CITY OF BURLINGTON, VERMONT

CLIFF STREET SIDEWALK IMPROVEMENTS

STP SDWK(6)

FEBRUARY, 2014

ISSUED FOR 60% REVIEW
NOT FOR CONSTRUCTION
NOVEMBER 4, 2013

Aldrich + Elliott
WATER RESOURCE ENGINEERS
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WARD 6 CITY COUNCILORS

KAREN PAUL

NORMAN BLAIS

MAYOR

HON. MIRO WEINBERGER

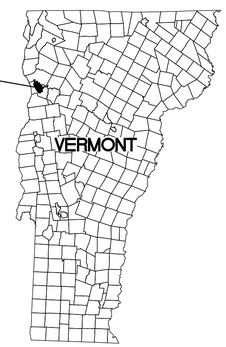
DIRECTOR OF PUBLIC WORKS

CHAPIN SPENCER

CITY ENGINEER AND SURVEYOR

NORM BALDWIN, PE

LOCATION MAP
SCALE: 1"=300'



INDEX OF DRAWINGS

DRAWING NO.	TITLE
T	TITLE SHEET AND INDEX OF DRAWINGS
1	GENERAL CONSTRUCTION LEGEND AND NOTES
2	QUANTITY SHEET
3	TYPICAL STREET/SIDEWALK CROSS SECTIONS
4	PLAN AND PROFILE STATION 0+00 TO 4+00
4A	PLAN AND PROFILE STATION 0+00 TO 2+00
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5	PLAN AND PROFILE STATION 4+00 TO 8+00
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7	SIDEWALK CROSS SECTIONS
8	ROADWAY AND SIDEWALK DETAILS
9	EROSION CONTROL DETAILS AND NOTES
10	TRAFFIC CONTROL PLAN

PROJECT DESCRIPTION AND LOCATION

THE PROJECT SHALL CONSIST OF THE INSTALLATION OF NEW 5' SIDEWALK INCLUDING CURBING, DRAINAGE, AND RETAINING WALLS. THE PROJECT IS LOCATED ON THE NORTH SIDE OF CLIFF STREET, BEGINNING AT SOUTH WILLARD STREET AND EXTENDING TO SOUTH PROSPECT STREET.

VERMONT AGENCY OF TRANSPORTATION QUALITY ASSURANCE PROGRAM=LEVEL 3

VTRANS STANDARDS		
STANDARD	DESCRIPTION	DATE
B-71	STANDARDS FOR RESIDENTIAL AND COMMERCIAL DRIVES	7/8/05
C-2A	PORTLAND CEMENT SIDEWALK DRIVE ENTRANCES WITH SIDEWALK ADJACENT TO CURB	10/14/05
C-2B	PORTLAND CEMENT CONCRETE SIDEWALK DRIVE ENTRANCE WITH SIDEWALK AND GREEN STRIP	3/10/08
C-3A	SIDEWALK RAMPS	3/10/08
C-3B	SIDEWALK RAMPS AND MEDIAN STRIPS	3/10/08
C-10	CURBING	2/11/08
D-11	CAST IRON COVER	2/11/08
E-193	PAVEMENT MARKING DETAILS	2/11/08
J-3	MAILBOX SUPPORT DETAIL	8/07/95

No.	DATE	DESCRIPTION	CHECKED

CITY OF BURLINGTON, VERMONT

CLIFF STREET SIDEWALK IMPROVEMENTS

TITLE SHEET AND INDEX OF DRAWINGS

DESIGNED JJD	PROJECT NO. 12077
DRAWN JEB	DRAWING NO. T
CHECKED JJD	
DATE FEB. 2014	

LEGEND

EXISTING

PLAN

PROPERTY LINE . . . . . PL PL
RIGHT-OF-WAY . . . . . ROW ROW
CONTOUR 360
WATERLINE . . . . . W
TELEPHONE CONDUIT (UNDERGROUND) . . . . . UGT
ELECTRICAL CONDUIT (UNDERGROUND) . . . . . UGE
OVERHEAD POWER . . . . . OHP
SANITARY SEWER . . . . . S
DRAIN . . . . . D
UNDERGROUND GAS. . . . . GAS
CULVERT . . . . .
TREE/BRUSH LINE . . . . .
GRAVEL ROAD OR DRIVE . . . . .
BITUMINOUS PAVEMENT . . . . .
SIDEWALK-CONCRETE . . . . .
CONCRETE CURB . . . . .
DITCH LINE . . . . .

TELEPHONE POLE. . . . . .
POWER POLE. . . . . .
COMBINATION POLE. . . . . .

GUY WIRE . . . . .
SEWER MANHOLE. . . . . S
CATCH BASIN. . . . . ⊞
HYDRANT. . . . .
CURB STOP. . . . . ⊕
VALVE. . . . . ⋈
SIGN. . . . .
DECIDUOUS TREE. . . . . .
CONIFEROUS TREE. . . . . .
STUMP. . . . . .
SURVEY POINT SET. . . . . △ STA. 1
PAVEMENT CORE 1
PROPERTY PIN . . . . . ○
LEDGE . . . . . .
LIGHT POLE . . . . . ☼
R.O.W. MONUMENT . . . . . ⊡
ELECTRICAL PULLBOX . . . . . E
MAILBOX . . . . . MB

PROFILE

GROUND SURFACE . . . . . .

PROPOSED

PLAN

CONTOUR 360
STORMDRAIN . . . . . SD
SILT FENCE . . . . .
PERMANENT EASEMENT LIMIT. . . . . .
TEMPORARY EASEMENT LIMIT. . . . . .
CONCRETE CURB . . . . .
BITUMINOUS PAVEMENT . . . . .
SIDEWALK-CONCRETE . . . . .
STORMDRAIN MANHOLE . . . . . S
CATCH BASIN . . . . . ⊞
SWALE . . . . .

PROFILE

SIDEWALK-CONCRETE . . . . . .

GENERAL CONSTRUCTION NOTES

1. **SAFETY**

   A. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS FOR THE SAFETY OF EMPLOYEES ON THE PROJECT AND SHALL COMPLY WITH ALL APPLICABLE PROVISIONS OF FEDERAL, STATE AND LOCAL SAFETY LAWS AND BUILDING CODES TO PREVENT ACCIDENTS OR INJURY. THE CONTRACTOR SHALL ERECT AND PROPERLY MAINTAIN AT ALL TIMES ALL NECESSARY SAFEGUARDS AND BARRICADES FOR THE PROTECTION OF EMPLOYEES ON THE WORK AND SAFETY OF OTHERS EMPLOYED NEAR THE WORK AND THE PUBLIC. FURTHER, THE CONTRACTOR SHALL POST DANGER SIGNS AND OTHER WARNING DEVICES TO PROTECT INDIVIDUALS FROM BEING INJURED IN THE VICINITY OF THE WORK.

   B. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE O.S.H.A. SAFETY REQUIREMENTS. THE CONTRACTOR SHALL INSURE ALL WORK PROCEEDS IN ACCORDANCE WITH O.S.H.A. REQUIREMENTS FOR SAFETY TRENCHING, EXCAVATION, AND CONFINED SPACE ENTRY PROCEDURES.

   C. THE CONTRACTOR SHALL PROVIDE ADEQUATE EQUIPMENT AND FACILITIES AS ARE NECESSARY AND REQUIRED TO PROVIDE EMERGENCY FIRST AID TO ANY PERSON WHO MAY BE INJURED IN THE PROSECUTION OF THE WORK UNDER THIS CONTRACT.

2. **PROTECTION OF WORK**

   A. THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR THE PROTECTION OF ALL BUILDINGS, STRUCTURES AND UTILITIES (BOTH PUBLIC AND PRIVATE), INCLUDING POWER POLES, SIGNS, UTILITY SERVICES, WATER MAINS, HYDRANTS, SEWERS, FORCE MAINS, STORM DRAINS, BURIED ELECTRICAL OR CONTROL WIRES, AND TELEPHONE CABLES WHETHER OR NOT THEY ARE SHOWN ON THE CONTRACT DRAWINGS.

   B. THE CONTRACTOR SHALL CAREFULLY SUPPORT AND PROTECT ANY UTILITIES, STRUCTURES, PIPE LINES, AND CONDUITS WHICH MAY BE ENCOUNTERED DURING COMPLETION OF THE WORK. ANY DAMAGE RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED BY HIM TO THE SATISFACTION OF THE ENGINEER AT CONTRACTORS EXPENSE.

3. **BURIED UTILITIES**

   A. THE CONTRACTOR SHALL NOTIFY "DIG SAFE" AT 1-888-DIG-SAFE 2 WEEKS PRIOR TO EXCAVATING IN CONSTRUCTION AREAS IN ORDER TO LOCATE BURIED UTILITIES WHICH MAY OR MAY NOT BE PRESENT. NO EXCAVATION IS AUTHORIZED UNTIL AFTER DIG SAFE HAS MARKED ALL EXISTING UTILITIES.

   B. UNDERGROUND UTILITIES LOCATIONS ARE APPROXIMATE ONLY. THOSE SHOWN ON THE DRAWINGS ARE BASED ON THE BEST AVAILABLE INFORMATION. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY OWNERS OF ADJACENT UTILITIES WHEN PROSECUTION OF THE WORK MAY AFFECT THEM. ALL DAMAGE, INJURY OR LOSS TO ANY PROPERTY, BY THE CONTRACTOR, OR ANY SUB-CONTRACTOR, TO THE FAULT OR NEGLIGENCE OF THE CONTRACTOR, SHALL BE REPLACED OR RESTORED TO AT LEAST ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR'S DUTIES AND RESPONSIBILILITIES FOR THE SAFETY AND PROTECTION OF THE WORK SHALL CONTINUE UNTIL SUCH TIME AS ALL THE WORK IS COMPLETED AND THE ENGINEER HAS ISSUED A NOTICE TO THE OWNER AND THE CONTRACTOR AS DESCRIBED HEREIN THAT WORK IS ACCEPTABLE AND FOR A PERIOD OF TWELVE MONTHS THEREAFTER.

3. **BURIED UTILITIES (CONT.)**

   C. THE CONTRACTOR SHALL EXCAVATE TEST PITS AS REQUIRED TO LOCATE EXISTING UTILITIES. THESE SHALL BE EXCAVATED TO LOCATE BURIED UTILITIES AND TO DETERMINE EXACT LOCATIONS AND/OR MATERIALS OF EXISTING UTILITIES. SOME HAND EXCAVATION MAY BE NECESSARY TO PROTECT UTILITIES. TEST PITS SHALL BE EXCAVATED AT LEAST TWO (2) WEEKS PRIOR TO CONSTRUCTION OF A PARTICULAR ITEM OF WORK SO THAT ALL TEST PITS REQUIRED OR NECESSARY BY THE CONTRACTOR SHALL BE INCLUDED IN PAY ITEM 204.22.

   D. THE CONTRACTOR IS RESPONSIBLE FOR ALL DAMAGE TO EXISTING UTILITIES AND SHALL BE RESPONSIBLE FOR REPAIR OF ANY SUCH DAMAGE AS QUICKLY AS POSSIBLE AT HIS OWN EXPENSE. THE CONTRACTOR SHALL MAINTAIN A SUPPLY OF REPAIR MATERIALS AND PIPE ON THE JOB SITE AT ALL TIMES IN ORDER TO MINIMIZE THE INCONVENIENCE CAUSED BY SUCH DAMAGE.

   E. FOR PROJECT WORK OUTSIDE OF THE CITY RIGHT-OF-WAY, THE CONTRACTOR SHALL BE RESPONSIBLE FOR HIRING A PRIVATE LOCATION SERVICE, SUCH AS VERMONT UNDERGROUND LOCATIONS, TO IDENTIFY ANY UTILITIES WHICH MAY BE WITHIN THE LIMIT OF CONSTRUCTION ON PRIVATE PROPERTY.

