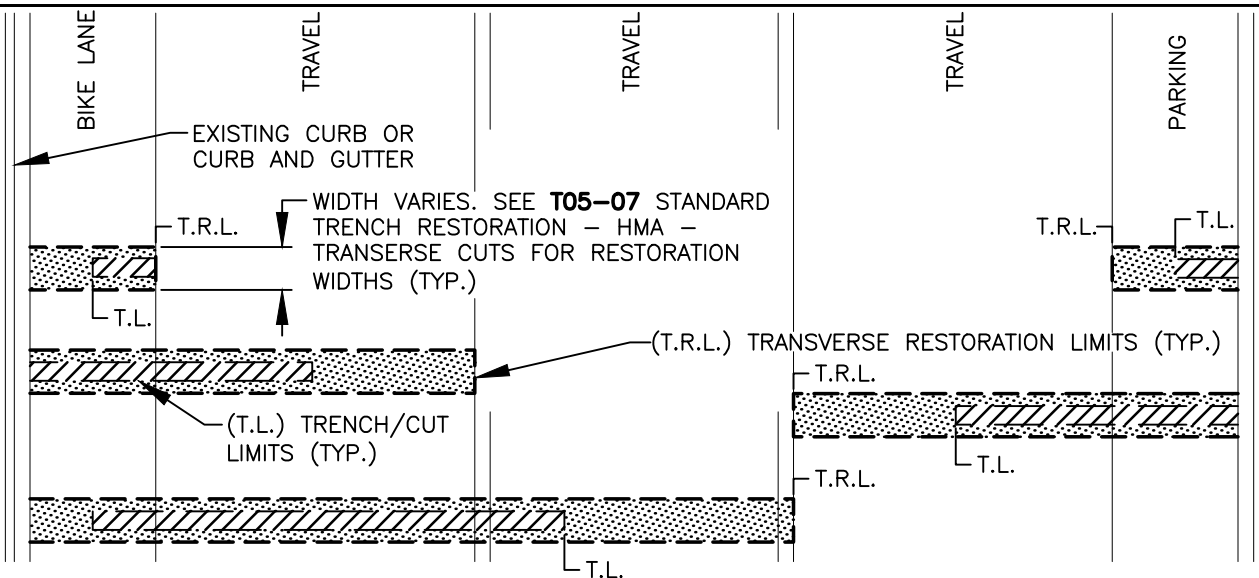
PAVEMENT RESTORATION / WIDENING AT CURBS



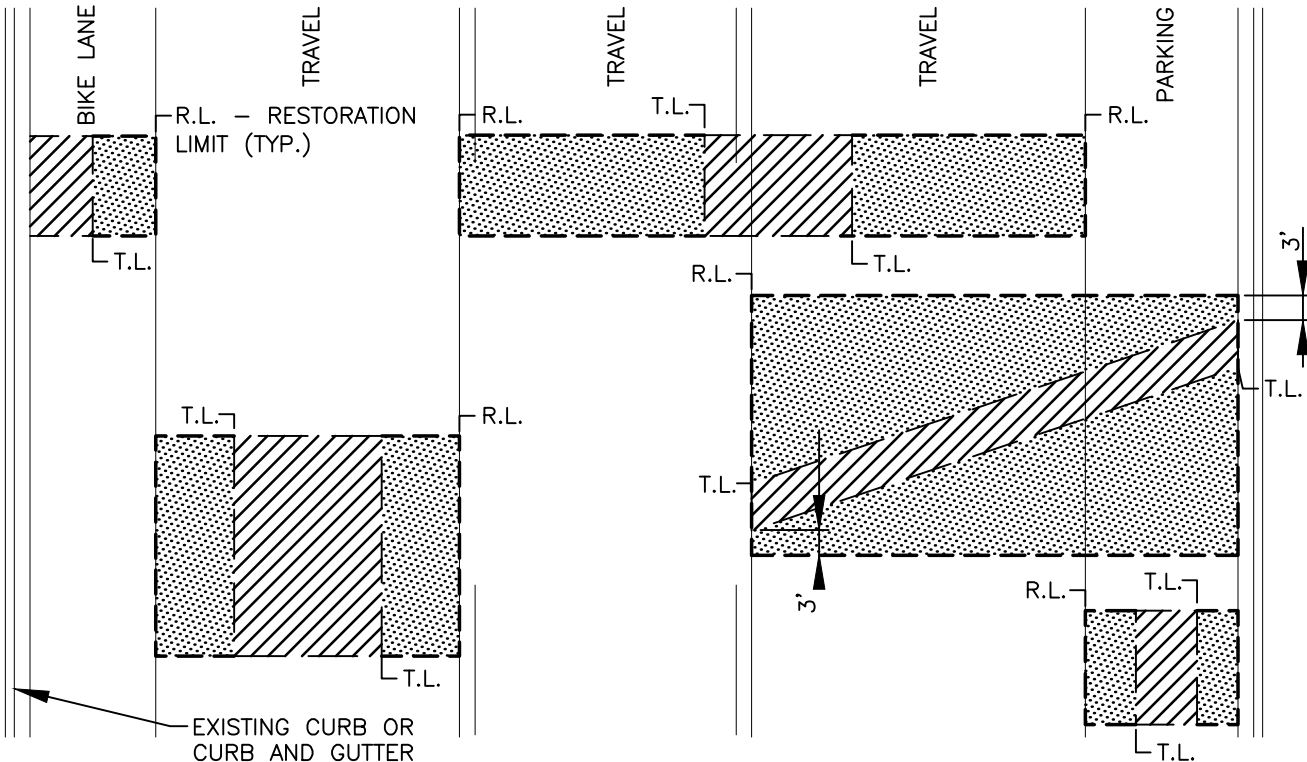
CITY OF VANCOUVER
DEPARTMENT OF PUBLIC WORKS
TRANSPORTATION DIVISION

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CDC	<i>M.H.H.</i>	8/04
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STD. PLAN NO.
T05-01A



TRANSVERSE CUTS



LONGITUDINAL CUTS

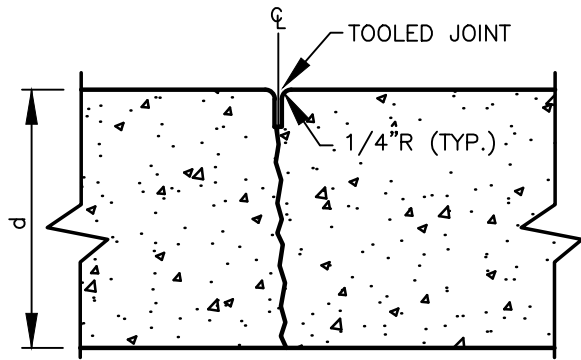
NOTES:

1. APPLIES TO ARTERIALS, COLLECTOR ARTERIALS, INDUSTRIAL STREETS AND STREETS IN THE CX ZONE. IT WILL BE REQUIRED ON RESIDENTIAL STREETS WITH A PCI LESS THAN 50 OR GREATER THAN 70 OR AS DIRECTED BY THE ENGINEER.
2. AREAS OUTSIDE OF T-CUT OF TRENCH OR OTHER STREET CUTS SHALL BE PLANED AND PAVED TO NEAREST LANE LINE REGARDLESS OF WHERE CUT FALLS WITHIN THE LANE. DEPTH OF PLANE AND INLAY TO MATCH DEPTH OF EXISTING TOP LIFT PLUS 1/4". DEPTH TO BE NO LESS THAN 0.25' OR AS DIRECTED BY ENGINEER.
3. THE RESTORATION REQUIREMENTS SHOWN ARE MINIMUMS. ADDITIONAL RESTORATION MAY BE REQUIRED BY THE ENGINEER. FULL DEPTH REMOVAL AND REPLACEMENT OF ACP IN LIEU OF GRIND MAY BE ALLOWED PER DIRECTION OF ENGINEER.
4. NO REMNANT ASPHALT 4' OR LESS PER NOTE 5 ON **STANDARD TRENCH RESTORATION - NOTES T05-04A.**

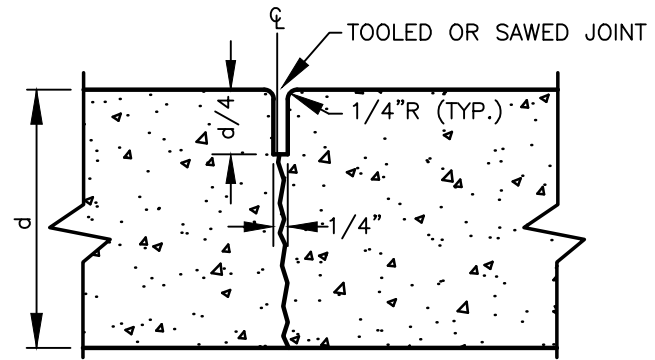
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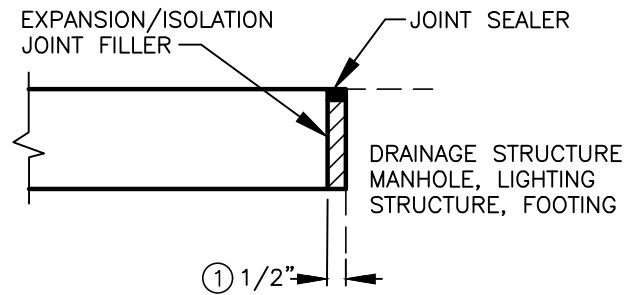
PAVEMENT RESTORATION LIMITS			STD. PLAN NO. T05-01B
CITY OF VANCOUVER DEPARTMENT OF PUBLIC WORKS TRANSPORTATION DIVISION			
DRAWN BY CDC	APPROVED BY <i>M.H.H.</i>	APPROVAL DATE 8/08	
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SURFACE JOINT

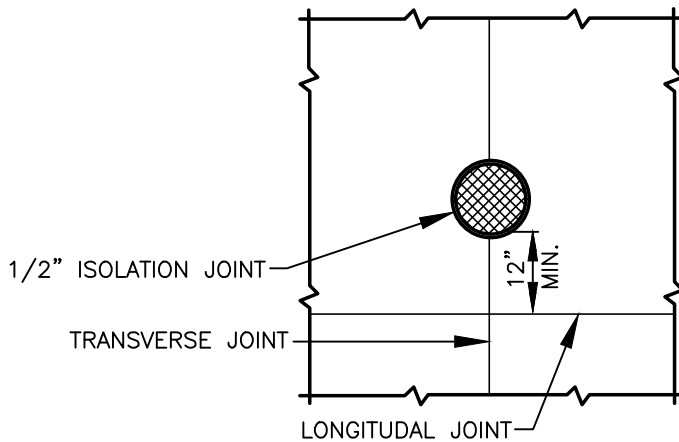


CONTRACTION JOINT

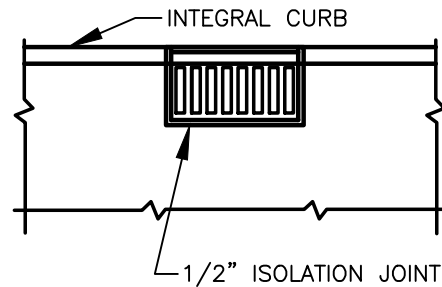


EXPANSION/ISOLATION JOINT DETAIL

- ① 3/8" JOINT FILLER FOR SIDEWALKS, ADA RAMPS, AND DRIVEWAYS



MANHOLES



CATCH BASINS

NOTES:

1. CONTRACTION JOINTS MAY BE USED IN PLACE OF SURFACE JOINTS.
2. CONSTRUCTION COLD JOINTS MAY BE USED IN PLACE OF CONTRACTION JOINTS.
3. CONCRETE PAVEMENT LOAD TRANSFER REQUIREMENTS ACROSS JOINTS SHALL BE DETERMINED BY PCC PAVEMENT DESIGN.
4. PARALLEL JOINTS SHALL BE SEPARATED BY A MINIMUM OF 2'.