4. **CONSTRUCTION**

   A. THE CONTRACTOR SHALL USE ONLY DESIGNATED BENCH MARKS FOR REFERENCE ELEVATIONS.

   B. EROSION CONTROL, SHALL BE PROVIDED BY THE CONTRACTOR, IN ACCORDANCE WITH CONTRACT DOCUMENTS AND THE VERMONT LOW RISK HANDBOOK. EROSION CONTROLS SHALL BE IN PLACE PRIOR TO CONSTRUCTION. ALL DISTURBED AREAS ARE TO BE IMMEDIATELY STABILIZED. NO AREA SHALL BE LEFT UNSTABILIZED FOR MORE THAN SEVEN DAYS AT A TIME.

   C. ALL EROSION PREVENTION AND SEDIMENT CONTROL MEASURES MUST BE IMPLEMENTED PRIOR TO CONSTRUCTION.

5. **SITEWORK**

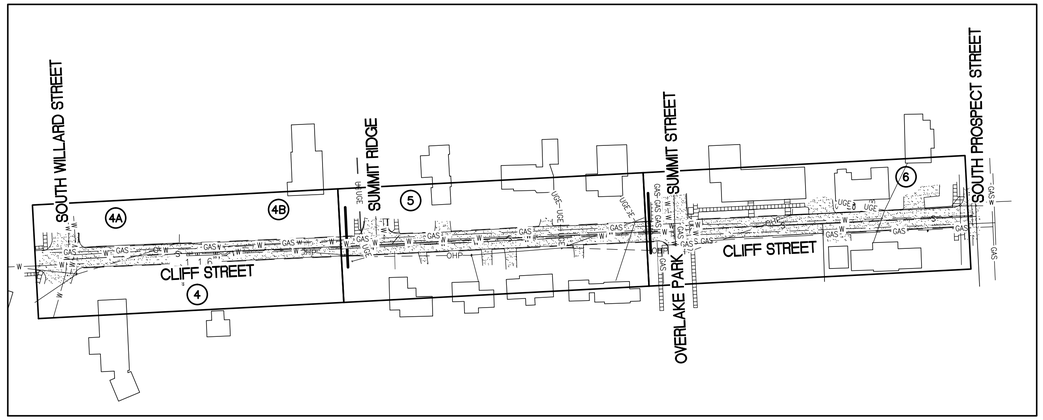
   A. ALL EXCESS MATERIAL SHALL BE DISPOSED OF OFF SITE UNLESS APPROVED BY THE OWNER. A COPY OF A WRITTEN AGREEMENT BETWEEN THE CONTRACTOR AND THE SITE OWNER SHALL BE SUBMITTED TO THE ENGINEER BEFORE ANY MATERIAL IS DEPOSITED AT THE SITE. DISPOSAL OF EXCESS MATERIALS OFF-SITE SHALL BE PERFORMED IN ACCORDANCE WITH SOLID WASTE MANAGEMENT DIVISION REGULATIONS AND SHALL INCLUDE THE OBTAINING OF ANY REQUIRED PERMITS. VTRANS WILL REVIEW AND PERMIT ALL WASTE, BORROW AND STAGING SITES OF THE CONTRACTOR BEFORE CONSTRUCTION CAN BEGIN.

6. **RECORD DOCUMENTS**

   A. ALL BURIED UTILITIES ENCOUNTERED SHALL BE DOCUMENTED WITH DEPTH AND THREE (3) TIES AND SHOWN BY THE CONTRACTOR ON RECORD DRAWINGS.

7. **STANDARDS**

   A. USE STATE OF VERMONT, AGENCY OF TRANSPORTATION, STANDARD SPECIFICATIONS FOR CONSTRUCTION, 2011, OR LATEST EDITION.



N
LOCATION PLAN
SCALE: 1"=100'

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No.	DATE	DESCRIPTION	CHECKED

CITY OF BURLINGTON, VERMONT

CLIFF STREET SIDEWALK IMPROVEMENTS

GENERAL CONSTRUCTION LEGEND AND NOTES

DESIGNED	PROJECT NO.
JJD	12077
DRAWN: JEB	DRAWING NO. 1
CHECKED: JJD	
DATE: FEB. 2014	

QUANTITY SHEET

ESTIMATED QUANTITIES	UNIT	DESCRIPTION OF ITEM	ITEM NO.
0	LS	Clearing and Grubbing	201.10
0	CY	Common Excavation	203.15
0	CY	Solid Rock Excavation	203.16
0	CY	Excavation of Surfaces and Pavements	203.28
0	CY	Earth Borrow	203.30
0	CY	Trench Excavation of Earth	204.20
0	CY	Trench Excavation of Earth, Exploratory	204.22
0	CY	Structure Excavation	204.25
0	CY	Granular Backfill for Structures	204.30
0	CY	Subbase of Crushed Gravel, Fine Graded	301.26
0	CWT	Emulsified Asphalt	404.65
0	TON	Bituminous Concrete Pavement	406.25
0	CY	Concrete, High Performance Class AA	501.32
0	LB	Reinforcing Steel	507.15
0	GAL	Water Repellent, Silane	514.10
0	EA	Precast Reinforced Concrete Catch Basin with Cast Iron Grate	604.20
0	LF	Underdrain Pipe (6 Inches)	605.10
0	HR	Power Broom Rental, Type I	608.30
0	MGAL	Dust Control with Water	609.10
0	CY	Stone Fill, Type II	613.11
0	LF	Cast-in-Place Concrete Curb, Type B	616.28
0	EA	Relocate Mail Box, Single Support	617.10
0	SY	Portland Cement Concrete Sidewalk, 5 Inch	618.10
0	SY	Portland Cement Concrete Sidewalk, 8 Inch	618.11
0	SY	Detectable Warning Surface	618.30
0	EA	Hydrant, Relocate	629.29
0	TON	Crushed Stone Bedding(3/4")	629.54
0	HOUR	Flaggers	630.15
0	LS	Mobilization / Demobilization	635.11
0	LS	Traffic Control	641.10
0	SY	Geotextile for Silt Fence	649.51
0	LB	Seed	651.15
0	LB	Fertilizer	651.18
0	TON	Agricultural Limestone	651.20
0	GAL	Hydraulic Mulch	651.28
0	CY	Topsoil	651.35
0	SY	Temporary Erosion Matting	653.20
0	CY	Temporary Stone Check Dam, Type I	653.25
0	EA	Inlet Protection Device, Type I	653.40
0	LF	Barrier Fence	653.50
0	LF	Project Demarcation Fence	653.55
0	EA	Evergreen Shrubs	656.25
0	EA	Deciduous Trees	656.30
0	EA	Deciduous Shrubs	656.35
0	EA	Transplanting Shrubs	656.50
0	LS	Tree Protection	656.85
0	EA	Removing Signs	675.50
0	EA	Erecting Salvaged Signs	675.60
0	EA	Setting Salvaged Posts	675.61
0	LF	Special Provision (Steel Pedestrian Railing)	900.640
0	SY	Special Provision (Gravity Retaining Wall)	900.675

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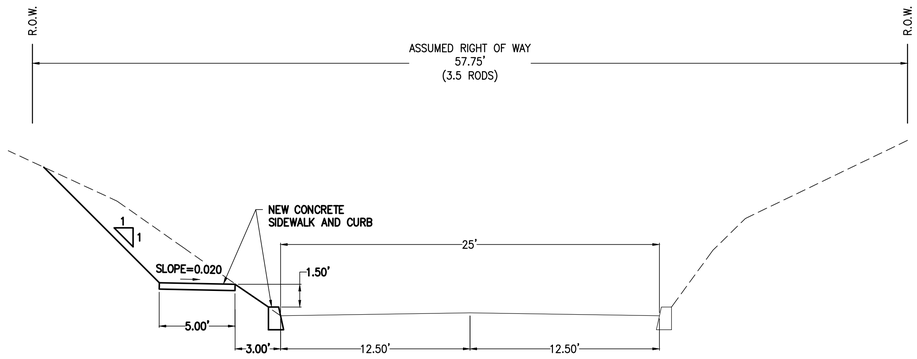
CLIFF STREET SIDEWALK IMPROVEMENTS

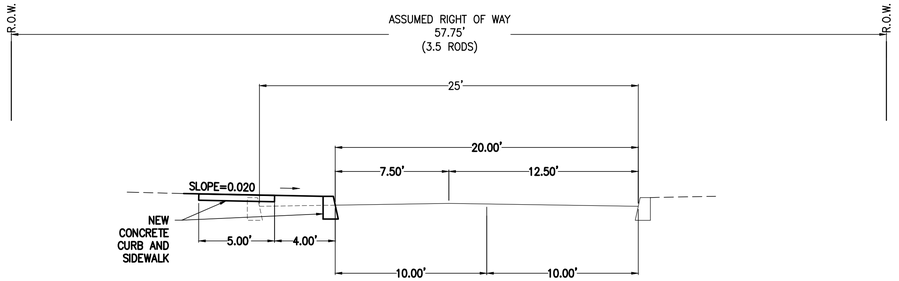
QUANTITY SHEET

DESIGNED	PROJECT NO.
JJD	12077
DRAWN: JEB	DRAWING NO.
CHECKED: JJD	2
DATE: FEB. 2014	



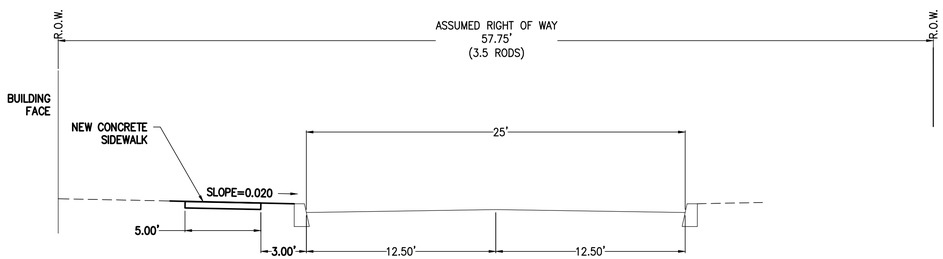
SOUTH WILLARD STREET TO SUMMIT RIDGE

SCALE: 1"=5'



SUMMIT RIDGE TO SUMMIT STREET

SCALE: 1"=5'



SUMMIT STREET TO SOUTH PROSPECT STREET

SCALE: 1"=5'

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CITY OF
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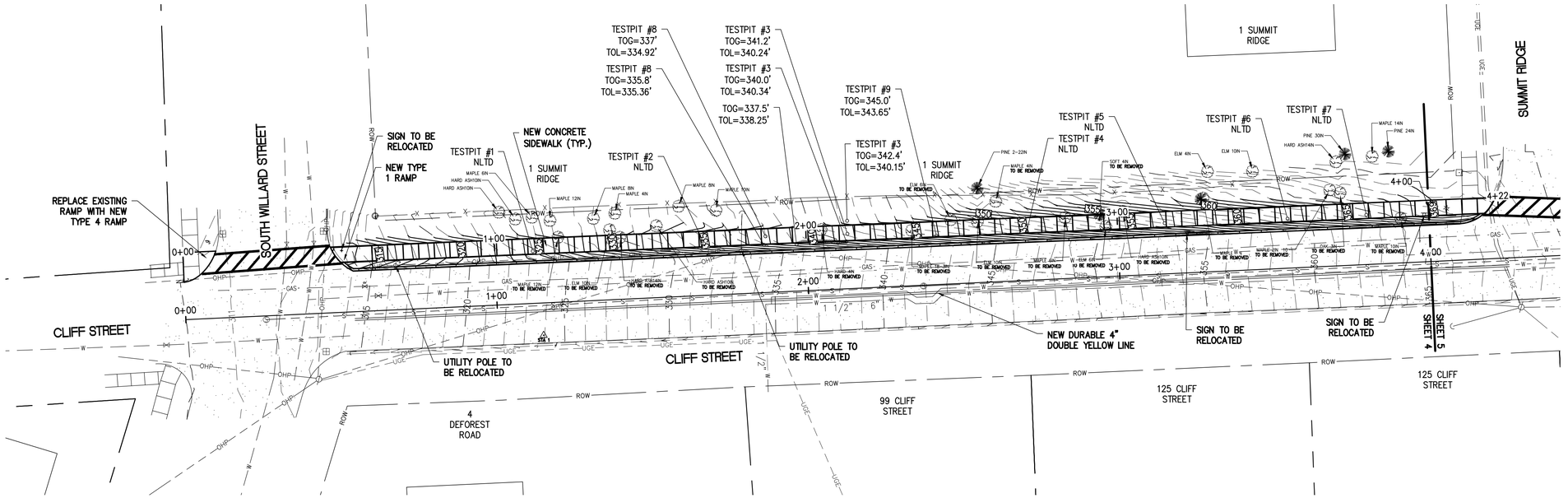
VERMONT

CLIFF STREET
SIDEWALK
IMPROVEMENTS

**TYPICAL
STREET/SIDEWALK
CROSS SECTIONS**

DESIGNED	PROJECT NO.
JJD	12077
DRAWN	DRAWING NO.
JEB	3
CHECKED	
JJD	
DATE	
FEB. 2014	

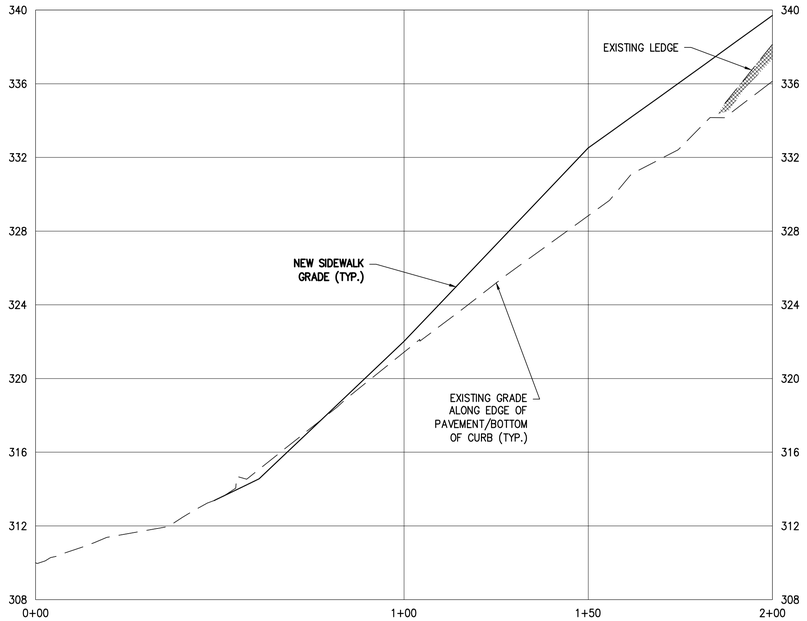


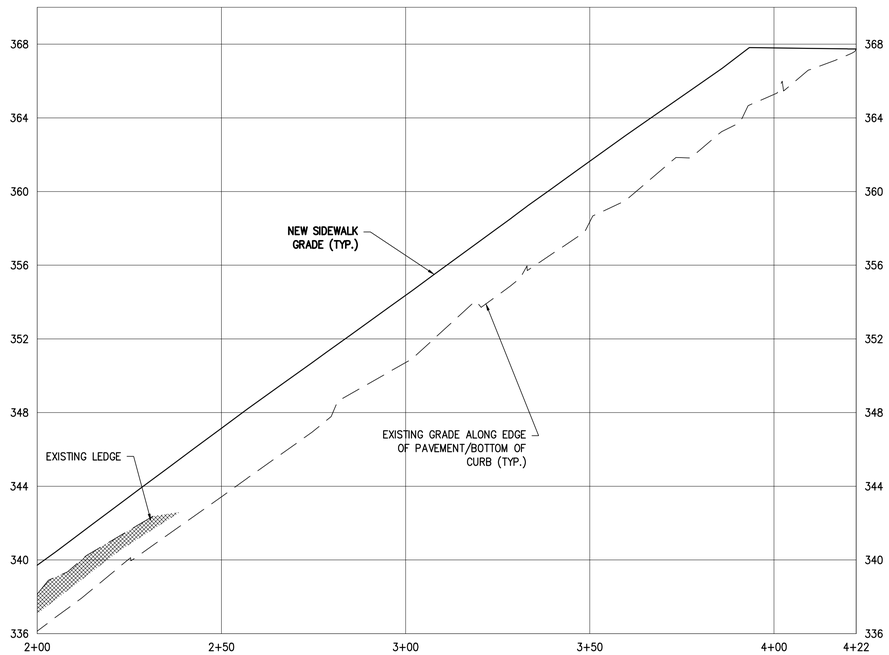
NOTES:

1. TOG= TOP OF GRADE
2. TOL=TOP OF LEDGE
3. NLTD=NO LEDGE TO DEPTH
4. CONTRACTOR SHALL REMOVE TREES AS SHOWN. ALL OTHER TREES SHALL BE PROTECTED DURING CONSTRUCTION.

PLAN
SCALE: 1"=20'

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)





SIDEWALK PROFILE
SCALE: HORIZ.=1"=20'
VERT.=1"=4'

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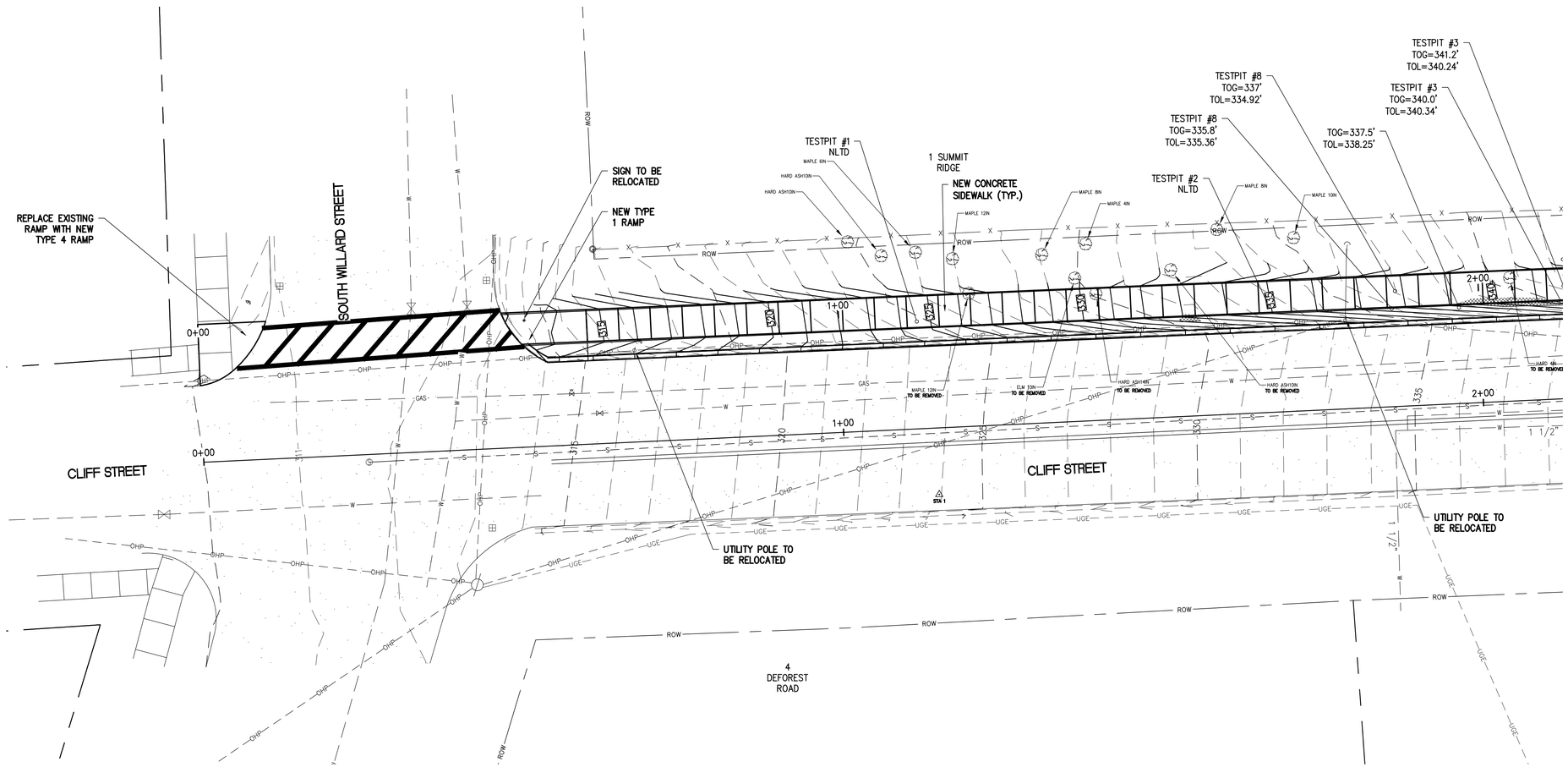
CLIFF STREET SIDEWALK IMPROVEMENTS

PLAN AND PROFILE STATION 0+00 TO 4+00

DESIGNED	PROJECT NO.
JJD	12077
DRAWN: JEB	DRAWING NO. 4
CHECKED: JJD	
DATE: FEB. 2014	



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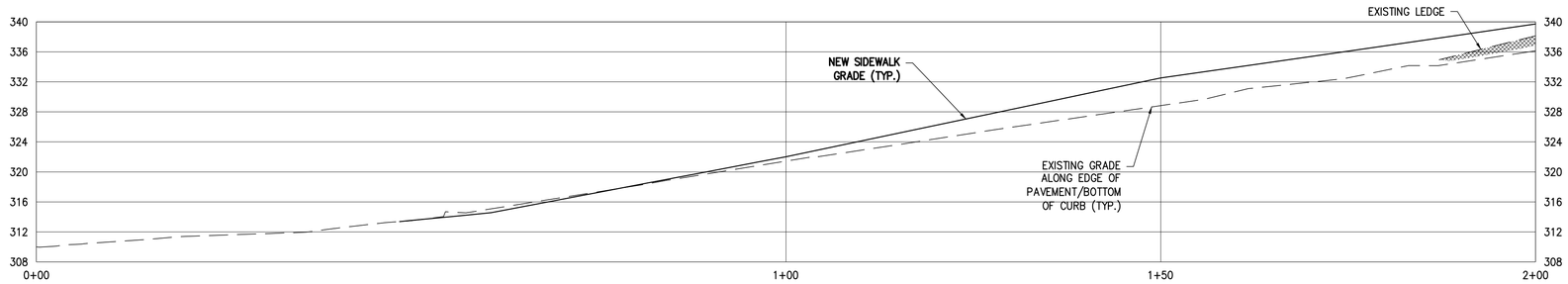
PLAN
SCALE: 1"=10'

GRAPHIC SCALE
10 0 5 10 20 40
(IN FEET)



SIDEWALK PROFILE
SCALE: HORIZ.=1"=10'
VERT.=1"=10'