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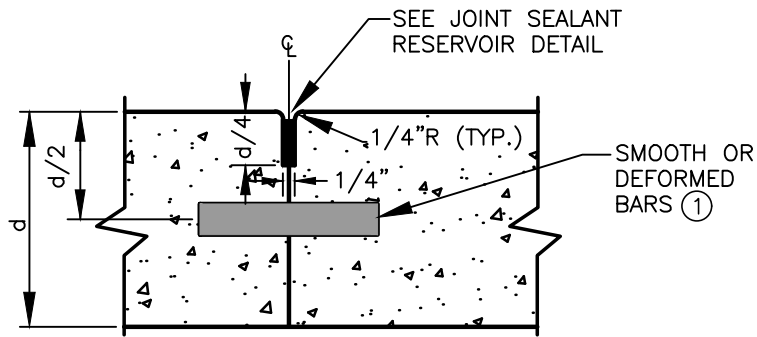


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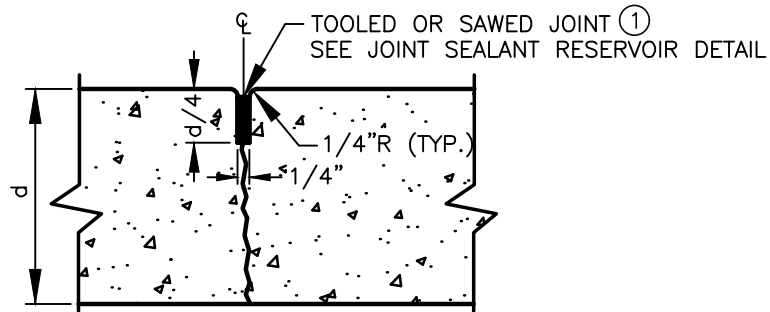
CONCRETE JOINTS

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7	<i>M.H.H.</i>	3/24

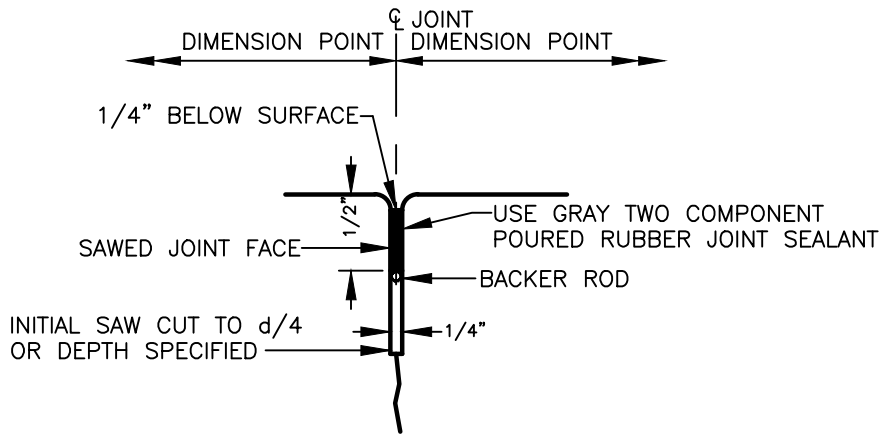
STD. PLAN NO.
T05-02



**FIXED AND WORKING
CONSTRUCTION JOINT DETAIL**



SEALED CONTRACTION JOINT



JOINT SEALANT RESERVOIR

NOTE:

- ① CONCRETE PAVEMENT LOAD TRANSFER REQUIREMENTS ACROSS JOINTS SHALL BE DETERMINED BY PCC PAVEMENT DESIGN.

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CITY OF VANCOUVER
DEPARTMENT OF PUBLIC WORKS
TRANSPORTATION DIVISION

CONCRETE PATCH JOINTS

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CDG	<i>M.H.H.</i>	8/04
REVISION	APPROVED BY	APPROVAL DATE
7	<i>M.H.H.</i>	3/24

STD. PLAN NO.
T05-03

GENERAL NOTES:

1. ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS, EXCEPT WHERE OTHERWISE NOTED IN THESE STANDARDS. MATERIALS AND WORKMANSHIP SHALL BE IN CONFORMANCE WITH THE CURRENT EDITION OF THE STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION PREPARED BY THE WASHINGTON STATE CHAPTER OF THE AMERICAN PUBLIC WORKS ASSOCIATION (APWA) AND THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION (WSDOT). REFERENCE TO ENGINEER IN SPECIFICATIONS IS DEFINED AS CITY OF VANCOUVER ENGINEER.
2. A FORTY-EIGHT (48) HOUR MINIMUM NOTICE SHALL BE GIVEN TO THE ENGINEER PRIOR TO PAVING UNLESS A LESSER TIME IS APPROVED BY THE ENGINEER.
3. AN ALTERNATE PEDESTRIAN ACCESSIBLE ROUTE OF TRAVEL IS REQUIRED WHEN AN EXISTING ACCESSIBLE ROUTE IS BLOCKED DURING CONSTRUCTION. THE ALTERNATE ACCESSIBLE ROUTE SHALL MEET MIN. ACCESSIBLE STANDARDS AS SET FORTH IN THE LATEST VERSION OF THE AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES (ADAAG) MANUAL.
4. TRENCH BACKFILL AND RESURFACING SHALL BE AS SHOWN IN THE STANDARD DETAILS, UNLESS MODIFIED BY THE RIGHT OF WAY USE PERMIT OR FRANCHISE – UTILITY STREET/RIGHT OF WAY PERMIT. SURFACING DEPTHS AND PAVING LIMITS SHOWN IN THE STANDARD DETAILS ARE MINIMUMS AND MAY BE INCREASED BY THE ENGINEER TO MEET TRAFFIC LOADINGS OR SITE CONDITIONS.


STREET SECTIONS FOR AASHTO SOIL TYPES A1-A5 – ALL OTHER SOIL TYPES SEE STREET SECTION DETAIL FOR STREET CLASSIFICATION		
CLASSIFICATION	ASPHALT THICKNESS	BASE ROCK THICKNESS
PRINCIPAL ARTERIALS	0.85	0.85
MINOR ARTERIALS/3 LANE COLLECTOR ARTERIALS	0.75	0.85
COLLECTOR ARTERIALS	0.60	0.65
PRIMARY INDUSTRIAL 5 LANE	0.85	0.85
PRIMARY INDUSTRIAL 3 LANE	0.80	0.85
SECONDARY INDUSTRIAL 3 LANE	0.70	0.85
LOCAL INDUSTRIAL 2 LANE	0.65	0.75
NEIGHBORHOOD CIRCULATOR, LOCAL ACCESS (NON-RESIDENTIAL)	0.40	0.85
LOCAL ACCESS (RESIDENTIAL), LOOP/CUL-DE-SAC, PUBLIC ALLEY, PRIVATE STREET >4 DWELLINGS, APPROVED NARROW LOT STREET/ALLEY	0.40	0.75
PRIVATE STREET 1-4 DWELLINGS (NO CURBS) AND PRIVATE ALLEY	0.25	0.65

5. ON ALL STREETS WHERE 4 FEET OR LESS OF PAVEMENT REMAINS BETWEEN THE OUTSIDE OF A LONGITUDINAL TRENCH AND THE EDGE OF PAVEMENT OR THE CURB, THE PAVEMENT MUST BE REMOVED AND THE FULL DEPTH RESTORATION MUST BE FROM THE CUT NEAREST THE ROADWAY CENTER LINE TO THE CURB OR EDGE OF PAVEMENT. WHEREVER THERE IS ANY PART OF AN EXISTING PATCH WITHIN 5 FEET OF THE NEW CUT, THE OLD PATCH WILL BE INCORPORATED INTO THE NEW PAVEMENT RESTORATION. THE INCORPORATION MAY BE PART OF THE FULL DEPTH RESTORATION OR A PLANE AND ACP INLAY AS DEMONSTRATED IN THE CITY STANDARD PLANS FOR **PAVEMENT RESTORATION LIMITS T05-01B** AND **STANDARD TRENCH RESTORATION – HMA – TRANSVERSE CUTS T05-07**. RESTORATION BEYOND MINIMUM STANDARDS MAY BE REQUESTED ON STREETS WITH A PC1 RATING LESS THAN 50 OR GREATER THAN 70, REGARDLESS OF AGE OF FUNCTIONAL CLASSIFICATION. VMC 11.80.100 (D)(2)(6) AND (7).
6. THE ENGINEER MAY REQUIRE MATERIALS COMPACTION AND MOISTURE TESTING. TESTING SHALL BE PERFORMED BY A LAB PRE-APPROVED BY THE CITY'S CONSTRUCTION DIVISION WITH THE RESULTS BEING SUPPLIED TO THE ENGINEER. THE TESTING IS NOT INTENDED TO RELIEVE THE CONTRACTOR FROM ANY LIABILITY FOR THE TRENCH RESTORATION. IT IS INTENDED TO SHOW THE INSPECTOR AND THE CITY THAT THE RESTORATION MEETS THIS SPECIFICATION.

NUMBER OF TESTS REQUIRED:

- UNDER 50 SQ. FT. = ONE (1) (ONE TEST FOR 7 DAYS)
- 50 TO 100 SQ. FT. = TWO (2) (ONE TEST FOR 14 DAYS)
- 100 TO 300 SQ. FT. = THREE (3) (ONE TEST FOR 28 DAYS)
- OVER 300 SQ. FT. = ONE (1) TEST EVERY 200 SQ. FT. OR EVERY 100 LINEAR FEET OF TRENCH, IF APPLICABLE.

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 <p>CITY OF Vancouver WASHINGTON</p>	STANDARD TRENCH RESTORATION - NOTES			STD. PLAN NO. T05-04A
	CITY OF VANCOUVER DEPARTMENT OF PUBLIC WORKS TRANSPORTATION DIVISION			
	DRAWN BY CDC	APPROVED BY <i>M.H.H.</i>	APPROVAL DATE 8/04	
REVISION 6	APPROVED BY <i>M.H.H.</i>	APPROVAL DATE 3/24		

GENERAL NOTES (CONTINUED):

7. WHEN TRENCHING WITHIN THE UNIMPROVED RIGHT OF WAY, THE RIGHT OF WAY SHALL BE RESTORED TO ITS ORIGINAL OR BETTER CONDITION. TRENCHES SHALL BE BACKFILLED AND COMPACTED PER THE TRENCH RESTORATION DETAILS, MATCHING THE EXISTING SURFACE.
8. ALL CUTS IN PAVED ROADS AND SHOULDERS MUST BE PERMANENTLY PATCHED IMMEDIATELY UP COMPLETION OF THE BACKFILL WORK. IN CASES OF INCLEMENT WEATHER, THE PERMANENT PATCHING MAY BE DELAYED FOR UP TO 5 DAYS AS LONG AS STEEL PLATES OR HARD SURFACE TEMPORARY PAVING ARE USED, WITH ENGINEER APPROVAL. USE OF STEEL PLATES REQUIRE BEDDING AND PINNING. IF THE WORK REQUIRES MORE THAN 1 DAY TO ACCOMPLISH, THE PORTION OF THE WORK THAT HAS BEEN COMPLETED EACH DAY MAY BE PATCHED WITH A TEMPORARY PATCH. AT THE COMPLETION OF THE WORK, ALL TEMPORARY PATCHES SHALL BE REMOVED AND THE ENTIRE AREA PERMANENTLY PATCHED. IF A GRIND AND INLAY OR OVERLAY IS REQUIRED AS PART OF THE RESTORATION, THE INLAY OR OVERLAY SHALL BE ACCOMPLISHED WITHIN 10 WORKING DAYS OF THE PERMANENT PATCHING.

ALL JOINTS SHALL BE SAND SEALED USING HEATED PAVING ASPHALT AND SANDED SAME DAY AS PAVING. VMC 11.80.100 (D)(8).
9. WHENEVER A NEW STREET IS ACCEPTED FROM A DEVELOPER, CONSTRUCTED OR RECONSTRUCTED BY THE CITY OR A NEW SURFACE TREATMENT IS COMPLETED, A FIVE (5) YEAR STREET CUT PROHIBITION GOES INTO EFFECT. THIS WILL RESULT IN DELAYING FURTHER CONSTRUCTION WITHIN THE PAVEMENT SECTION EXCEPT IN THE EVENT OF COMPELLING CIRCUMSTANCES. VMC 11.80.100 (B).
10. CONTROL DENSITY FILL WILL BE REQUIRED WHEN STREET CUTS ARE IN ARTERIALS, COLLECTORS, INDUSTRIAL STREETS, STREETS LOCATED IN CX ZONING, CDF MAY BE REQUIRED ON OTHER STREETS WITH A PCI GREATER THAN 70. VMC 11.80.100 (C)(2)(d) AND VMC 11.80.100 (D2).
11. ALL TRAFFIC SIGNAL INTERCONNECT CONDUITS AND CABLES (COPPER OR FIBER OPTIC) SHALL BE PROTECTED DURING CONSTRUCTION ACTIVITIES. DUE TO THE IMPORTANCE OF MAINTAINING THESE COMMUNICATIONS, ANY DAMAGE TO THESE CABLES AND CONDUITS CAUSED BY THE CONTRACTOR OR ANY OF ITS AFFILIATES SHALL BE REPORTED WITHIN 2 HOURS TO OPERATIONS CENTER DISPATCH AT (360) 696-8177 AND REPAIRED WITHIN 48 HOURS UNLESS OTHERWISE APPROVED BY CITY TRAFFIC ENGINEER. IF THIS REPAIR CANNOT BE COMPLETED IN THE ALLOTTED TIME, WORK WILL BE DONE BY THE CITY OR ITS DESIGNEE AND ALL COSTS, INCLUDING ANY OVERHEAD COSTS, WILL BE INVOICED TO THE CONTRACTOR.
12. ALL TRAFFIC SIGNALS SHALL REMAIN IN OPERATION DURING CONSTRUCTION ACTIVITIES, EXCEPT AS INDICATED ON THE PLANS. ANY DAMAGES CAUSED BY THE CONTRACTOR OR ANY OF ITS AFFILIATES TO THE EXISTING TRAFFIC SIGNAL CONDUIT, WIRING, POLES, MAST ARMS, SIGNAL INDICATIONS, LOOP DETECTORS, AND OTHER RELATED COMPONENTS SHALL BE REPAIRED WITHIN 24 HOURS UNLESS OTHERWISE APPROVED BY ENGINEER. IF THIS REPAIR CANNOT BE COMPLETED IN THE ALLOTTED TIME, WORK WILL BE DONE BY THE CITY OR ITS DESIGNEE AND ALL COSTS, INCLUDING ANY OVERHEAD COSTS, WILL BE INVOICED TO THE CONTRACTOR.
13. CONTRACTOR SHALL REPORT ALL DAMAGES IMMEDIATELY TO THE CITY'S CONSTRUCTION SERVICES OFFICE AT (360)487-7750 OR CONTACT THE INSPECTOR.
14. FOR RIGHT OF WAY PERMITS, THE RESTORATION WORK SHALL HAVE A WARRANTY PERIOD OF 2 YEARS ON RESIDENTIAL STREETS AND 5 YEARS ON ARTERIAL STREETS. PUBLIC AND PRIVATE UTILITIES SHALL WARRANTY THEIR WORK FOR THE LIFE OF THE RESTORATION. THE OWNER OR UTILITY SHALL REPAIR ANY OF THE FOLLOWING DEFICIENCIES WHICH OCCUR DURING THE WARRANTY PERIOD. VMC 11.80.100 (E).