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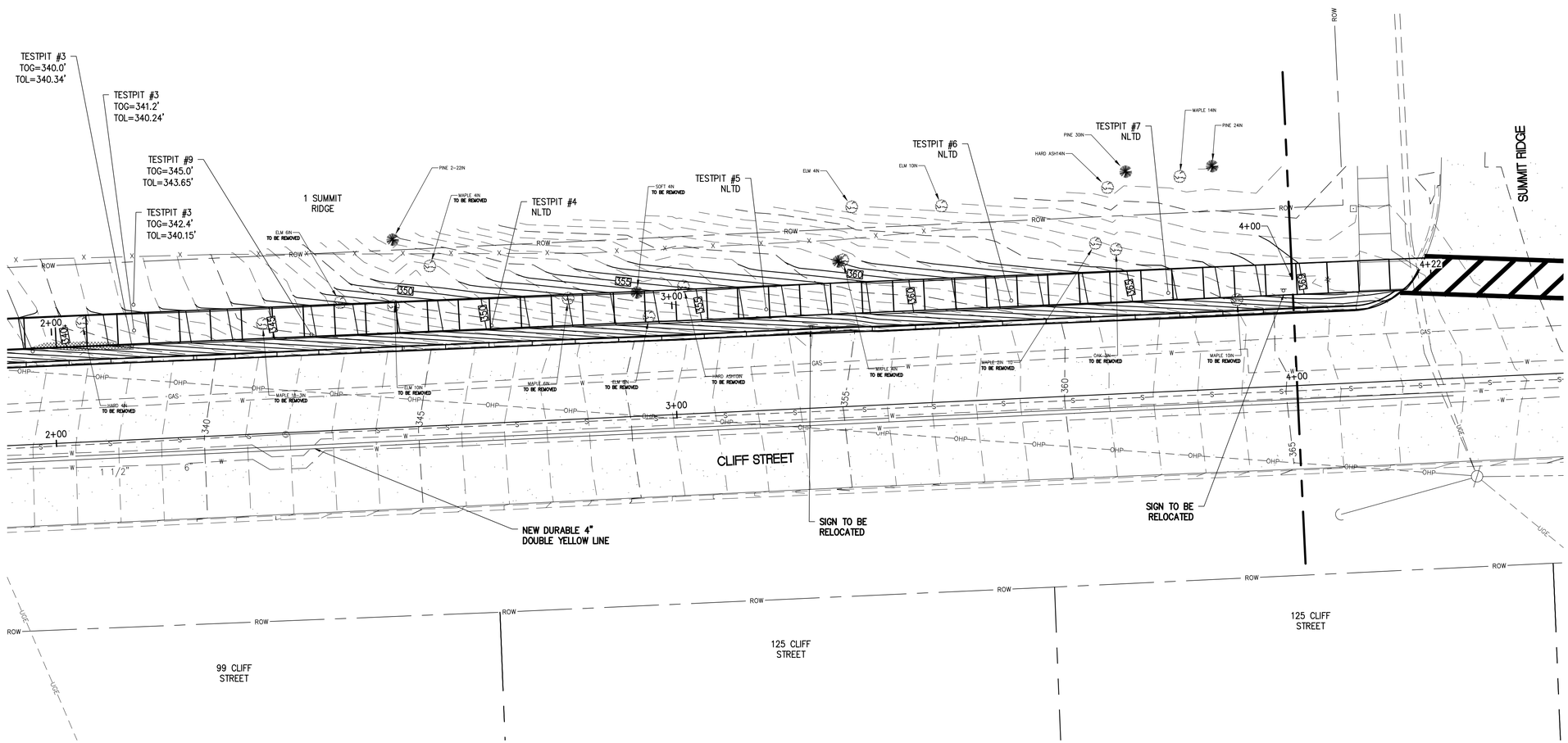
CITY OF BURLINGTON, VERMONT

CLIFF STREET SIDEWALK IMPROVEMENTS

PLAN AND PROFILE STATION 0+00 TO 2+00

DESIGNED	PROJECT NO.
JJD	12077
DRAWN: JEB	DRAWING NO.
CHECKED: JJD	4A
DATE: FEB. 2014	



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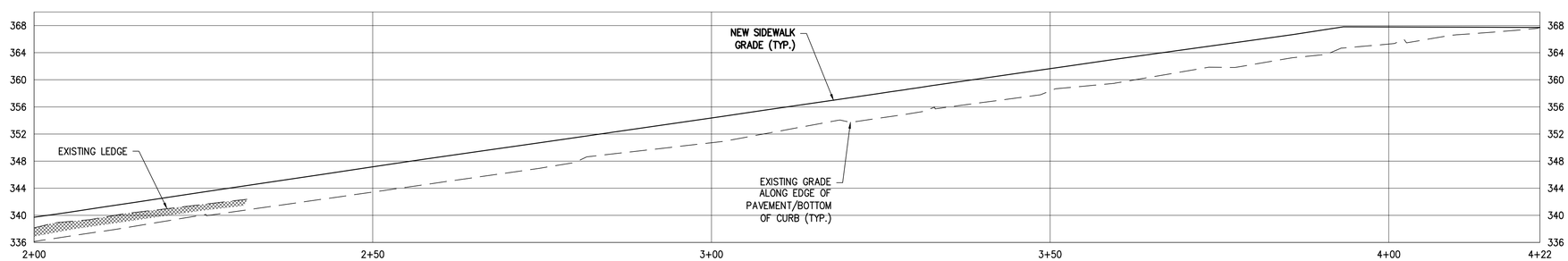
PLAN
SCALE: 1"=10'

GRAPHIC SCALE
10 0 5 10 20 40
(IN FEET)



SIDEWALK PROFILE
SCALE: HORIZ.=1"=10'
VERT.=1"=10'

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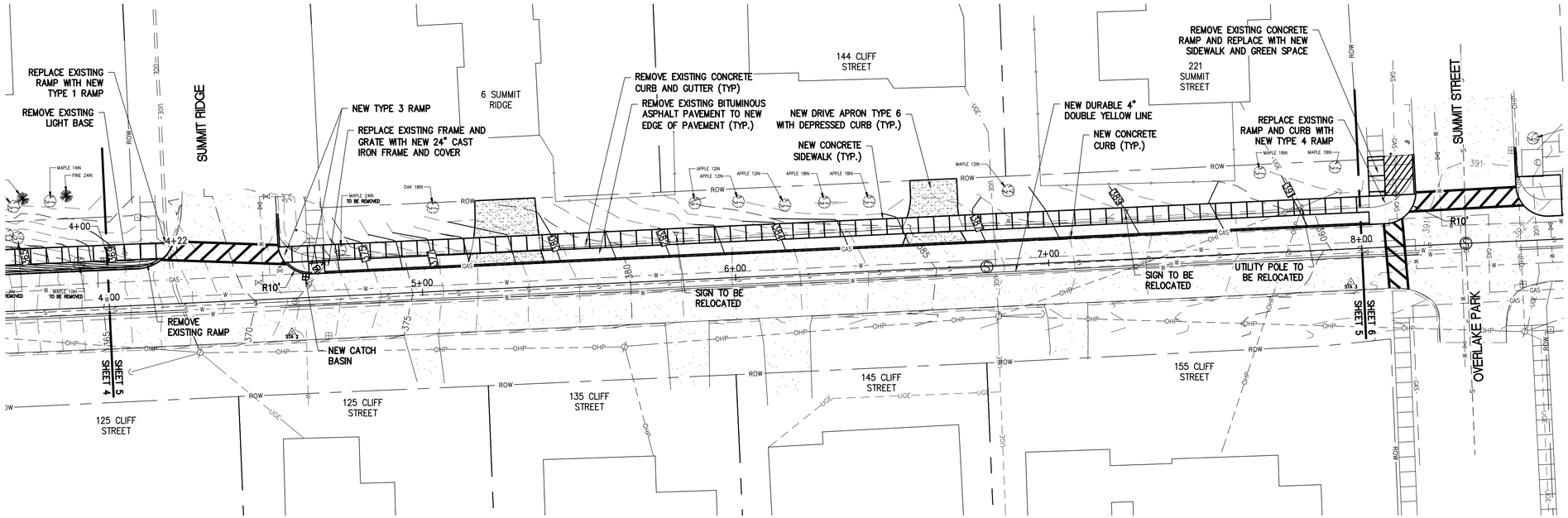
CLIFF STREET SIDEWALK IMPROVEMENTS

PLAN AND PROFILE STATION 2+00 TO 4+22

DESIGNED	PROJECT NO.
JJD	12077
DRAWN	DRAWING NO.
JEB	4B
CHECKED	
JJD	
DATE	
FEB. 2014	

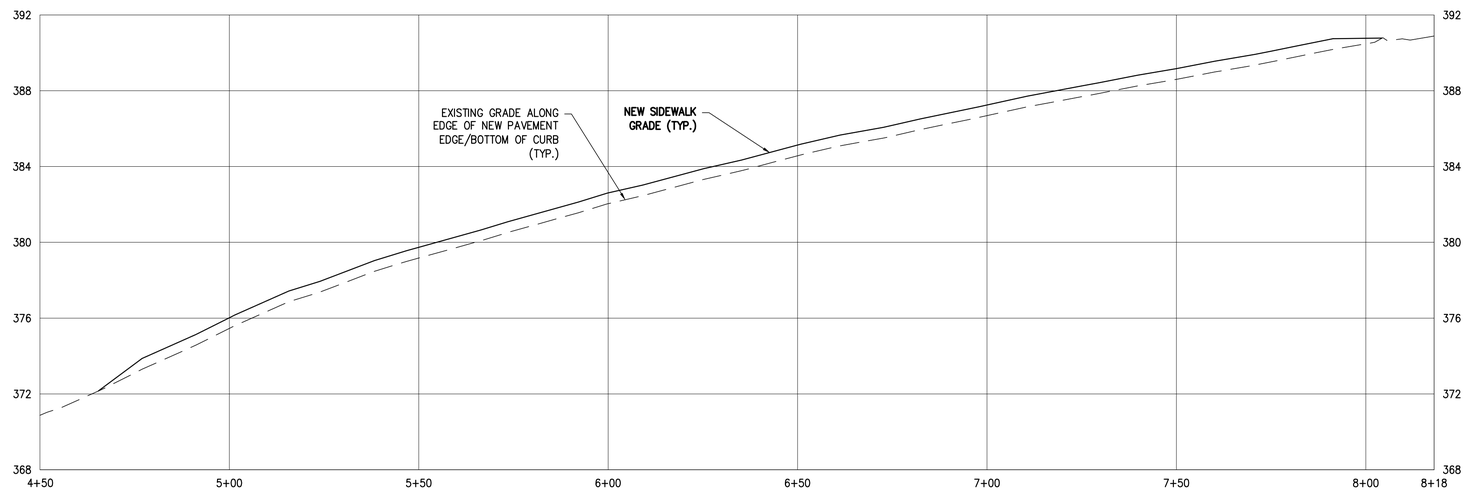


N
PLAN
SCALE: 1"=20'

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)



SIDEWALK PROFILE
SCALE: HORIZ.=1"=20'
VERT.=1"=4'

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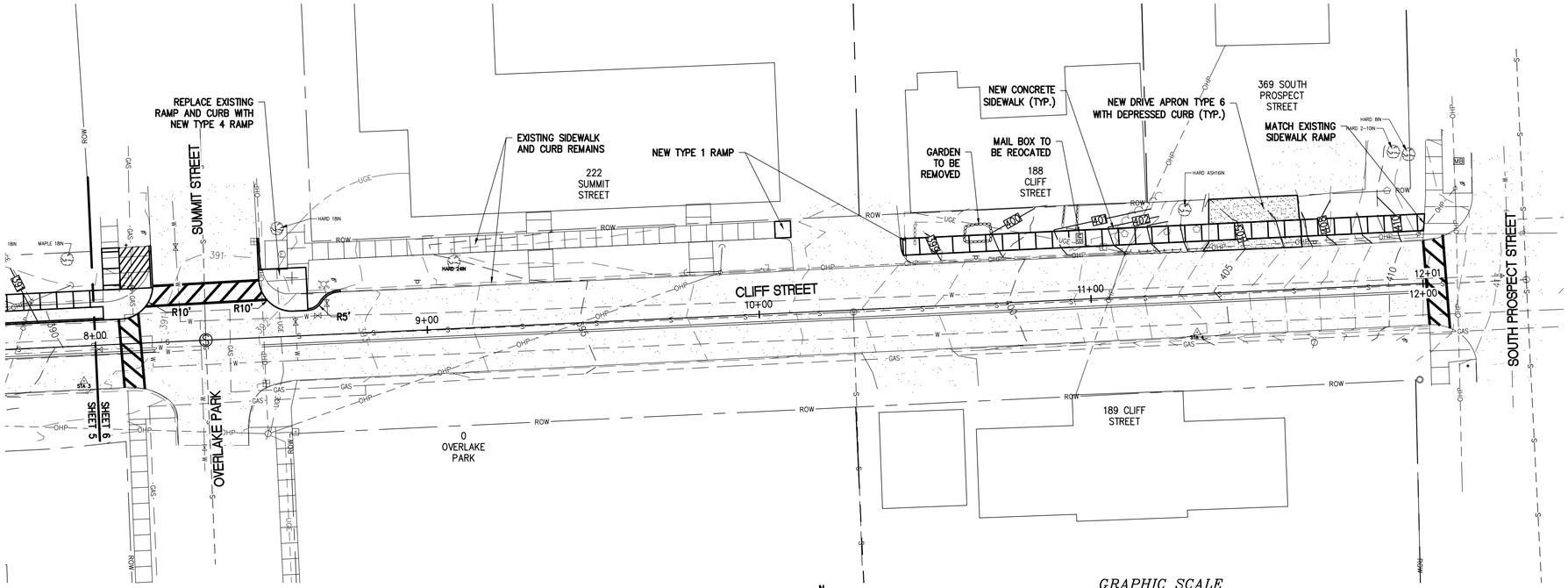
No.	DATE	DESCRIPTION	CHECKED

CITY OF BURLINGTON, VERMONT

CLIFF STREET SIDEWALK IMPROVEMENTS

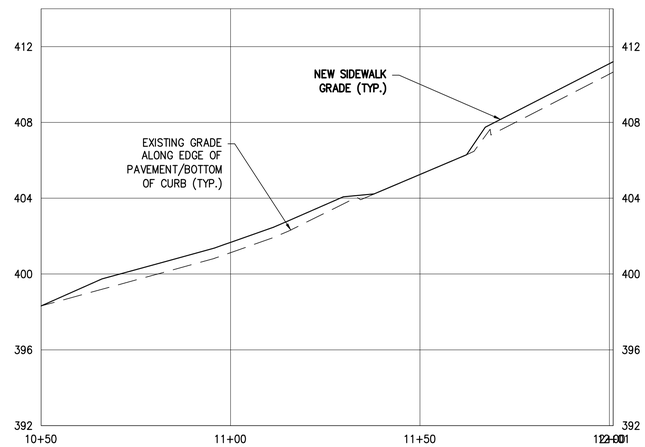
PLAN AND PROFILE STATION 4+00 TO 8+00

DESIGNED	PROJECT NO.
JJD	12077
DRAWN JEB	DRAWING NO. 5
CHECKED JJD	
DATE FEB. 2014	



PLAN
SCALE: 1"=20'

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)



SIDEWALK PROFILE
SCALE: HORIZ.=1"=20'
VERT.=1"=4'

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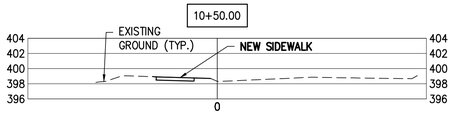
No.	DATE	DESCRIPTION	CHECKED

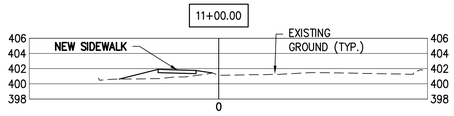
CITY OF BURLINGTON, VERMONT

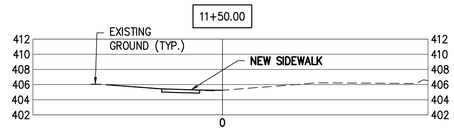
CLIFF STREET SIDEWALK IMPROVEMENTS

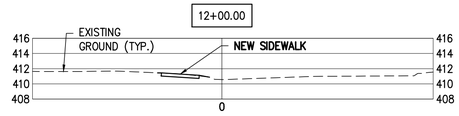
PLAN AND PROFILE STATION 8+00 TO 12+01

DESIGNED	PROJECT NO.
JJD	12077
DRAWN: JEB	DRAWING NO.
CHECKED: JJD	6
DATE: FEB. 2014	



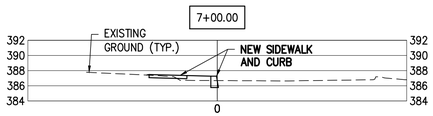


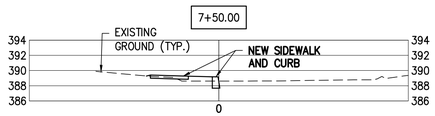


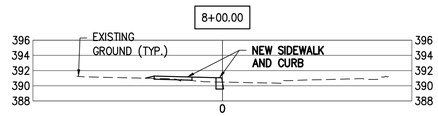


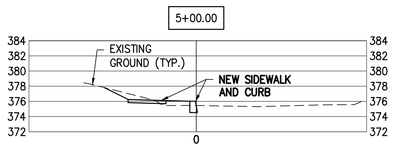
NEW SIDEWALK CROSS SECTIONS - SUMMIT STREET TO SO. PROSPECT ST.

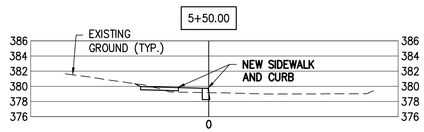
SCALE: 1"=10'

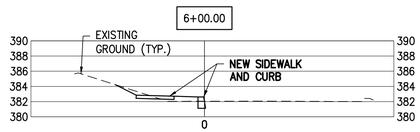


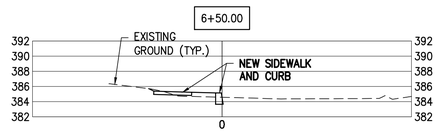






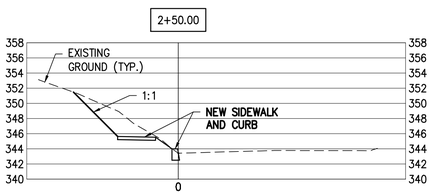


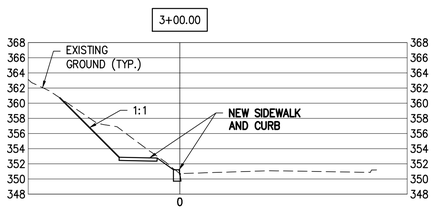


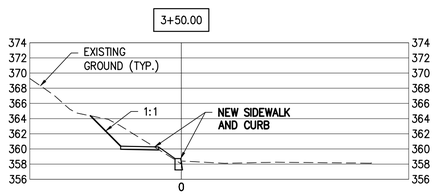


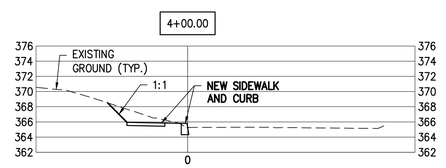
NEW SIDEWALK CROSS SECTIONS - SUMMIT RIDGE TO SUMMIT STREET

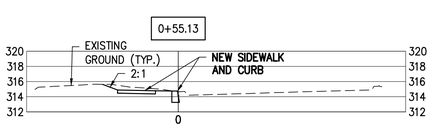
SCALE: 1"=10'

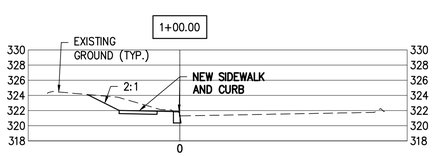


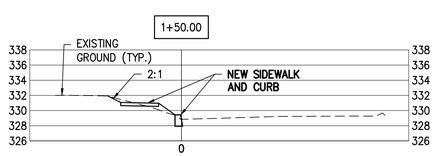


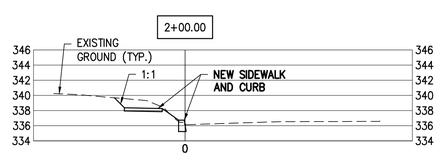












NEW SIDEWALK CROSS SECTIONS - SO. WILLARD TO SUMMIT RIDGE - NO WALL

SCALE: 1"=10'

GRAPHIC SCALE

10 0 5 10 20 40

(IN FEET)

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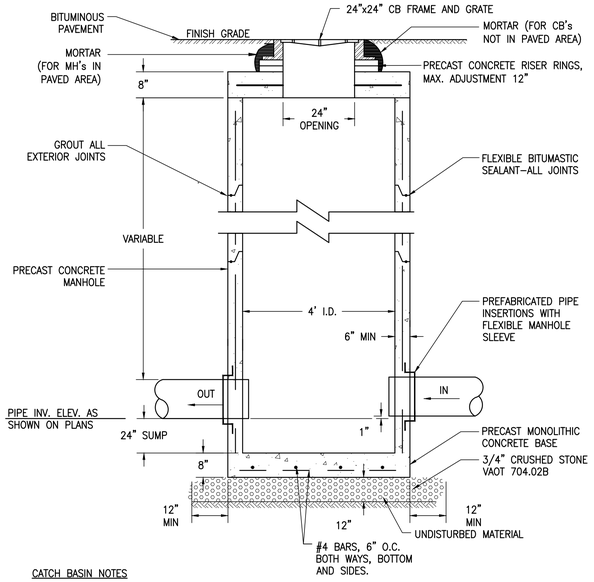
No.	DATE	DESCRIPTION	CHECKED

CITY OF BURLINGTON, VERMONT

CLIFF STREET SIDEWALK IMPROVEMENTS

SIDEWALK CROSS SECTIONS

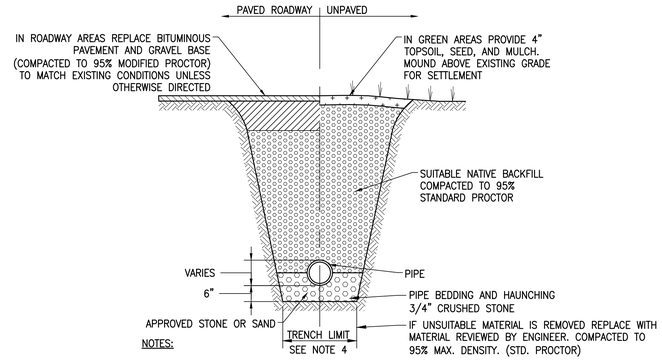
DESIGNED	PROJECT NO.
JJD	12077
DRAWN: JEB	DRAWING NO. 7
CHECKED: JJD	
DATE: FEB. 2014	



CATCH BASIN NOTES

1. IF DEPTH OF CATCH BASIN IS 7 FEET OR LESS FROM RIM TO CENTERLINE INVERT THEN A FLAT TOP WILL BE INSTALLED. IF DEPTH OF MANHOLE FROM RIM TO CENTERLINE INVERT IS MORE THAN 7 FEET THEN A CONICAL TOP WILL BE INSTALLED.
2. PROVIDE FLANGE GRATE AND FRAME.
3. CONCRETE=4,000 psi; STEEL REBAR=40,000 psi
4. STRUCTURES SHALL BE DESIGNED TO WITHSTAND AN H20 LOADING.

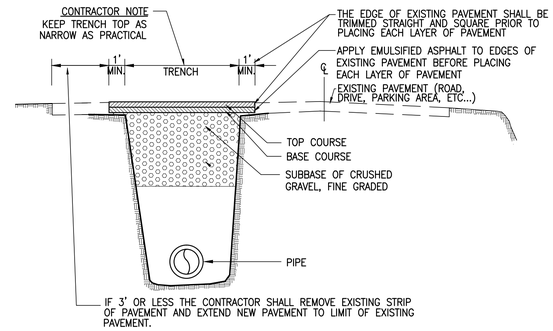
A/8 TYPE II CATCH BASIN DETAIL
SCALE: NONE



NOTES:

1. NO MECHANICAL TAMPERS SHALL BE USED DIRECTLY OVER PVC PIPE TO ENSURE PIPE IS NOT DAMAGED.
2. BEDDING TO PROVIDE A FIRM, STABLE, CONTINUOUS AND UNIFORM SUPPORT FOR THE FULL LENGTH OF THE PIPE.
3. FOR INITIAL BACKFILL CONTRACTOR CAN USE 3/4" CRUSHED STONE.
4. THE TRENCH LIMITS SHALL BE AS FOLLOWS:
   A. 6' FOR PIPES INSTALLED WITH A DEPTH OF COVER 10' OR LESS.
   B. 8' FOR PIPES INSTALLED WITH A DEPTH OF COVER GREATER THAN 10'.