SETTLEMENT OR BUMP: ANY SETTLEMENT OR BUMP MORE THAN 1/4 INCH LOWER OR HIGHER THAN THE ORIGINAL PAVEMENT SHALL BE REPAIRED. REPAIR MAY INCLUDE REMOVAL AND REPLACEMENT OR SKIN PATCHING AND WILL BE DETERMINED BY THE ENGINEER.

EDGE SEPARATION: ANY SEPARATION OF THE TRENCH FROM SURROUNDING ROADWAY GREATER THAN 1/4 INCH SHALL BE CRACK SEALED WITH MATERIAL PER WSDOT STANDARD SPECIFICATIONS SECTION 9-04.2(1).

ALLIGATOR CRACKING: ANY TRENCH PAVEMENT WHICH EXHIBITS ALLIGATOR CRACKING SHALL BE REMOVED AND REPLACED. THE REPLACEMENT SHALL BE IN CONFORMANCE WITH THE PAVEMENT REPAIR SECTION OF THE STANDARD SPECIFICATIONS.

RAVELING: RAVELING IS DEFINED AS SURFACE DETERIORATION THAT OCCURS WHEN AGGREGATE PARTICLES ARE DISLODGED OR OXIDATION CAUSES LOSS OF ASPHALT BINDER. THE HOT MIX ASPHALT PAVEMENT LOSES IT'S SMOOTH SURFACE AND BEGINS TO APPEAR VERY OPEN AND ROUGH. MEDIUM OR HIGH SEVERITY RAVELING AS DEFINED BY THE "PAVEMENT SURFACE CONDITION FIELD RATING MANUAL FOR ASPHALT PAVEMENT" DEVELOPED BY THE NORTHWEST PAVEMENT MANAGEMENT ASSOCIATION SHALL BE PLANED AND RE-PAVED.

15. FOR PERVIOUS PAVEMENTS, PER VMC 11.80.100 (B), STREETS CONSTRUCTED WITH PERMEABLE MATERIALS WILL HAVE A STREET CUT PROHIBITION FOR THE LIFE OF THE STREET.

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STANDARD TRENCH RESTORATION - NOTES

CITY OF VANCOUVER
DEPARTMENT OF PUBLIC WORKS
TRANSPORTATION DIVISION

DRAWN BY	APPROVED BY	APPROVAL DATE
CDC	<i>M.H.H.</i>	8/04
REVISION	APPROVED BY	APPROVAL DATE
6	<i>M.H.H.</i>	3/24

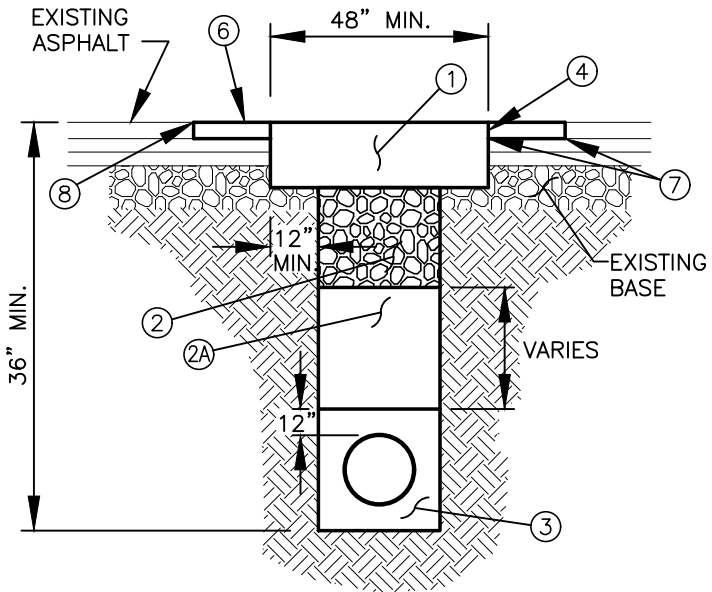
STD. PLAN NO.
T05-04B

- ① HOT MIX ASPHALT CLASS 1/2" PG 58H-22 CONSTRUCTED IN ACCORDANCE SECTION 5-04 OF THE WSDOT STANDARD SPECIFICATIONS. COMPACTION SHALL BE 92% OF MAXIMUM DENSITY AS DETERMINED BY WSDOT FOP FOR AASHTO T209.

HOT MIX ASPHALT AND BASE THICKNESS PER CHART ON **T05-04A, NOTE 4.**

IF EXISTING SECTION IS GREATER THAN THE VALUE IN THE TABLE, INSTALL 1" GREATER THAN EXISTING ASPHALT THICKNESS. MINIMUM LIFT THICKNESS IS 0.15' - MAXIMUM HMA LIFT THICKNESS IS 0.35' FOR BASE COURSE, 0.25' FOR WEARING COURSE.

THE MIX TEMPERATURE SHALL BE 325 DEGREES MAXIMUM AT THE TIME OF PLANT DISCHARGE. AT THE TIME OF PLACEMENT, THE MIX TEMPERATURE SHALL BE 250 DEGREES MINIMUM.



- ①A HARD SURFACING REQUIRED SAME DAY AS STREET OPENING ON OR WITHIN 30 FT. OF ALL ARTERIAL CLASSIFICATIONS, AND STREETS IN CX ZONING AND INDUSTRIAL AREAS. VMC 11.80.100 (D)(8).
- ② BASE ROCK SHALL CONSIST OF CRUSHED SURFACING BASE COURSE, MEETING THE REQUIREMENTS OF SECTION 4-04 OF THE STANDARD SPECIFICATIONS. COMPACTION SHALL BE TO 95% MAXIMUM DENSITY. EACH LIFT SHALL NOT EXCEED 0.5'.
- ②A TRENCH ZONE - GRAVEL BACKFILL PER WSDOT SPECIFICATIONS FOR GRAVEL BACKFILL (SECTION 9-03.10, AGGREGATE FOR GRAVEL BASE). COMPACTED TO 95% OF MAXIMUM DENSITY IN THE TRENCH ZONE USING METHOD C COMPACTION AS PER SECTION 2-03.3 (14). THE ENGINEER WILL EVALUATE THE BACKFILL BASED ON GRADATION AND MOISTURE. MATERIALS WET OF OPTIMUM MOISTURE CONTENT MAY BE REJECTED. MATERIALS DRY OF OPTIMUM MOISTURE CONTENT WILL NEED ADDITIONAL MOISTURE DURING COMPACTION.

TRENCH ZONE WIDTH
PIPE 8 IN. OR MORE = PIPE O.D. +2 FT. OR AS DIRECTED BY THE ENGINEER
PIPE 6 IN. OR LESS = PIPE O.D. +1 FT. OR AS DIRECTED BY THE ENGINEER

- ③ PIPE BEDDING AND PIPE ZONE BACKFILL MATERIALS SHALL BE PER UTILITY OWNERS AND/OR CITY SPECIFICATIONS. DEPTH OF COVER MAY BE ADJUSTED PER UTILITY OWNERS, AND/OR CITY SPECIFICATIONS. 90% COMPACTION PER SECTION 7-08.3(1)C OF THE STANDARD SPECIFICATIONS.
- ④ THE EXISTING ROAD SURFACE SHALL BE CUT IN A NEAT LINE PRIOR TO PAVEMENT REPLACEMENT BY SAWCUTTING, WHEEL CUTTER, OR PLANING EQUIPMENT. THIS WILL BE REQUIRED AROUND THE PERIMETER OF ALL EXCAVATIONS TO PROVIDE CLEAN, STRAIGHT, VERTICAL SIDES. THE CUT LINE SHALL BE ONE CONTINUOUS, FULL ASPHALT DEPTH, STRAIGHT LINE MIN. 12" FROM THE OUTER EXCAVATION LIMITS OR OF ANY SLOUGHING OF THE STREET CUT.

ALL TRENCHES SHALL BE 12" MIN. FROM EXISTING CURB TO ALLOW FOR CONSTRUCTION OF T-CUT SECTION. REMNANT ASPHALT SHALL BE REMOVED AND REPLACED PER **NOTE 5 ON STANDARD TRENCH RESTORATION - NOTES T05-04A.**

- ⑤ 48" MIN. PAVEMENT RESTORATION AROUND MANHOLES, VALVES AND VAULTS MEASURED FROM EDGE PER **T05-01B**; ARTERIAL ROADWAYS, AND ROADWAYS WITH PCI GREATER THAN 70. MAY REQUIRE ADDITIONAL RESTORATION PER **T05-01B** AND **T05-07**. FOR CONCRETE RESTORATION CONTACT PAVEMENT MANAGEMENT AT (360)487-8177.
- ⑥ THE MINIMUM WEARING COURSE LIFT WIDTH SHALL BE EXPANDED TO LANE LINES PER STANDARD PLAN **T05-01B PAVEMENT RESTORATION LIMITS** AND/OR **T05-07** OR AS DIRECTED BY THE ENGINEER.
- ⑦ THE EDGES OF ALL EXISTING ASPHALT SURFACES SHALL BE CLEANED AND A TACK COAT SHALL BE APPLIED PER SECTION 5-04 OF THE STANDARD SPECIFICATIONS.
- ⑧ ALL JOINTS SHALL BE SEALED USING HEATED PAVING ASPHALT AND SANDED SAME DAY AS PAVING.

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STANDARD TRENCH RESTORATION - HMA - GRANULAR BACKFILL

CITY OF VANCOUVER
DEPARTMENT OF PUBLIC WORKS
TRANSPORTATION DIVISION

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CDC	<i>M.H.H.</i>	8/04
REVISION	APPROVED BY	APPROVAL DATE
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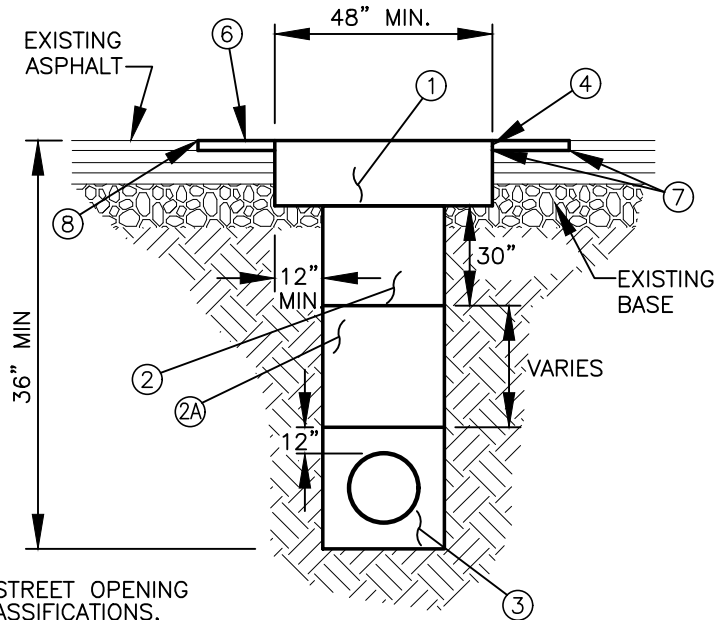
STD. PLAN NO.
T05-05

- ① HOT MIX ASPHALT CLASS 1/2" PG 58H-22 CONSTRUCTED IN ACCORDANCE WITH SECTION 5-04 OF THE STANDARD SPECIFICATIONS. COMPACTION SHALL BE 92% OF MAXIMUM DENSITY AS DETERMINED BY WSDOT FOP FOR AASHTO T209.

HOT MIX ASPHALT THICKNESS PER CHART ON **T05-04A, NOTE 4.**

IF EXISTING SECTION IS GREATER THAN THE VALUE IN THE TABLE, INSTALL 1" GREATER THAN EXISTING ASPHALT THICKNESS. MINIMUM HMA LIFT THICKNESS IS 0.15' - MAXIMUM HMA LIFT THICKNESS IS 0.35' FOR BASE COURSE, 0.25' FOR WEARING COURSE.

THE MIX TEMPERATURE SHALL BE 325 DEGREES MAXIMUM AT THE TIME OF PLANT DISCHARGE. AT THE TIME OF PLACEMENT, THE MIX TEMPERATURE SHALL BE 250 DEGREES MINIMUM.



- ①A HARD SURFACING REQUIRED SAME DAY AS STREET OPENING ON OR WITHIN 30 FT. OF ALL ARTERIAL CLASSIFICATIONS, AND STREETS IN CX ZONING AND INDUSTRIAL AREAS. VMC 11.80.100 (D)(8).

- ② BACKFILL SHALL CONSIST OF CONTROL DENSITY FILL (CDF), SEE **T05-06B** FOR **CDF TECHNICAL SPECIFICATIONS.**

GRANULAR BACKFILL MAY BE USE IN LIEU OF CDF IN TRENCHES IF APPROVED BY THE ENGINEER PRIOR TO PLACEMENT. TESTING OF THE TOP 30" OF GRANULAR BACKFILL WILL BE REQUIRED AS PER **STANDARD TRENCH RESTORATION T05-04A (6)** AND **T05-05 (2).**

DENSITY TESTING SHALL BE PERFORMED BY A LAB PRE-APPROVED BY THE CITY'S CONSTRUCTION DIVISION WITH THE RESULTS BEING SUPPLIED TO THE ENGINEER.

- ②A TRENCH ZONE - GRANULAR BACKFILL AS APPROVED BY LOCAL AGENCY OR WSDOT SPECIFICATION SECTION 9-03.14 FOR SELECT BORROW. COMPACT TO 95% OF MAXIMUM DENSITY IN THE TRENCH ZONE USING METHOD C COMPACTION PER SECTION 2-03.3 (14). CDF MAY BE USED IN LIEU OF GRANULAR BACKFILL. NATIVE MATERIAL MAY BE USED IF APPROVED BY THE ENGINEER PRIOR TO PLACEMENT.

TRENCH ZONE WIDTH	
PIPE 8 IN. OR MORE =	PIPE O.D. +2 FT. OR AS DIRECTED BY THE ENGINEER
PIPE 6 IN. OR LESS =	PIPE O.D. +1 FT. OR AS DIRECTED BY THE ENGINEER

- ③ PIPE BEDDING AND PIPE ZONE BACKFILL MATERIALS SHALL BE PER UTILITY OWNERS AND/OR CITY SPECIFICATIONS. DEPTH OF COVER MAY BE ADJUSTED PER UTILITY OWNERS, AND/OR CITY SPECIFICATIONS. 90% COMPACTION PER SECTION 7-08.3(1)C OF THE STANDARD SPECIFICATIONS.

- ④ THE EXISTING ROAD SURFACE SHALL BE CUT IN A NEAT LINE PRIOR TO PAVEMENT REPLACEMENT BY SAWCUTTING, WHEEL CUTTER, OR PLANING EQUIPMENT. THIS WILL BE REQUIRED AROUND THE PERIMETER OF ALL EXCAVATIONS TO PROVIDE CLEAN, STRAIGHT, VERTICAL SIDES. THE CUT LINE SHALL BE ONE CONTINUOUS, FULL ASPHALT DEPTH, STRAIGHT LINE 1FT FROM THE OUTER EXCAVATION LIMITS OR OF ANY SLOUGHING OF THE STREET CUT.

ALL STREET CUTS SHALL BE 12" MIN. FROM EXISTING CURB TO ALLOW FOR CONSTRUCTION OF T-CUT SECTION. REMNANT ASPHALT SHALL BE REMOVED AND REPLACED PER **NOTE 5** ON **STANDARD TRENCH RESTORATION - NOTES T05-04A.**

- ⑤ 48" MIN. PAVEMENT RESTORATION AROUND MANHOLES, VALVES AND VAULTS MEASURED FROM EDGE PER **T05-01B**; ARTERIAL ROADWAYS, AND ROADWAYS WITH PCI GREATER THAN 70. MAY REQUIRE ADDITIONAL RESTORATION PER **T05-01B** AND **T05-07**. FOR CONCRETE RESTORATION CONTACT PAVEMENT MANAGEMENT AT (360)696-8177.

- ⑥ THE MINIMUM WEARING COURSE WIDTH SHALL BE EXPANDED TO LANE LINES PER STANDARD PLAN **T05-01B PAVEMENT RESTORATION LIMITS, T05-07 STANDARD TRENCH RESTORATION - HMA - TRANSVERSE CUTS** OR AS DIRECTED BY THE ENGINEER.

- ⑦ THE EDGES OF ALL EXISTING ASPHALT SURFACES SHALL BE CLEANED AND A TACK COAT SHALL BE APPLIED PER SECTION 5-04 OF THE STANDARD SPECIFICATIONS.

- ⑧ ALL JOINTS SHALL BE SEALED USING HEATED PAVING ASPHALT AND SANDED SAME DAY AS PAVING.

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STANDARD TRENCH RESTORATION - HMA - CONTROLLED DENSITY FILL

CITY OF VANCOUVER
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STD. PLAN NO.
T05-06A

CDF TECHNICAL SPECIFICATIONS

- a) THE CONTROLLED DENSITY FILL (CDF) MIX DESIGN SHALL BE FROM AN APPROVED SOURCE.
- b) THE CONTRACTOR SHALL SUBMIT THE MIX DESIGN ONE WEEK MINIMUM PRIOR TO INTENDED USE FOR REVIEW AND APPROVAL. ALTERNATIVELY, THE CONTRACTOR MAY PROVIDE THE SUPPLIER AND MIX NUMBER IF THE CDF MIX HAS BEEN APPROVED WITHIN THE PREVIOUS 12 MONTHS.
- c) THE CONTRACTOR SHALL PROVIDE BATCH WEIGHTS SHOWING THE AMOUNTS OF ALL INGREDIENTS IN THE MIX, BATCH TIME, AND THE TOTAL AMOUNT OF THE BATCH.
- d) CONTROL DENSITY FILL SHALL BE PERFORMANCE BASED AND MEET THE FOLLOWING CRITERIA:
 - THE CDF MIXTURE SHALL BE FLOWABLE, NON-SEGREGATING, AND SELF LEVELING.
 - CAN BE PAVED ON WITHIN 48 HOURS UNLESS OTHERWISE APPROVED.
 - TYPE F FLY ASH: 200 LBS MINIMUM.
 - TYPE I OR II CEMENT: 50 LBS MINIMUM.
 - SETTLING SHALL BE LESS THAN 1/8" PER FOOT DEPTH.
 - SHALL BE MACHINE DIGABLE UNLESS NOTED OTHERWISE.
 - FINE AGGREGATE (LESS THAN 3/8") SHALL BE USED UNLESS OTHERWISE APPROVED.
 - CONCRETE UNIT WEIGHT SHALL BE 100 PCF MINIMUM.
 - COMPRESSIVE 28 DAY STRENGTHS FROM MIN. 50 PSI TO MAX. 150 PSI.
- e) CDF SHALL NOT BE PLACED ON FROZEN GROUND. CDF PATCHING, MIXING AND PLACING MAY BE STARTED IF WEATHER CONDITIONS ARE FAVORABLE, WHEN THE TEMPERATURE IS AT 34-DEGREES F AND RISING. AT THE TIME OF PLACEMENT, CDF MUST HAVE A TEMPERATURE OF AT LEAST 40-DEGREES F. MIXING AND PLACING SHALL STOP WHEN THE TEMPERATURE IS 38 DEGREES F OR LESS AND FALLING. EACH FILLING STAGE SHALL BE AS CONTINUOUS AN OPERATION AS POSSIBLE.
- f) TRENCH SECTIONS TO BE FILLED WITH CDF SHALL BE CONTAINED AT EITHER END OF THE TRENCH SECTION BY BULKHEADS OR EARTH FILL.
- g) DURING CDF CURE TIME, THE CONTRACTOR SHALL INSTALL STEEL STREET PLATES OR OTHER PROTECTIVE DEVICES WHICH WILL ALLOW FOR THE PASSAGE AND SAFETY OF TRAFFIC WITH NO LOAD TRANSFERRED TO THE CDF.
- h) CONTRACTOR SHALL ALLOW FOR A MINIMUM 48 HOUR CURE TIME FOR CDF PRIOR TO PLACING ASPHALT.
- i) 30-INCH DEPTH OF CDF MAY BE REDUCED WITH ENGINEER'S APPROVAL IF CONFLICTING WITH PIPE ZONE BACKFILL.

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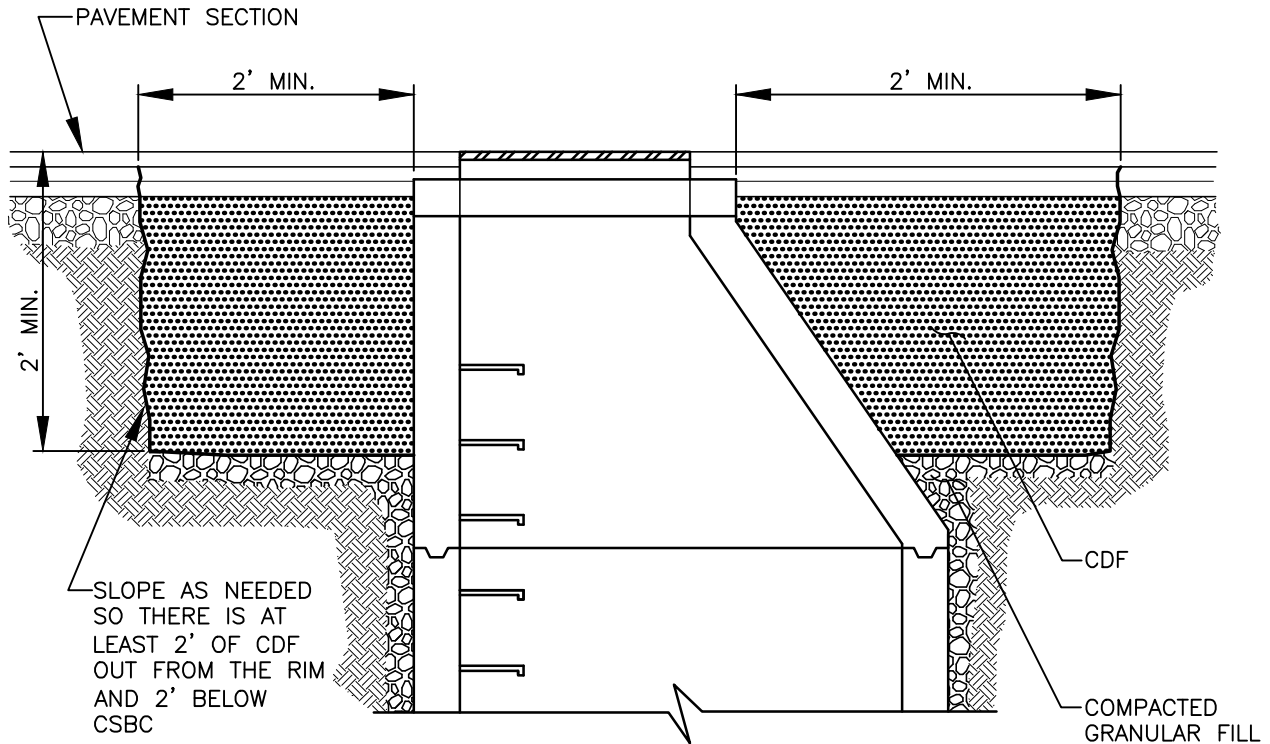


STANDARD TRENCH RESTORATION - HMA - CONTROLLED DENSITY FILL

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STD. PLAN NO.
T05-06B



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CONTROLLED DENSITY FILL AROUND MANHOLES

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STD. PLAN NO.
T05-06C

PLANE AND PAVE.
MATCH DEPTH OF EXISTING
TOP LIFT PLUS 1/4" NO
LESS THAN 0.25' OR AS
DIRECTED BY ENGINEER

FACE OF CURB OR EDGE OF PAVEMENT

CENTER LINE OR
LANE LINE

FACE OF CURB OR EDGE OF PAVEMENT

EXISTING HOT
MIX ASPHALT

3' MIN. 4' MIN. 3' MIN.