B/8 TYPICAL STORMDRAIN TRENCH DETAIL
SCALE: NONE



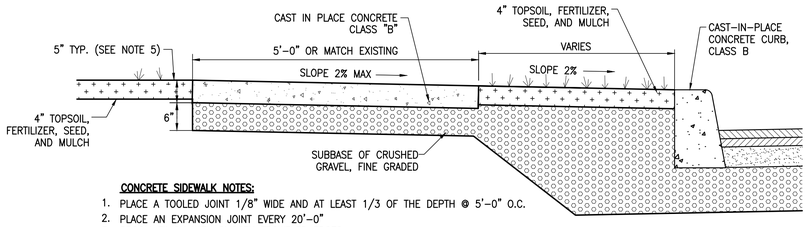
PAVEMENT REPAIR NOTES:

1. ALL PAVEMENT SHALL HAVE A MINIMUM COMPACTED THICKNESS AS SHOWN.
2. SHOULDER SHALL BE REPLACED, IF NECESSARY, TO ITS CONDITION PRIOR TO CONSTRUCTION.
3. PAVEMENT REPAIR WORK WITHIN CITY ROW SHALL MATCH EXISTING CONDITIONS

SCHEDULE OF TRENCH REPAIR THICKNESSES

	STREETS	DRIVEWAYS
BITUMINOUS PAVEMENT		
TOP COURSE	1-1/2" TYPE III	1" TYPE IV
BASE COURSE – TYPE II	2"	1"
FINE CRUSHED GRAVEL	8"	4"
COARSE CRUSHED GRAVEL SUBBASE	12"	8"

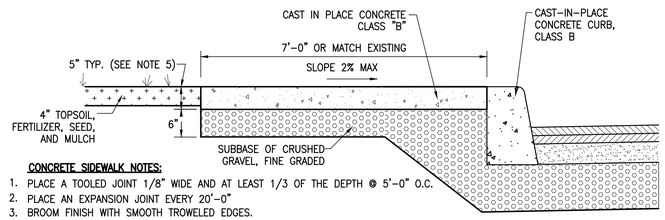
C/8 TYPICAL TRENCH PAVEMENT REPAIR DETAIL
SCALE: NONE



CONCRETE SIDEWALK NOTES:

1. PLACE A TOOLED JOINT 1/8" WIDE AND AT LEAST 1/3 OF THE DEPTH @ 5'-0" O.C.
2. PLACE AN EXPANSION JOINT EVERY 20'-0"
3. BROOM FINISH WITH SMOOTH TROWELED EDGES.
4. SIDEWALK SHALL BE CONSTRUCTED IN ACCORDANCE WITH VAOT STANDARDS, SECTION 618.
5. CONCRETE SHALL BE THICKENED TO 8" THROUGH ALL RESIDENTIAL DRIVES.
6. GREEN SPACE BETWEEN EDGE OF ROAD AND EDGE OF SIDEWALK SHALL BE 4' UNLESS OTHERWISE INDICATED ON THE CONTRACT DRAWINGS.
7. AFTER INITIAL CURING PERIOD IS OVER (APPROXIMATELY 28 DAYS) ALL EXPOSED SURFACES SHALL RECEIVE TWO COATS OF WATER REPELLANT, SILANE.

D/8 TYPICAL CONCRETE SIDEWALK, GREEN STRIP, CURB DETAIL
SCALE: NONE



CONCRETE SIDEWALK NOTES:

1. PLACE A TOOLED JOINT 1/8" WIDE AND AT LEAST 1/3 OF THE DEPTH @ 5'-0" O.C.
2. PLACE AN EXPANSION JOINT EVERY 20'-0"
3. BROOM FINISH WITH SMOOTH TROWELED EDGES.
4. SIDEWALK SHALL BE CONSTRUCTED IN ACCORDANCE WITH VAOT STANDARDS, SECTION 618.
5. CONCRETE SHALL BE THICKENED TO 8" THROUGH ALL RESIDENTIAL DRIVES.

E/8 TYPICAL CONCRETE SIDEWALK ADJACENT CURB DETAIL
SCALE: NONE

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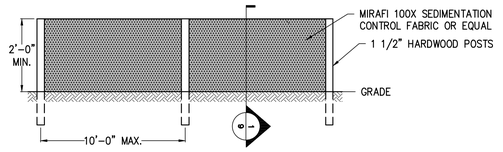
No.	DATE	DESCRIPTION	CHECKED

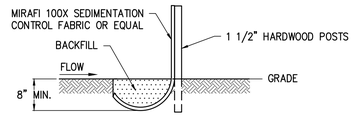
CITY OF BURLINGTON, VERMONT

CLIFF STREET SIDEWALK IMPROVEMENTS

STORMWATER, ROADWAY, AND SIDEWALK DETAILS

DESIGNED JJD	PROJECT NO. 12077
DRAWN JEB	DRAWING NO. 8
CHECKED JJD	
DATE FEB. 2014	

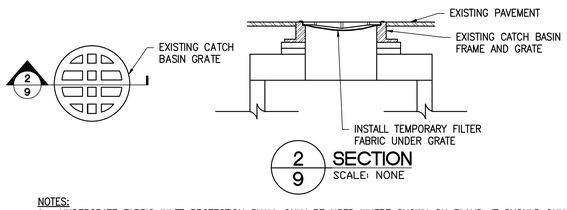




1/9 SECTION
SCALE: NONE

NOTES:
1. SILT FENCE SHALL BE PRE-FABRICATED EROSION CONTROL FENCE BY MIRAFI OR APPROVED EQUAL.
2. INSTALL WHERE SHOWN ON PLANS. THE FENCE SHALL BE INSTALLED PARALLEL TO CONTOURS WHERE POSSIBLE. THE ENDS OF THE FENCE SHOULD BE CURVED UPHILL TO PREVENT FLOW AROUND THE ENDS.
3. SECTIONS OF THE SILT FENCE SHALL BE JOINED TO OVERLAP BY FOLDING FABRIC AROUND EACH POST ONE FULL TURN. DRIVE POSTS TIGHTLY TOGETHER AND SECURE TOPS OF POSTS BY TYING OFF WITH CORD OR WIRE TO PREVENT FLOW-THROUGH OR BUILT-UP SEDIMENT AT JOINT.
4. INSPECT ALL SILT FENCE AT LEAST ONCE A WEEK AND WITHIN 24 HOURS AFTER EACH RAINFALL. MAINTENANCE SHALL BE PERFORMED AS NEEDED, AND SEDIMENT REMOVED WHEN SEDIMENT REACHES 1/3 HEIGHT OF THE SILT FENCE.
5. UPON FINAL STABILIZATION OF THE AREA UPHILL OF THE FABRIC, THE FABRIC SHALL BE REMOVED WITH THE APPROVAL OF THE ENGINEER.

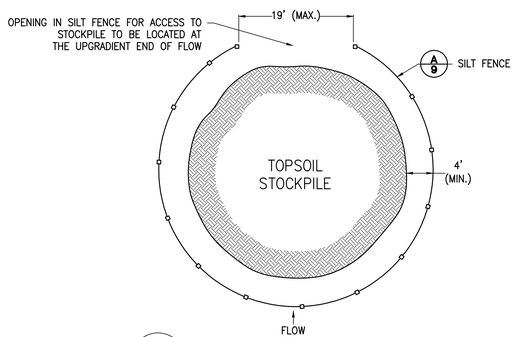
A/9 TYPICAL TEMPORARY SILT FENCE DETAIL
SCALE: NONE



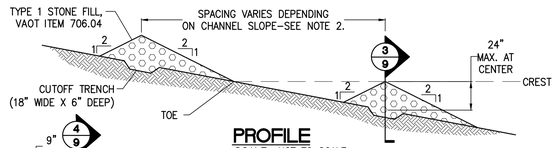
2/9 SECTION
SCALE: NONE

NOTES:
1. UNDERGRATE FABRIC INLET PROTECTION SHALL ONLY BE USED WHERE SHOWN ON PLANS. IT SHOULD ONLY BE USED FOR EXISTING CATCH BASINS IN EXISTING PAVED AREAS FOR LINEAR PIPELINE PROJECTS WHERE AMOUNT OF SEDIMENT RUN OFF IS MINIMAL AND DURATION OF CONSTRUCTION IS SHORT.
2. LIFT THE GRATE AND INSTALL FILTER FABRIC (MIRAFI 140NL OR EQUAL) OVER THE FRAME, AND THEN SET GRATE BACK IN PLACE.
3. INSPECT EACH INLET AT LEAST ONCE A WEEK AND WITHIN 24 HOURS AFTER EVERY RAINFALL. REPAIR AND REPLACEMENT OF INLET PROTECTION SHALL BE MADE AT TIME OF INSPECTION.
4. UPON STABILIZATION OF THE AREA UPSTREAM FROM THE INLET, THE PROTECTION SHALL BE REMOVED WITH THE APPROVAL OF THE ENGINEER.

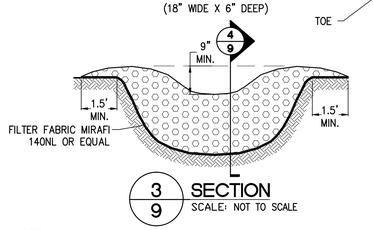
B/9 TYPICAL TEMPORARY INLET PROTECTION DETAIL
SCALE: NONE



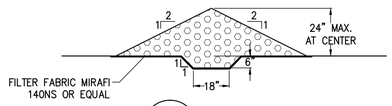
C/9 TYPICAL TOPSOIL STOCKPILE DETAIL
SCALE: NONE



PROFILE
SCALE: NOT TO SCALE



3/9 SECTION
SCALE: NOT TO SCALE



4/9 SECTION
SCALE: NOT TO SCALE

NOTES:
1. STONE WILL BE PLACED ON A FILTER FABRIC FOUNDATION AT ALL LOCATIONS SHOWN ON THE PLANS.
2. SET SPACING OF THE CHECK DAMS TO ASSURE THAT THE ELEVATIONS OF THE CREST OF THE DOWNSTREAM DAM IS AT THE SAME ELEVATION OF THE TOE OF THE UPSTREAM DAM.
3. EXTEND THE STONE A MINIMUM OF 1.5 FEET BEYOND THE DITCH BANKS TO PREVENT THE FLOW OF WATER AROUND THE DAM.
4. PROTECT THE CHANNEL DOWNSTREAM OF THE LOWEST CHECK DAM FROM SCOUR AND EROSION WITH STONE OR LINER AS APPROPRIATE.
5. ENSURE THAT THE CHANNEL APPURTENANCES SUCH AS CULVERT ENTRANCES BELOW CHECK DAMS ARE NOT SUBJECT TO DAMAGE OR BLOCKAGE FROM DISPLACED STONES.
6. INSPECT ALL CHECK DAMS AT LEAST ONCE A WEEK AND WITHIN 24 HOURS AFTER WACH RAINFALL. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND SEDIMENT REMOVED WHEN SEDIMENT REACHES 1/3 HEIGHT OF CHECK DAM.
7. UPON STABILIZATION OF THE AREA UPSTREAM OF THE STONE CHECK DAM, THE CHECK DAM SHALL BE REMOVED WITH THE APPROVAL OF THE ENGINEER. THE AREA UNDER THE STONE CHECK DAM SHALL BE SEEDED AND MULCHED UPON REMOVAL.