SEE TABLE FOR
MINIMUM WIDTH

SEE TABLE FOR
MINIMUM WIDTH

PLANING LIMIT. MAY DO A
FULL DEPTH SAWCUT AND
REMOVE AND REPLACE EXISTING
DEPTH OF ASPHALT AT THE
DIRECTION OF THE ENGINEER

NOTE:

1. HMA TYPE SHALL MEET THE REQUIREMENTS OF THE TYPICAL STREET SECTIONS FOR THE CLASSIFICATION OF ROAD. SEE DETAILS IN THE **T10-XX** SERIES.
2. 10' RESIDENTIAL/LOCAL ACCESS PLANING WIDTH MAY BE REQUIRED ON STREETS WITH A PCI LESS THAN 50 OR GREATER THAN 70 OR AS REQUIRED BY THE ENGINEER.
3. PLANING SHALL EXTEND A MINIMUM OF 3' BEYOND THE SAWCUT OF THE T-CUT.
4. AT DRIVEWAY/CURB OPENINGS OR REPLACEMENTS LONGITUDINAL LIMITS OF PLANE AND PAVE SHALL BE EXTENDED 3' BEYOND THE NEW CONSTRUCTION AND 5' BEYOND THE TANGENT LENGTH OF A CONSTRUCTED CURB RADIUS.

3' MIN.
(TYP.)

1' MIN.
(TYP.)

4' MIN.

STANDARD TRENCH RESTORATION
HMA - GRANULAR BACKFILL OR
CONTROLLED DENSITY FILL PER
T05-05 THROUGH T05-07B

MINIMUM PLANING WIDTHS

ROADWAY TYPE	WIDTH
PRINCIPAL ARTERIAL	25'
MINOR ARTERIAL	20'
COLLECTOR ARTERIAL	15'
RESIDENTIAL/LOCAL ACCESS ②	10'



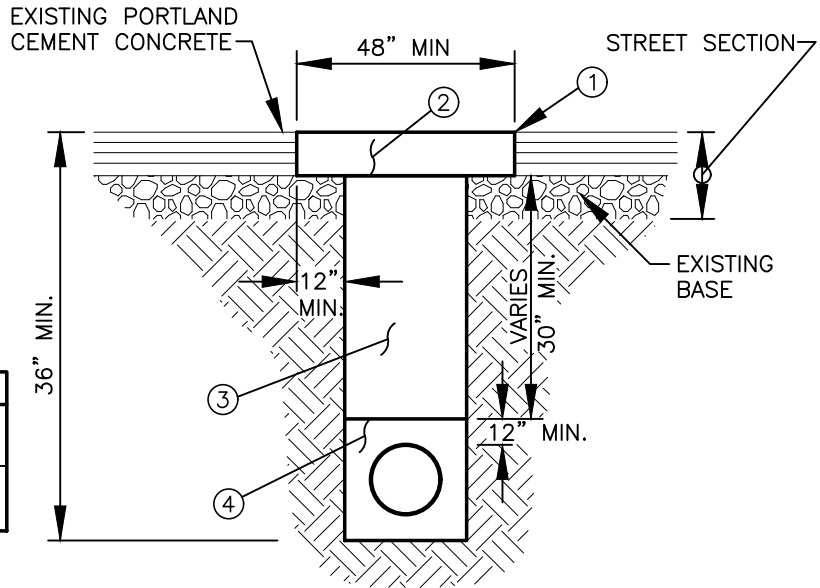
STANDARD TRENCH RESTORATION - HMA - TRANSVERSE CUTS

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STD. PLAN NO.
T05-07

- ① EXISTING PORTLAND CEMENT CONCRETE PAVEMENT SHALL BE SAWCUT AROUND THE ENTIRE PERIMETER OF THE PAVEMENT TO BE REMOVED PRIOR TO REMOVAL. THE DIMENSIONS OF THE PAVEMENT TO BE REMOVED SHALL MEET THE REQUIREMENTS OF STANDARD PLAN SHEETS **T05-10** AND **T05-11**. PAVEMENT REMOVAL SHALL EXTEND A MINIMUM OF 12" BEYOND THE FINAL TRENCH WIDTH. MATCH EXISTING CONCRETE DEPTH.



TRENCH ZONE WIDTH
PIPE 8 IN. OR MORE = PIPE O.D. + 2 FT. OR AS DIRECTED BY THE ENGINEER
PIPE 6 IN. OR LESS = PIPE O.D. + 1 FT. OR AS DIRECTED BY THE ENGINEER

- ② CEMENT CONCRETE PAVEMENT CONSTRUCTION SHALL FOLLOW THE REQUIREMENTS OF SECTION 5-05 OF THE CURRENT VERSION OF THE WSDOT STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION WITH THE FOLLOWING MODIFICATIONS:
- a) THE CONTRACTOR MAY SUBMIT A PREVIOUS MIX DESIGN WHICH HAS BEEN ACCEPTED BY THE CITY FOR OTHER CEMENT CONCRETE PAVEMENT CONSTRUCTION.
 - b) LONGITUDINAL AND TRANSVERSE CONTRACTION JOINTS SHALL BE CONSTRUCTED IN THE SAME LOCATION AS EXISTING CONTRACTION JOINTS AND SHALL MATCH THE JOINT LOCATION OF ADJACENT CONCRETE PAVEMENT NOT REMOVED. ISOLATION JOINTS SHALL BE CONSTRUCTED AROUND ANY CATCH BASINS AND MANHOLES IN THE PAVEMENT AS SHOWN ON **CONSTRUCTION JOINTS DETAIL T05-02**.
 - c) SAWED CONTRACTION JOINTS SHALL BE CONSTRUCTED AND SEALED AS SHOWN ON **CONCRETE PATCH JOINTS DETAIL T05-03**.
 - d) TIE BARS AND DOWEL BARS:
 EXISTING PCC 8-INCHES OR GREATER: THE SIZE AND LOCATION OF TIE AND DOWEL BARS SHALL BE CONSTRUCTED AS SHOWN ON **STEEL LAYOUT FOR CONCRETE PATCH - INTERIOR DETAIL T05-11** AND **STEEL LAYOUT FOR CONCRETE PATCH - EXTERIOR DETAIL T05-12**. TIE BARS AND DOWEL BARS SHALL BE PLACED BETWEEN THE RESTORED PAVEMENT AND THE EXISTING PAVEMENT.

 EXISTING PCC LESS THAN 8-INCHES: TIE BARS AND DOWEL BARS SHALL NOT BE USED. THE PCC SHALL BE THICKENED TO 9-INCHES. PLAIN CONTRACTION JOINTS SHALL BE CONSTRUCTED. CONSTRUCTION JOINTS IN NEW PCC MAY REQUIRE DOWELS AND TIE BARS IF LOADING CONDITIONS WARRANT AND WILL BE IDENTIFIED IN PERMITTING OR DEVELOPMENT REQUIREMENTS.
 - e) THE FINISH OF THE PCC PAVEMENT SHALL MATCH (AS CLOSE AS POSSIBLE) THE FINISH OF THE EXISTING PAVEMENT AT THE TIME IT WAS CONSTRUCTED.
 - f) SURFACE SMOOTHNESS SHALL FOLLOW THE REQUIREMENTS FOR SMALL OR IRREGULAR AREAS IDENTIFIED IN THE STANDARD SPECIFICATIONS.
 - g) THE PAVEMENT MAY BE OPENED TO TRAFFIC WHEN THE CONCRETE HAS DEVELOPED A COMPRESSIVE STRENGTH OF 4,000 PSI. THIS STRENGTH SHALL BE ACHIEVED WITHIN 3 DAYS FOLLOWING CONCRETE PLACEMENT UNLESS APPROVED BY THE ENGINEER.
- ③ BACKFILL SHALL CONSIST OF CONTROL DENSITY FILL (CDF), A MIXTURE OF PORTLAND CEMENT, FLY ASH, AGGREGATES, WATER AND ADMIXTURES PROPORTIONED TO PROVIDE A NON-SEGREGATING, SELF-CONSOLIDATING, FREE-FLOWING MATERIAL WHICH WILL RESULT IN A HARDENED, DENSE, NON-SETTLING FILL PRODUCING UNCONFINED COMPRESSIVE 28 DAY STRENGTHS FROM 50 PSI TO A MAXIMUM OF 150 PSI. SEE **T05-06B** FOR **CDF TECHNICAL SPECIFICATIONS**.
- ④ PIPE BEDDING AND PIPE ZONE BACKFILL SHALL BE PER UTILITY OWNERS AND/OR CITY SPECIFICATIONS. DEPTH OF COVER MAY BE ADJUSTED PER UTILITY OWNERS AND/OR CITY SPECIFICATIONS, 90% COMPACTION PER SECTION 7-08.3(1)C OF THE STANDARD SPECIFICATIONS.

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STANDARD TRENCH RESTORATION - CEMENT CONCRETE PAVEMENT

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STD. PLAN NO.
T05-08

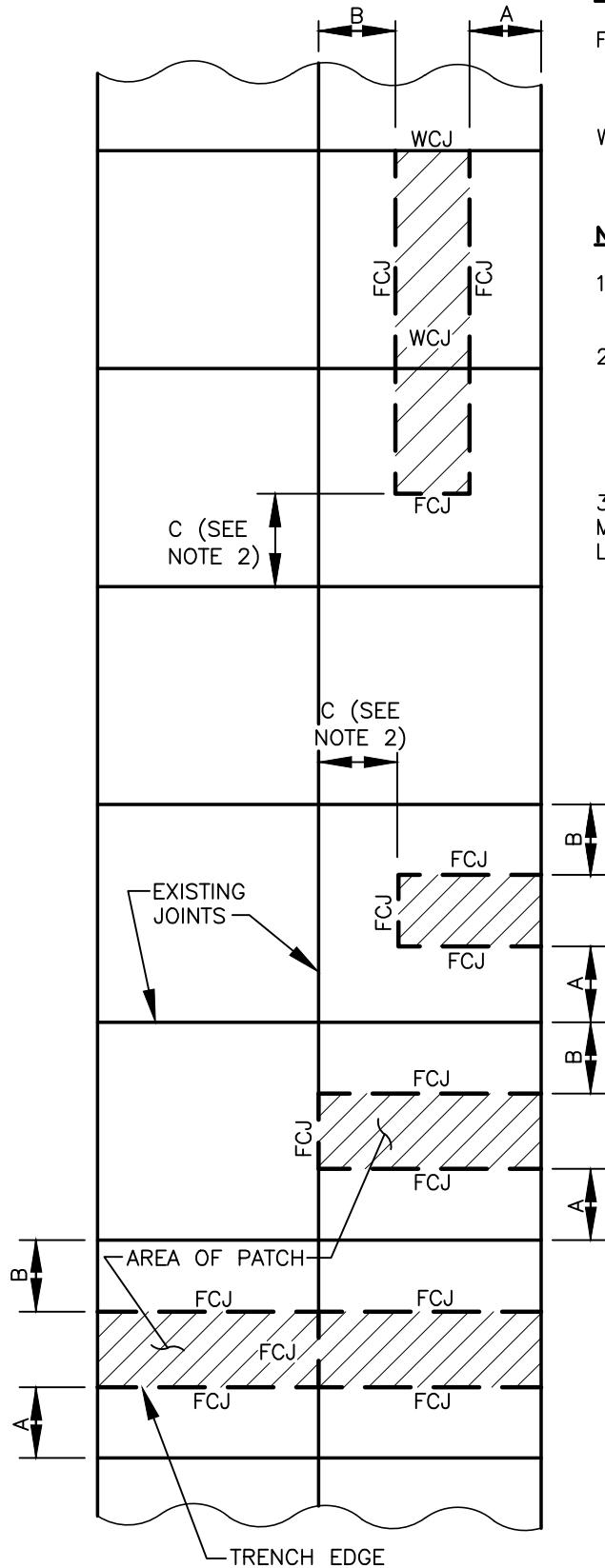
PCC SAWCUT LOCATED IN INTERIOR OF SLAB PANELS

FCJ = FIXED CONSTRUCTION JOINT WITH DEFORMED TIE BARS SEE **STEEL LAYOUT FOR CONCRETE PATCH - INTERIOR DETAIL T5-11**.

WCJ = WORKING CONTRACTION JOINT WITH SMOOTH DOWELS SEE **STEEL LAYOUT FOR CONCRETE PATCH - INTERIOR DETAIL T5-11**.

NOTES:

1. THESE PATCH LAYOUTS APPLY WHEN BOTH A AND B ARE GREATER THAN OR EQUAL TO 5FT.
2. IF C IS LESS THAN 5FT., THEN EXTEND PATCH TO EXISTING JOINT, EXCEPT IF EXISTING JOINT HAS SMOOTH DOWELS, THEN EXTEND PATCH 5FT. BEYOND JOINT, REMOVE EXISTING DOWEL ASSEMBLY AND REPLACE WITH NEW ASSEMBLY.
3. IF NEW JOINT FALLS WITHIN A WHEEL PATH OR MIDDLE OF BIKE LANE, EXTEND RESTORATION TO NEAREST LONGITUDINAL OR TRANSVERSE JOINT.



CONCRETE PATCH LAYOUT - INTERIOR



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STD. PLAN NO.
T05-09

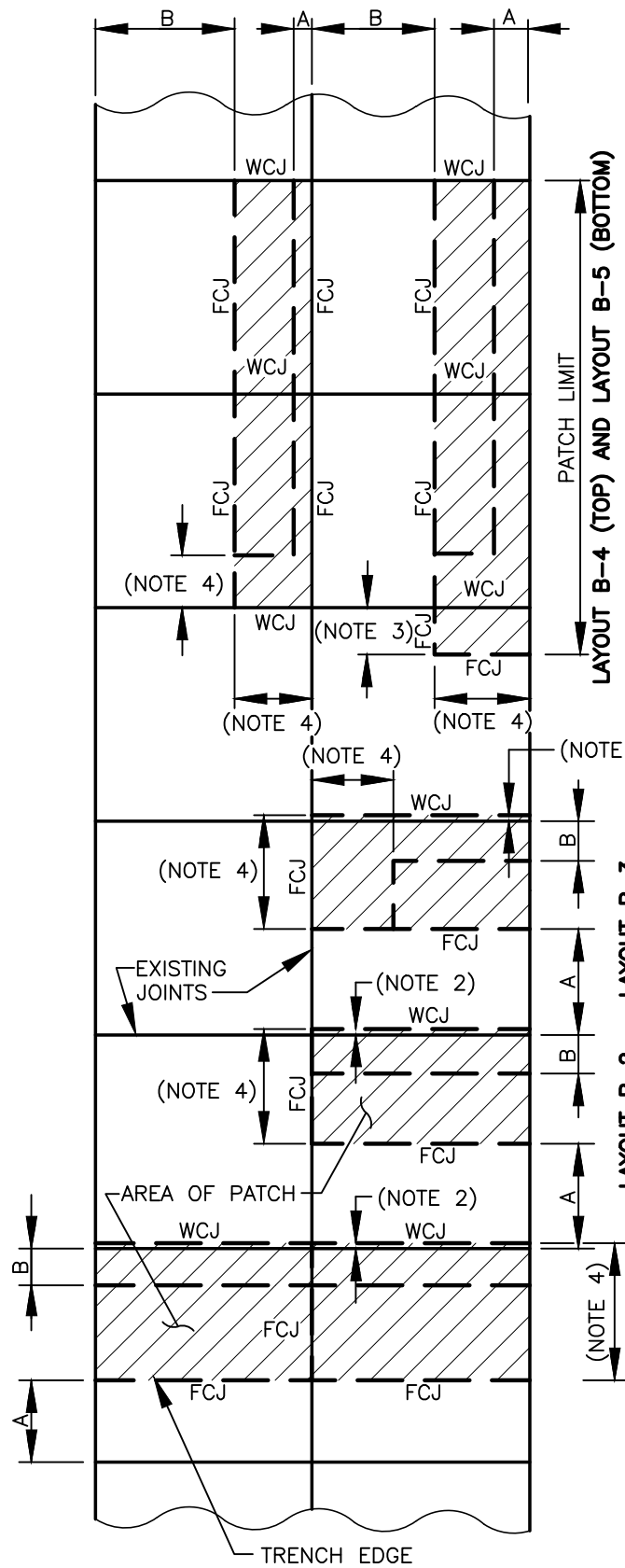
PCC SAWCUT LOCATED NEAR EXTERIOR OF SLAB PANELS

FCJ = FIXED CONSTRUCTION JOINT WITH DEFORMED TIE BARS SEE **STEEL LAYOUT FOR CONCRETE PATCH - EXTERIOR DETAIL T5-12.**

WCJ = WORKING CONTRACTION JOINT WITH SMOOTH DOWELS SEE **STEEL LAYOUT FOR CONCRETE PATCH - EXTERIOR DETAIL T5-12.**

NOTES:

1. THESE PATCH LAYOUTS APPLY WHEN EITHER A OR B ARE LESS THAN 5FT.
2. IF EXISTING TRANSVERSE JOINT HAS SMOOTH DOWELS, THEN EXTEND PATCH 5FT. BEYOND JOINT AND REMOVE EXISTING DOWEL ASSEMBLY.
3. FOR LONGITUDINAL PATCH THAT COVERS LESS THEN FULL WIDTH OF SLAB, EXTEND PATCH 5FT. BEYOND EXISTING JOINT IF IT HAS SMOOTH DOWELS, REMOVE EXISTING DOWEL ASSEMBLY DOWEL AND REPLACE WITH NEW ASSEMBLY.
4. WHERE EDGE OF TRENCH IS < 5FT. FROM JOINT, EXTEND PATCH TO NEAREST JOINT OR BEYOND AS REQUIRED BY NOTE 2 AND 3. FOR TRANSVERSE PATCH WITH TRANSVERSE EDGE < 5FT. FROM TRANSVERSE JOINT (**LAYOUT B-3**), EXTEND PATCH TO BOTH NEAREST TRANSVERSE AND NEAREST LONGITUDINAL JOINT SO THAT WCJ EXTENDS ACROSS THE FULL SLAB WIDTH.
5. IF NEW JOINT FALLS WITHIN A WHEEL PATH OR MIDDLE OF BIKE LANE, EXTEND RESTORATION TO NEAREST LONGITUDINAL OR TRANSVERSE JOINT.



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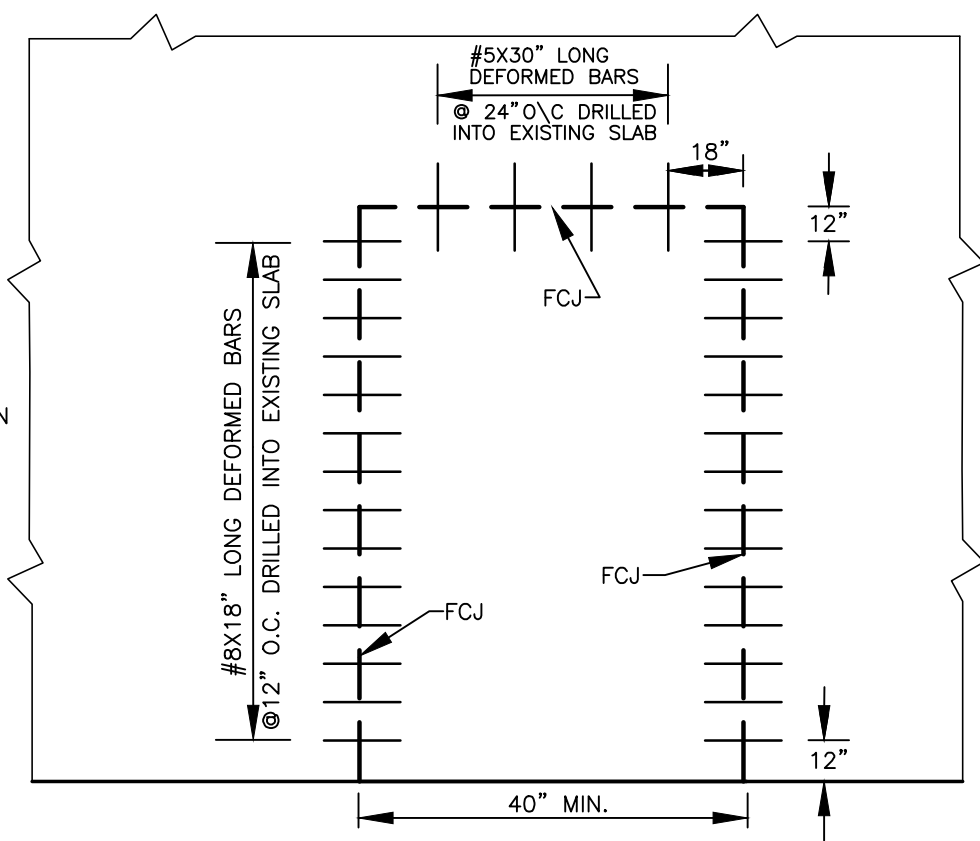
CONCRETE PATCH LAYOUT - EXTERIOR

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STD. PLAN NO.
T05-10

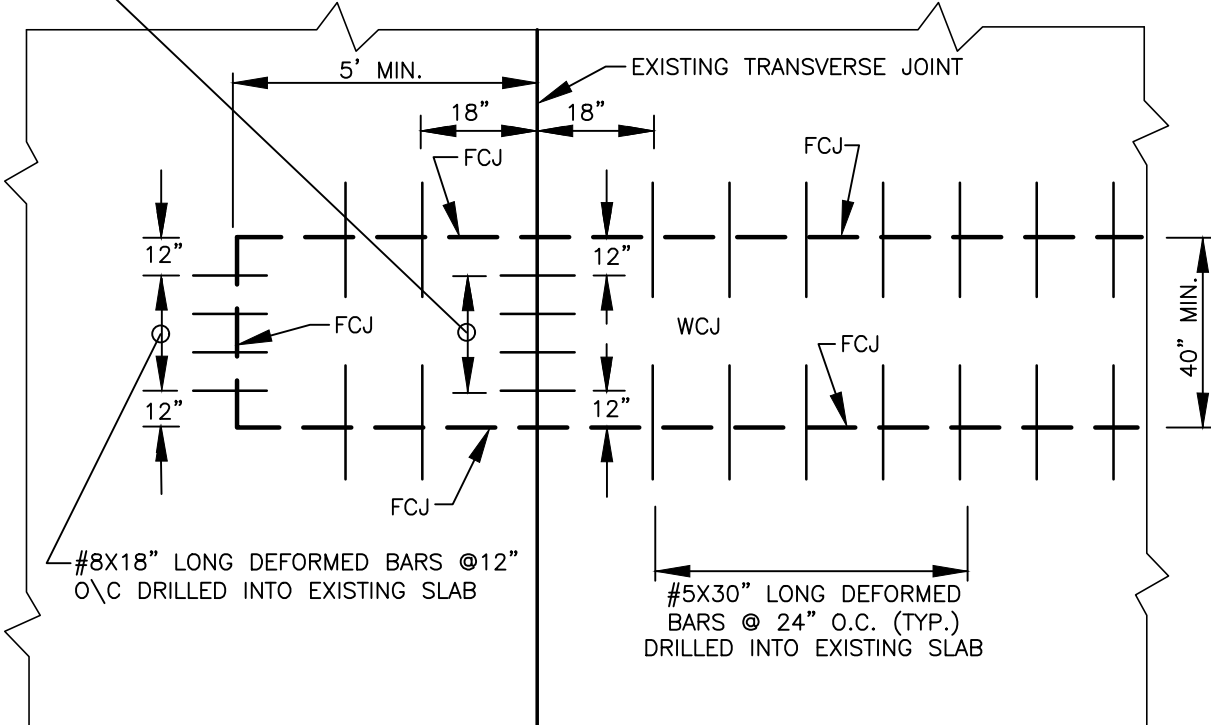
LANE DIRECTION →



STEEL LAYOUT - TRANSVERSE INTERIOR PATCH

1 1/4" DIA. X 18" LONG SMOOTH DOWELS
 @ 12" O.C. SET ON ASSEMBLY

LANE DIRECTION →



STEEL LAYOUT - LONGITUDINAL INTERIOR PATCH

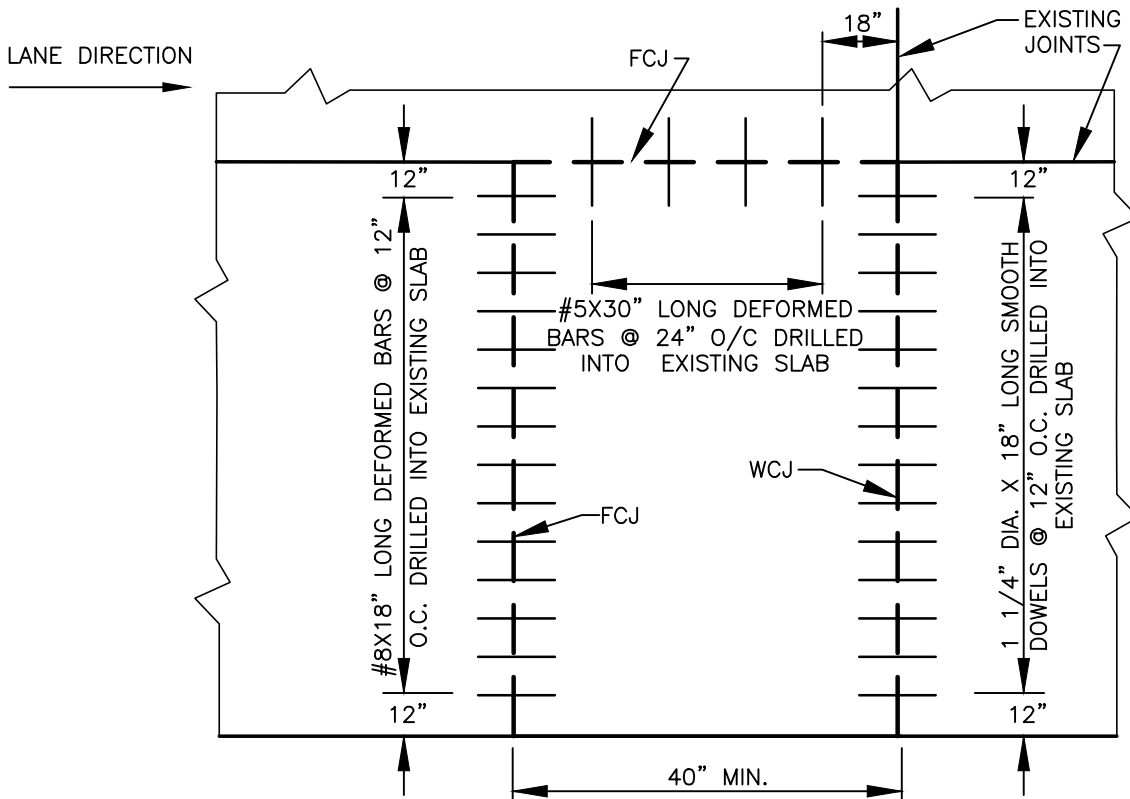
STEEL LAYOUT FOR CONCRETE PATCH - INTERIOR