D/9 TYPICAL TEMPORARY STONE CHECK DAM DETAIL
SCALE: NONE

EROSION CONTROL NOTES:

1. THIS PROJECT HAS BEEN PERMITTED AS A LOW RISK SITE. THE CONTRACTOR AT A MINIMUM MUST FOLLOW THE LOW RISK SITE HANDBOOK AT ALL TIMES. THE CONTRACTOR SHALL OBTAIN ANY ADDITIONAL PERMITS IF THE PROJECT IS MODIFIED IN SUCH A WAY THAT CHANGES THE PERMIT JURISDICTION.
2. EROSION CONTROL MEASURES ARE TO BE IMPLEMENTED PRIOR TO PERFORMING ANY EARTHWORK DOWNSTREAM OF THE DISTURBED AREA AND AS DIRECTED BY THE CONSTRUCTION ENGINEER. THE MEASURES SHALL BE MAINTAINED UNTIL THE UPSTREAM DISTURBED AREA HAS BEEN PERMANENTLY STABILIZED AND AS DIRECTED BY THE CONSTRUCTION ENGINEER. THE CONTRACTOR SHALL INSTALL ALL TEMPORARY EROSION PREVENTION AND SEDIMENT CONTROL MEASURES AS SHOWN ON THE CONTRACT DRAWINGS. THE CONTRACTOR SHALL PROVIDE ANY ADDITIONAL MEASURES DETERMINED NECESSARY IN THE FIELD.
3. SILT FENCE SHALL BE INSTALLED, AS SHOWN ON THE CONTRACT DRAWINGS PRIOR TO ANY EARTHWORK DOWNSTREAM OF THE DISTURBED AREA AND AS DIRECTED BY THE CONSTRUCTION ENGINEER. THE SILT FENCE SHALL BE MAINTAINED AND CLEANED UNTIL THE UPSTREAM DISTURBED AREA HAS BEEN PERMANENTLY STABILIZED AND AS DIRECTED BY THE CONSTRUCTION ENGINEER. WHERE POSSIBLE NATURAL DRAINAGE WAYS SHALL BE UTILIZED AND LEFT OPEN TO REMOVE EXCESS SURFACE WATER.
4. STONE CHECK DAMS SHALL BE INSTALLED IN DRAINAGE SWALES, AS SHOWN ON THE CONTRACT DRAWINGS AND AS DIRECTED BY THE CONSTRUCTION ENGINEER. CHECK DAMS SHALL BE INSTALLED IMMEDIATELY FOLLOWING DISTURBANCE OF THE DRAINAGE SWALE AND SHALL BE MAINTAINED UNTIL THE UPSTREAM DISTURBED AREA IS PERMANENTLY STABILIZED AND AS DIRECTED BY THE CONSTRUCTION ENGINEER.
5. DEGRADABLE EROSION CONTROL BLANKETS SHALL BE INSTALLED ON DISTURBED VEGETATED SLOPES THAT HAVE SLOPES GREATER THAN 4:1. THE CONTRACTOR SHALL INSTALL THE DEGRADABLE EROSION CONTROL BLANKETS PER MANUFACTURER'S RECOMMENDATIONS.
6. PROPER EROSION CONTROLS SHALL BE PROVIDED AROUND STOCKPILED EXCAVATED MATERIALS. THESE CONTROLS MAY INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING METHODS OF EROSION PREVENTION AND SEDIMENT CONTROL: PERIMETER SILT FENCE; INTERCEPTOR DRAINAGE DITCHES; VELOCITY REDUCTION DAMS IN DRAINAGE DITCHES; TEMPORARY BANK PROTECTION SUCH AS RIPRAP, MATTING, OR ARTIFICIAL COVERING; STONE CHECK DAM CONTROL SYSTEMS; SPECIAL STOCKPILING METHODS; AND WATER BARS.
7. THE CONTRACTOR SHALL PROVIDE A MECHANICAL SWEEPER AND SHALL SWEEP CLEAN THE ROADS IN THE CONSTRUCTION AREAS AS REQUIRED TO REMOVE ACCUMULATED SEDIMENT AND PREVENT SEDIMENT RUNOFF INTO RECEIVING WATERS AND AS DIRECTED BY THE CONSTRUCTION ENGINEER.
8. TEMPORARY EROSION CONTROL MEASURES SHALL BE UTILIZED BY THE CONTRACTOR AS REQUIRED TO PREVENT ANY SEDIMENTATION FROM RUNNING INTO RECEIVING WATERS. THE CONTRACTOR SHALL MAKE EVERY EFFORT TO MINIMIZE ANY IMPACT OF THE ON-SITE SURFACE RUNOFF ON THE QUALITY OF THE RECEIVING WATERS.
9. THE SMALLEST PRACTICAL AREA OF LAND SHALL BE DISTURBED AT ANY ONE TIME DURING CONSTRUCTION. WHEN LAND IS DISTURBED DURING CONSTRUCTION, THE DISTURBANCE SHALL BE KEPT TO THE SHORTEST PRACTICAL DURATION AS APPROVED BY THE CONSTRUCTION ENGINEER. LAND SHALL NOT BE LEFT DISTURBED DURING THE WINTER MONTHS AND OVERWINTER STABILIZATION MEASURES SHALL BE INSTALLED PRIOR TO OCTOBER 15TH.
10. ALL DISTURBED AREAS AND SIDE SLOPES WHICH ARE FINISH GRADED WITH NO FURTHER CONSTRUCTION TO TAKE PLACE SHALL BE LOAMED, LIMED, FERTILIZED, SEEDED, AND MULCHED WITHIN 48 HOURS OF FINAL GRADING. A MINIMUM OF 4 INCHES OF LOAM SHALL BE PLACED.
11. NO DISTURBED AREAS SHALL BE LEFT UNSEEDED AND UNMULCHED FOR MORE THAN SEVEN (7) DAYS. DISTURBED AREAS WHICH WILL BE REGRADED LATER DURING CONSTRUCTION SHALL BE MULCHED AND SEEDED WITH RYE GRASS TO PREVENT EROSION. HAY OR STRAW MULCH SHALL BE APPLIED TO ALL FRESHLY SEEDED AREAS AT THE RATE OF 2 TONS PER ACRE. BALES SHALL BE UNSPOILED, AIR DRIED, AND FREE FROM WEED, SEEDS, AND ANY COARSE MATERIAL. CONTRACTOR MAY ALSO USE EROSION MATTING OR OTHER APPROVED METHODS OF TEMPORARY COVER.
12. ALL EROSION PREVENTION AND SEDIMENT CONTROL STRUCTURES AND MEASURES SHALL BE INSPECTED BY OR UNDER THE DIRECTION OF THE ON-SITE COORDINATOR AT LEAST EVERY SEVEN (7) CALENDAR DAYS AND AS SOON AS POSSIBLE BUT NO LATER THAN 24 HOURS AFTER ANY STORM EVENT WHICH GENERATES A DISCHARGE OF STORMWATER RUNOFF FROM THE CONSTRUCTION SITE.
13. AFTER ALL UPSTREAM DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED AND AS DIRECTED BY THE CONSTRUCTION ENGINEER, THE DOWNSTREAM TEMPORARY EROSION CONTROL MEASURES ARE TO BE REMOVED AND THE ACCUMULATED SEDIMENT PROPERLY DISPOSED OF. THE AREA DISTURBED BY THE REMOVAL OF TEMPORARY MEASURES SHALL BE PREPARED, SEEDED, AND MULCHED.

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No.	DATE	DESCRIPTION	CHECKED

CITY OF BURLINGTON, VERMONT

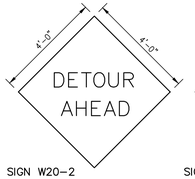
CLIFF STREET SIDEWALK IMPROVEMENTS

EROSION CONTROL DETAILS AND NOTES

DESIGNED JJD	PROJECT NO. 12077
DRAWN JEB	
CHECKED JJD	DRAWING NO. 9
DATE FEB. 2014	

ON PROJECT CONSTRUCTION SIGNS

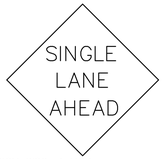
VERMONT AGENCY OF TRANSPORTATION STANDARD E-6



SIGN W20-2

SIGN W20-3

SIGN W20-7a



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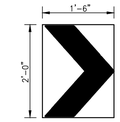

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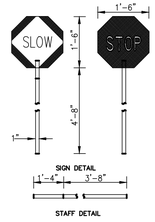

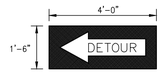

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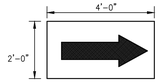

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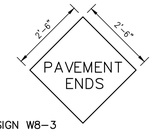


SIGN W8-3

MATERIALS

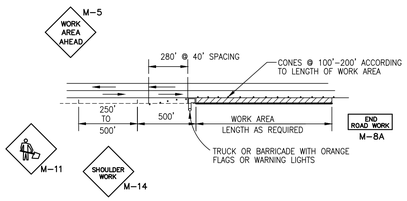
THE SIGN MATERIALS SHALL BE C.063 ALUMINUM WITH COLORS AS INDICATED IN DETAILS.
THE STAFF SHALL BE 1" RIDGED ALUMINUM CONDUIT OR TUBING WITH A WALL THICKNESS OF 1/8".

COLORS

THE COLORS SHALL CONFORM WITH THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS AND APPROVED BY THE U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION.

MOUNTING

THE STAFF SHALL BE MOUNTED WITH EITHER 2-1/4" ALUMINUM BOLTS OR 2-1/4" ALUMINUM RIVETS



APPLICATION OF STANDARDS

SINCE IT IS NOT POSSIBLE TO PRESCRIBE DETAILED STANDARDS OF APPLICATION FOR ALL OF THE SITUATIONS THAT MAY CONCEIVABLY ARISE ON A CONSTRUCTION PROJECT, REFERENCE MUST BE MADE TO THE VERMONT MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR THE PRINCIPLES, PROCEDURES AND STANDARDS THAT WILL BE REQUIRED IN CONNECTION WITH ON-PROJECT CONSTRUCTION SIGNS AND BARRICADES. THE SIGNS HERE SHOWN REPRESENT A SAMPLE OF THOSE THAT PROBABLY WILL BE MOST USED.

DESIGN

THE DESIGNS OF THE SIGNS AND BARRICADES SHALL CONFORM WITH THE DETAILS SHOWN ON THIS SHEET AND WITH THE STANDARDS PRESCRIBED IN THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES AND THE STANDARD HIGHWAY SIGNS BOOK. DEVIATIONS WILL NOT BE PERMITTED.

MATERIALS

THE SIGNS SHALL BE OF METAL, WOOD, PLYWOOD, HARDWOOD OR ANY OTHER MATERIAL SATISFACTORY TO THE ENGINEER. NO MATERIAL WILL BE APPROVED THAT WILL DETERIORATE BE EXPOSURE TO THE WEATHER DURING THE REQUIRED LIFE OF THE SIGN.

REFLECTORIZATION AND COLORS

ALL SIGNS, EXCEPT SIGN R11-2 AND THE SIGN PADDLE, SHALL HAVE BLACK TEXTS AND BORDERS ON AN ENCAPSULATED LENS REFLECTIVE ORANGE BACKGROUND. SIGN R11-2 SHALL HAVE BLACK TEXT AND BORDER ON AN ENCAPSULATED LENS REFLECTIVE WHITE BACKGROUND.

INSTALLATION

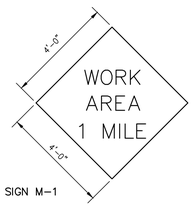
SIGNS AND BARRICADES SHALL BE IN PLACE PRIOR TO THE START OF THE CONSTRUCTION OPERATION TO WHICH THEY APPLY, AND SHALL BE REMOVED PROMPTLY WHEN THE NEED NO LONGER EXISTS. EACH SIGN SHALL BE ERECTED IN A NEAT AND WORKMANLIKE MANNER ON WOOD OR METAL POSTS SET SECURELY IN THE GROUND, OR ON THE GROUND, OR ON PORTABLE SUPPORTS FOR TEMPORARY USE, OR ON BARRICADES WHEN APPROPRIATE.

MAINTENANCE

SIGNS SHALL BE KEPT IN A CLEAN AND LEGIBLE CONDITION AT ALL TIMES WITH THE REFLECTIVE QUALITY COMPLETELY UNIMPAIRED. SIGNS, SIGN SUPPORTS, AND BARRICADES SHALL BE REPAIRED, CLEANED, REPAINTED OR REPLACED WHENEVER NECESSARY.
WEEDS, SHRUBBERY, CONSTRUCTION MATERIALS, EQUIPMENT, AND SNOW SHALL NOT BE ALLOWED TO OBSCURE ANY SIGN OR BARRICADE. THE MAINTENANCE OF ALL TRAFFIC CONTROL DEVICES SHALL BE SUBJECT TO THE ORDERS OF THE ENGINEER.