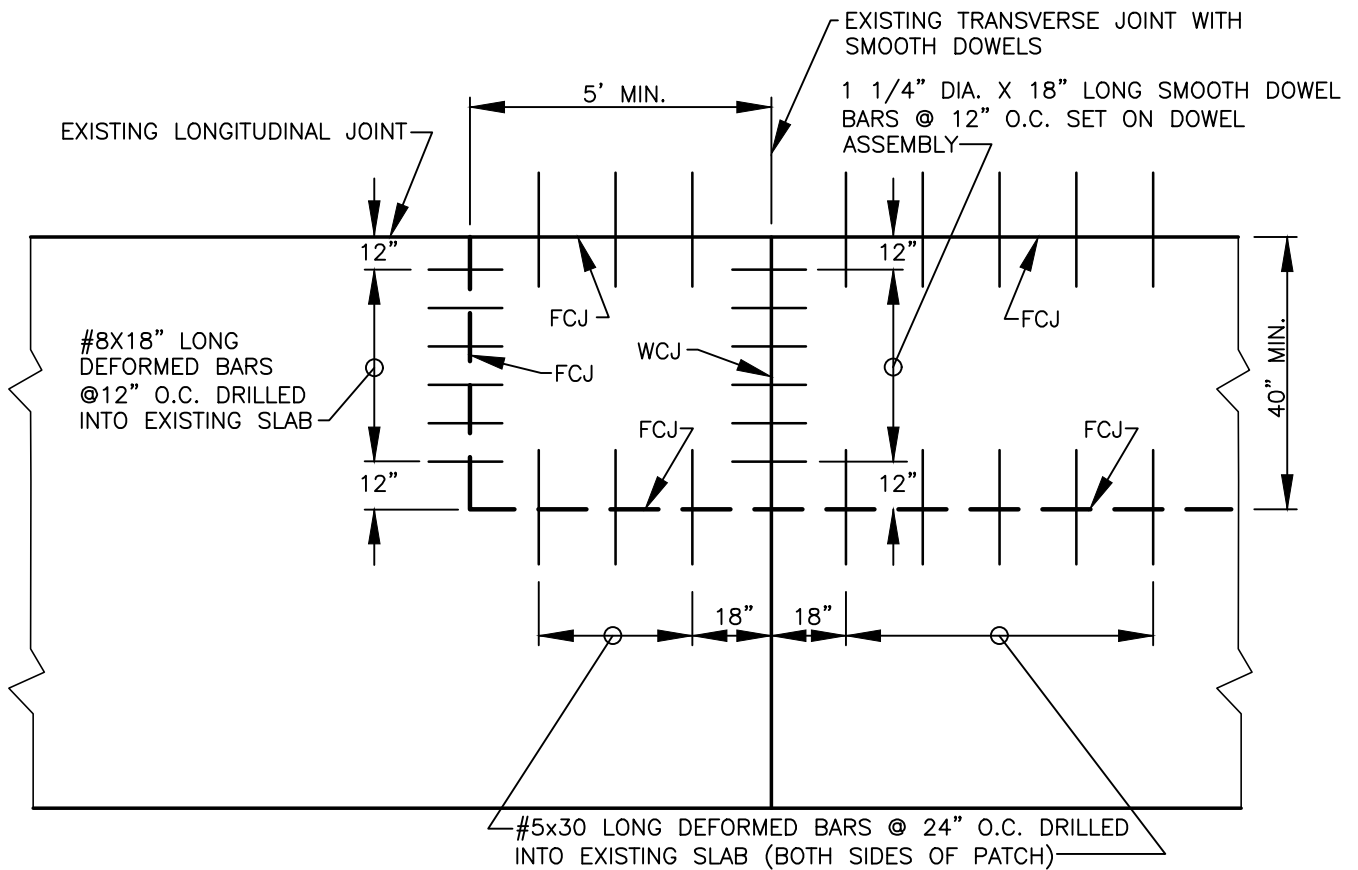
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T05-11



STEEL LAYOUT - TRANSVERSE EXTERIOR PATCH



STEEL LAYOUT - LONGITUDINAL EXTERIOR PATCH

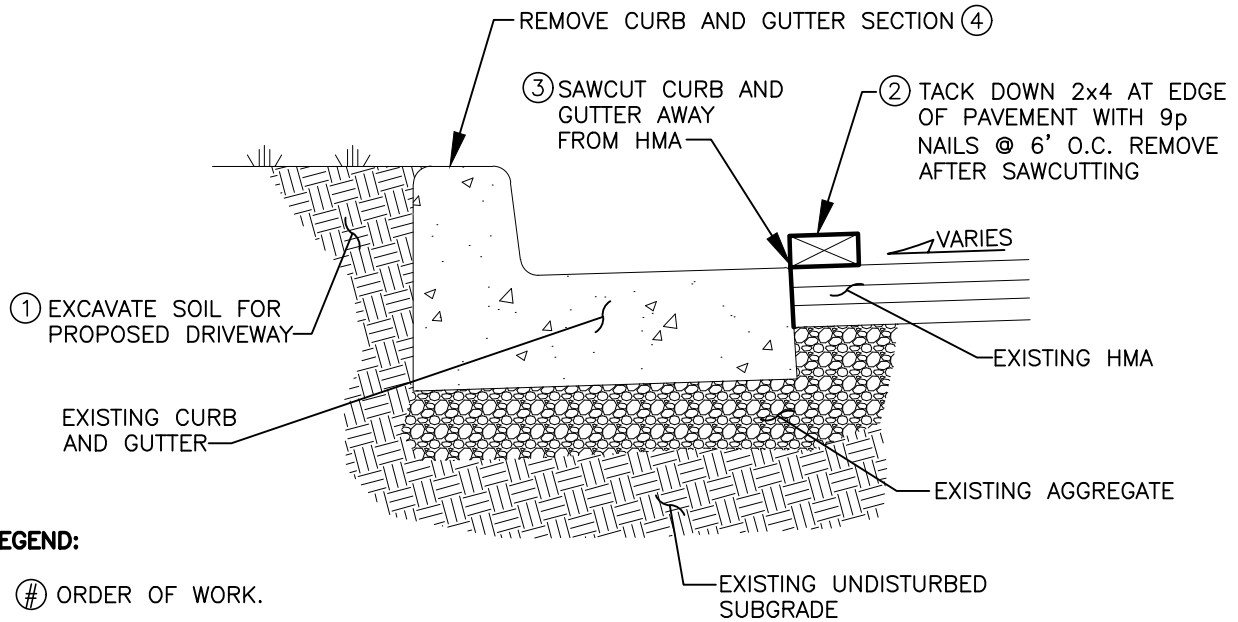
STEEL LAYOUT FOR CONCRETE PATCH - EXTERIOR



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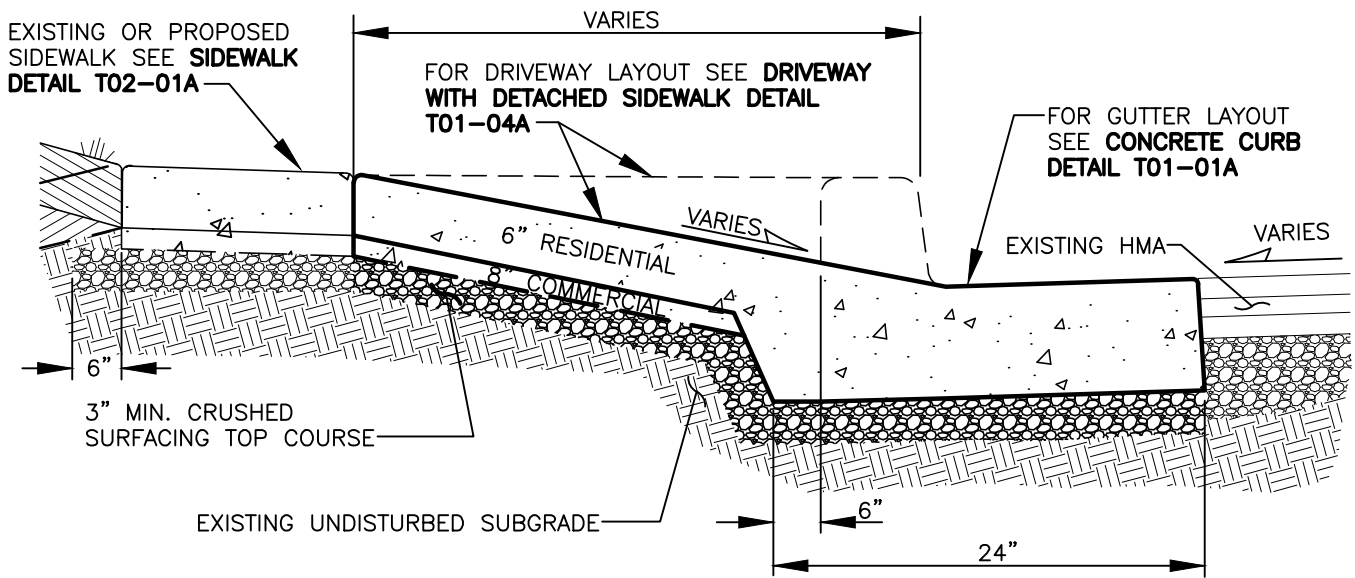
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T05-12



LEGEND:

① ORDER OF WORK.

EXISTING CONDITION



⑤ PROPOSED LAYOUT

NOTES:

1. IF HMA IS DAMAGED OR UNDERMINED WHILE REMOVING EXISTING CURB, SAWCUTTING AND PAVEMENT RESTORATION IS REQUIRED, SEE **RESTORATION/WIDENING AT CURBS DETAIL T05-01A** AND **PAVEMENT RESTORATION LIMITS DETAIL T05-01B**.
2. CONCRETE SHALL BE 4000 PSI MIN. (CL 4000), 3-1/2" SLUMP (MAX.), MEDIUM BROOM FINISH PARALLEL TO DRIVEWAY CENTERLINE.
3. COMMERCIAL DRIVEWAYS REQUIRE 8" CONCRETE WITH REINFORCING STEEL (6x6 - W2.9xW2.9 WWF, MIN.), 1 1/2" COVER FROM BOTTOM OF SLAB. RESIDENTIAL DRIVEWAYS REQUIRE 6" CONCRETE.
4. COMPACT SUBGRADE AND CRUSHED SURFACING TOP COURSE TO 95% OF MAXIMUM DRY DENSITY (3" MIN. DEPTH).

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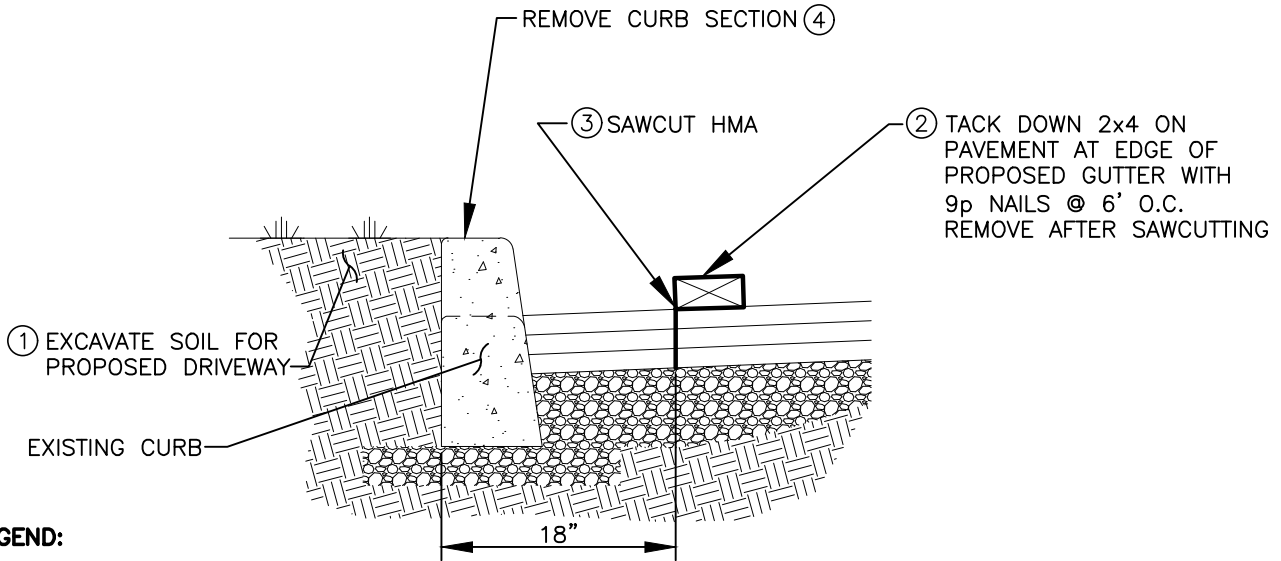


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**CURB AND GUTTER RESTORATION
AT DRIVEWAYS WITH DETACHED SIDEWALK**

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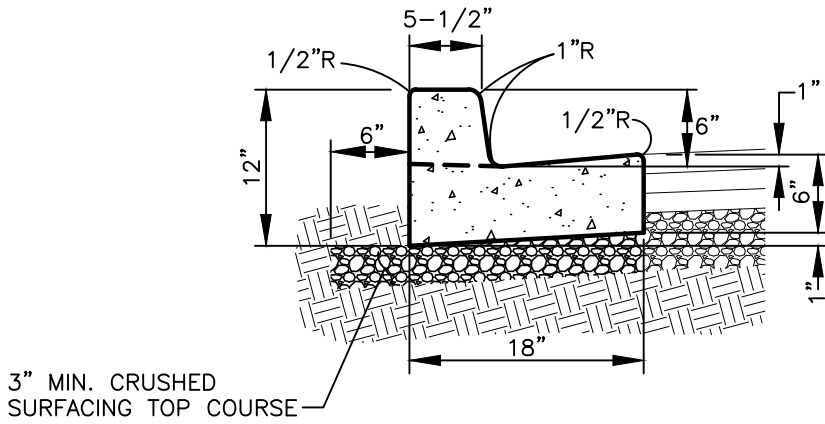
STD. PLAN NO.
T05-13



LEGEND:

④ ORDER OF WORK.

EXISTING TYPE E-1 CURB



⑤ PROPOSED TYPE A-1 CURB AND GUTTER
 (FOR ADDITIONAL INFORMATION SEE CONCRETE CURB
 DETAIL T01-01A)

NOTES:

1. IF HMA IS DAMAGED OR UNDERMINED WHILE REMOVING EXISTING CURB, SAWCUTTING AND PAVEMENT RESTORATION IS REQUIRED, SEE **RESTORATION/WIDENING AT CURBS DETAIL T05-01A** AND **PAVEMENT RESTORATION LIMITS DETAIL T05-01B**.
2. COMPACT SUBGRADE AND CRUSHED SURFACING TOP COURSE TO 95% OF MAXIMUM DRY DENSITY (3" MIN. DEPTH).

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OPTIONAL E-1 CURB REPLACEMENT WITH A-1 CURB AND GUTTER

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STD. PLAN NO.
T05-14

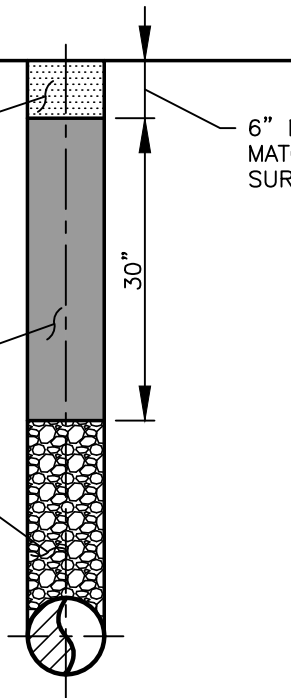
QUIKRETE FASTSET DOT MIX (OR SIMILAR IF APPROVED BY THE ENGINEER PRIOR TO USE)

6" MINIMUM, MATCH EXISTING SURFACE THICKNESS

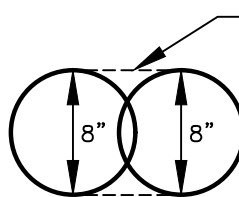
CONTROL DENSITY FILL (CDF) REQUIRED. SEE **T05-06A** AND **T05-06B** FOR SPECIFICATIONS. THE ENGINEER MAY ALLOW USE OF BENTONITE. ADVANCE SUBMITTAL REQUIRED

30"

CRUSHED GRANULAR IMPORT BACKFILL (COMPACT IN 6 TO 12 INCH LIFTS) MAY BE USED TO WITHIN 36" OF ASPHALT



CORED HOLE ALL



SAW CUT BETWEEN OVER-LAPPING OR ADJACENT HOLES TO CREATE A STRAIGHT EDGE

CORED HOLE PLAN VIEW AT OVERLAPPING OR ADJACENT HOLES

NOTES:

NON-PAVED SURFACE

- FOR HOLES THROUGH SOIL OR GRAVEL ONLY, REPLACE WITH NATIVE/LIKE MATERIAL TO GRADE AND USE SAND LAYER TO PROTECT UTILITY (NOTE 2).
- FOR HOLES THROUGH A SIDEWALK, REMOVE AFFECTED PANEL(S) AND REPLACE PER CITY OF VANCOUVER STANDARDS. JOINT TO JOINT REPLACEMENT REQUIRED OR AS DIRECTED BY ENGINEER.

PAVED ROADWAY

- ALL STREETS WITH A PAVEMENT CONDITION INDEX (PCI) OF 70 OR GREATER REQUIRE AN 8" OR SMALLER CORED HOLE FOR POTHOLES OR TEST HOLES, OR AS DIRECTED BY THE ENGINEER.
- HOLES SHALL BE PLACED OUTSIDE OF WHEEL PATH OF TRAVELWAY WHERE POSSIBLE.
- 6" TO 12" LAYER OF SAND DIRECTLY ABOVE THE UTILITY MAY BE USED WHEN BACKFILLING TO PROTECT EXISTING UTILITY STRUCTURE (OPTIONAL/AS NEEDED).
- NO USE OF COLD MIX OR REUSING EXISTING CORE FOR FINAL CAP.
- OPENINGS LARGER THAN 8" WILL BE CONSIDERED OPEN CUT AND SHALL MEET REQUIREMENTS OF **PAVEMENT RESTORATION LIMITS T05-01B, STANDARD TRENCH RESTORATION - HMA - CONTROLLED DENSITY FILL T05-06A AND T05-06B AND STANDARD TRENCH RESTORATION - HMA TRANSVERSE CUTS T05-07.**
- WHEN OPEN AND UNATTENDED COVER WITH PLATE 2 TIMES DIAMETER AND STABILIZE TO KEEP IN PLACES.
- INSTALLATION OF MONITORING WELLS OR OTHER PERMANENT OR SEMI-PERMANENT FIXTURES REQUIRE A STREET USE PERMIT (TYPE D) PER VMC 11.60.040.

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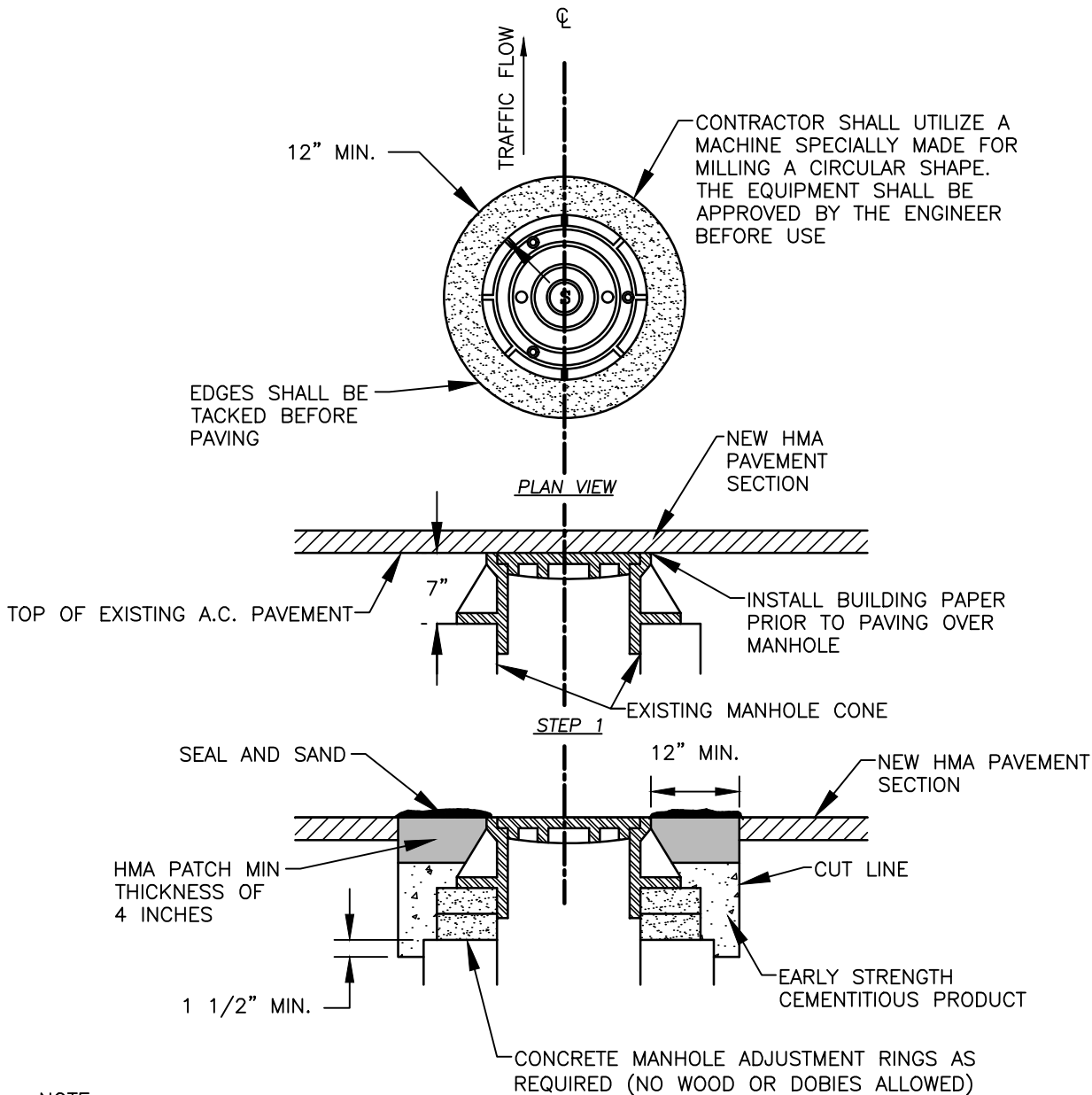


CORED HOLE (POTHOLE / TEST HOLE / MONITORING WELL) SECTION AND PLAN VIEW

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REVISION	APPROVED BY	APPROVAL DATE
5	<i>M.H.H.</i>	3/24

STD. PLAN NO.
T05-15



NOTE:
 THE TEMPERATURE OF HMA SHALL
 BE GREATER THAN 250° F AT TIME
 OF PLACEMENT.

STEPS 2, 3, 4, 5 & 6

MANHOLE ADJUSTMENT

- STEP 1 COVER EXISTING MANHOLE WITH BUILDING PAPER AND CONSTRUCT HMA PAVEMENT OVER TOP OF MANHOLE.
- STEP 2 REMOVE PAVEMENT AROUND MANHOLE 12" MIN. FROM MANHOLE FRAME.
- STEP 3 CLEAN SIDES OF ASPHALT TO ENSURE FREE OF DEBRIS/DUST.
- STEP 4 RAISE MANHOLE FRAME AND COVER USING CONCRETE RINGS AND CITY APPROVED SHIMS, BRICKS, AND CONCRETE TO FINISH GRADE MATCHING PROFILE AND CROSS SLOPE.
- STEP 5 BACKFILL WITH EARLY STRENGTH P.C.C. AND HMA TO DEPTHS AS DIRECTED.
- STEP 6 SEAL AND SAND UPON COMPLETION. SEAL SEAMS WITH BITUMINOUS EMULSION AND ADEQUATELY SAND WHEN COMPLETED.

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MANHOLE ADJUSTMENT CIRCULAR CUT

CITY OF VANCOUVER DEPARTMENT OF PUBLIC WORKS TRANSPORTATION DIVISION	DRAWN BY	APPROVED BY	APPROVAL DATE	STD. PLAN NO. T05-16
	CDC	<i>M.H.H.</i>	3/24	
	REVISION	APPROVED BY	APPROVAL DATE	
	1	<i>M.H.H.</i>	3/24	