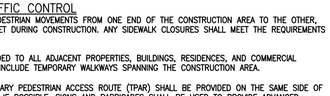
TYPICAL SIGNAGE FOR SHOULDER OPERATION

VERMONT AGENCY OF TRANSPORTATION STANDARD E-10



SIGN M-1

SIGN M-2 R or L



LOCATION

CONSTRUCTION APPROACH SIGNS SHALL BE LOCATED ON THIS SHEET OR OTHERWISE SHOWN ON THE PLANS.
THEY SHALL APPEAR AT EACH END OF THE HIGHWAY UNDER CONSTRUCTION, AND ON ALL INTERSECTING PUBLIC HIGHWAYS. THE EXACT PLACEMENT OF ANY SIGN WILL DEPEND UPON THE ALIGNMENT OF THE HIGHWAY AND THE CHARACTER OF THE ROADSIDES. THE LOCATION MEASUREMENT IN THIS SHEET ARE INTENDED TO INDICATE THE SEQUENCE TO BE FOLLOWED, AND THE MINIMUM SPACING TO BE OBSERVED THE ENGINEER IN DETERMINING EXACT LOCATIONS.

DESIGN

THE DESIGN OF THE SIGNS SHALL CONFORM WITH DETAILS SHOWN ON THIS SHEET AND WITH THE STANDARDS PRESCRIBED IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES PREPARED BY NATIONAL JOINT COMMITTEE ON UNIFORM TRAFFIC CONTROL DEVICES AND THE STANDARD HIGHWAY SIGNS BOOK.

MATERIALS

THE SIGNS SHALL BE OF METAL, WOOD, PLYWOOD, HARDBOARD OR ANY OTHER MATERIAL SATISFACTORY TO THE ENGINEER. NO MATERIAL WILL DETERIORATE BY EXPOSURE TO THE WEATHER DURING THE REQUIRED LIFE OF THE SIGN.

REFLECTORIZATION

ALL REFLECTORIZED MATERIAL SHALL CONSIST OF ENCAPSULATED LENS REFLECTIVE SHEETS.

INSTALLATION

THE SIGNS SHALL BE IN PLACE AT THE TIME THE PROJECT OFFICIALLY COMMENCES. EACH SIGN SHALL BE ERECTED IN A NEAT AND WORKMANLIKE MANNER ON WOOD OR METAL POSTS SET SECURELY IN THE GROUND. THE BOTTOM OF A SIGN SHALL BE AT LEAST 5 FEET ABOVE ROAD LEVEL NEAREST EDGE OF A SIGN SHALL BE AT LEAST 6 FEET OUTSIDE THE SHOULDER POINT OR 2 FEET OUTSIDE GUARD RAIL, CURBING, OR SIDEWALK. POSTS AND SIGNS SHALL BE BRACED OR REINFORCED IN BACK AS NECESSARY. THE INSTALLATION OF SIGNS SHALL BE SUBJECT TO APPROVAL OF THE ENGINEER. IN URBAN AREAS, THE BOTTOM OF THE SIGN SHALL BE AT LEAST 7 FEET ABOVE THE SIDEWALK.

MAINTENANCE

SIGNS SHALL BE MAINTAINED IN A CLEAN AND LEGIBLE CONDITION SATISFACTORY TO THE ENGINEER. THEY SHALL BE COMPLETELY VISIBLE TO APPROACHING TRAFFIC AT ALL TIMES. THEY SHALL BE KEPT PLUMB AND LEVEL, AND ALWAYS PRESENT A NEAT APPEARANCE. DAMAGED, DEFACED OR DIRTY SIGNS SHALL BE REPAIRED, CLEANED OR REPLACED AS ORDERED BY THE ENGINEER.

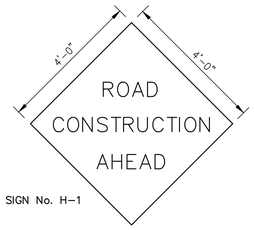
GENERAL

THE COST OF FINISHING, ERECTING, MAINTAINING AND REMOVING ALL CONSTRUCTION APPROACH SIGNS WILL BE CONSIDERED SUBSIDIARY WORK PERTAINING TO THE PROJECT AS A WHOLE AND SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE BID FOR VARIOUS ITEMS INVOLVED. IN ALL PHASES OF CONSTRUCTION OF APPROACH SIGNING, THE REQUIREMENTS SET FORTH IN THE MANUAL ON UNIFORM TRAFFIC DEVICES SHALL BE MET (SEE STANDARD SPECIFICATIONS, SECTION 107.09 BARRICADES, WARNING AND DETOUR SIGNS). WHEN PROJECT IS CLOSED DOWN FOR TEMPORARY PERIODS, THE SIGNS SHALL BE COVERED IN A WORKMANLIKE MANNER.

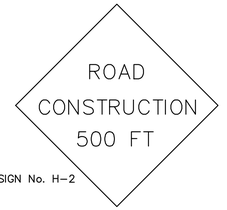
NOTE: REFER TO V.T.A.O.T. STANDARD E2 FOR SIGN LETTER SPACING AND DIMENSIONS.

TYPICAL ROAD CONSTRUCTION APPROACH SIGNS

VERMONT AGENCY OF TRANSPORTATION STANDARD E-2



SIGN No. H-1



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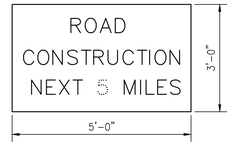
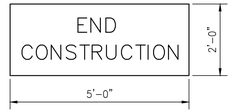
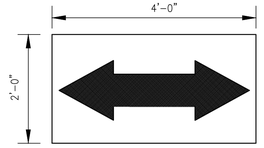




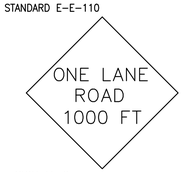


SIGN No. H-4

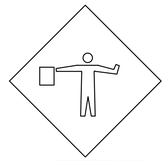
TYPICAL SIGNAGE FOR ONE LANE OPERATION

VERMONT AGENCY OF TRANSPORTATION STANDARD E-E-110

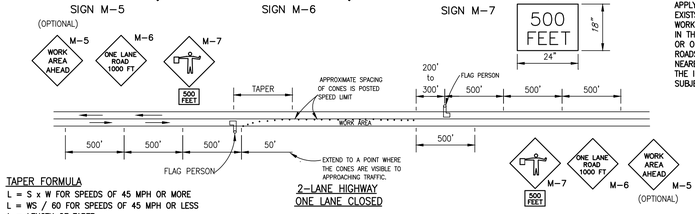
SIGN M-5



SIGN M-6



SIGN M-7



2-LANE HIGHWAY
ONE LANE CLOSED

NOTES

1. ALL SIGNS SHALL BE COVERED OR REMOVED AT THE END OF THE WORKING DAY UNLESS REQUIRED FOR THE PROTECTION OF SAFETY AND TRAVELING PUBLIC.
2. INSTALLATION: SIGNS AND BARRICADES SHALL BE IN PLACE PRIOR TO THE START OF THE MAINTENANCE OPERATION TO WHICH THEY APPLY AND SHALL BE REMOVED PROMPTLY WHEN THE NEED NO LONGER EXISTS. EACH SIGN SHALL BE ERECTED IN A NEAT AND WORKMANLIKE MANNER ON WOOD OR METAL POSTS SET SECURELY IN THE GROUND, OR ON PORTABLE SUPPORTS FOR TEMPORARY USE, OR ON BARRICADES WHEN APPROPRIATE. AS A GENERAL RULE, ROADSIDE SIGNS SHALL BE 5 FEET ABOVE ROAD LEVEL WITH THE NEAREST EDGE AT LEAST 6 FEET OUTSIDE THE SHOULDER POINT. THE INSTALLATION OF ALL SIGNS AND BARRICADES SHALL BE SUBJECT TO APPROVAL OF THE ENGINEER.

TAPER FORMULA

L = S x W FOR SPEEDS OF 45 MPH OR MORE
L = WS / 60 FOR SPEEDS OF 45 MPH OR LESS
L = LENGTH OF TAPER
S = NUMBER VALVE OF POSTED SPEED LIMIT
W = WIDTH OF OFFSET

REFLECTORIZATION

ALL REFLECTORIZED MATERIAL SHALL CONSIST OF ENCAPSULATED LENS REFLECTIVE SHEETING. THE TEXT AND BORDERS MAY BE SCREENED, LETTERING FILM, OR HAND PAINTED. CONES USED FOR TRAFFIC CONTROL AT NIGHT SHALL HAVE A MINIMUM 6" WIDE REFLECTORIZED MATERIAL.

COLORS

THE WARNING SIGNS SHOWN ON THE SHEET SHALL HAVE BLACK TEXT, BORDER, AND SYMBOLS ON A REFLECTORIZED ORANGE BACKGROUND. THE ORANGE SHALL CONFORM WITH THE STANDARD COLOR ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS AND APPROVED BY THE U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION.

TEXT DESIGN

LETTERS, DIGITS, SPACING AND TEXT DIMENSIONS SHALL CONFORM WITH THE STANDARD ALPHABETS AND DESIGN PRESCRIBED IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

SPECIFICATIONS

WARNING SIGNS SHALL MEET THE STANDARD STATE SPECIFICATIONS FOR TRAFFIC SIGNS.

SIGN BASE MATERIAL

THE SIGN BASE MATERIAL USED FOR THE WARNING SIGNS ON THIS SHEET MAY BE OF ANY OF THE FOLLOWING, WITH MINIMUM THICKNESS AS NOTED.

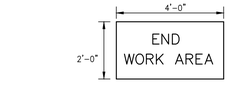
FLAT SHEET ALUMINUM	0.125 INCHES
HIGH DENSITY OVERLAID PLYWOOD	3/4 INCHES
GALVANIZED SHEET STEEL	12 GAGE

NOTE: REFER TO V.T.A.O.T. STANDARD E-8 FOR LETTER SPACING AND DIMENSIONS.

CONSTRUCTION SIGNAGE SCHEDULE

NOTES:

1. THE EXACT LOCATION OF THE SIGNAGE WILL BE DETERMINED BY THE ENGINEER AND OWNER.
2. SIGNS FOR AFFECTED AREAS OF CONSTRUCTION.



SIGN M-8

TRAFFIC CONTROL

ROADS	NECESSARY TRAFFIC CONTROL
CLIF STREET	AT LEAST ONE-WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES, UNLESS OTHERWISE NOTED. PROVIDE FLAG PERSONS AT BOTH ENDS OF THE OPERATION

PEDESTRIAN TEMPORARY TRAFFIC CONTROL

1. THE CONTRACTOR SHALL MAINTAIN PEDESTRIAN MOVEMENTS FROM ONE END OF THE CONSTRUCTION AREA TO THE OTHER, ON AT LEAST ONE SIDE OF THE STREET DURING CONSTRUCTION. ANY SIDEWALK CLOSURES SHALL MEET THE REQUIREMENTS OF THE MUTCD, PART 6.
2. PEDESTRIAN ACCESS SHALL BE PROVIDED TO ALL ADJACENT PROPERTIES, BUILDINGS, RESIDENCES, AND COMMERCIAL PROPERTIES AT ALL TIMES. THIS MAY INCLUDE TEMPORARY WALKWAYS SPANNING THE CONSTRUCTION AREA.
3. IF SIDEWALKS ARE CLOSED, A TEMPORARY PEDESTRIAN ACCESS ROUTE (TPAR) SHALL BE PROVIDED ON THE SAME SIDE OF THE ROAD AS THE CLOSED SIDEWALK, IF POSSIBLE. SIGNS AND BARRICADES SHALL BE USED TO PROVIDE ADVANCED NOTICE OF THE CLOSURE AND THE ROUTE OF ANY PEDESTRIAN DETOURS. THE TPAR SHALL HAVE A MINIMUM UNOBSTRUCTED WIDTH OF 4 FEET. IF THE TPAR IS LESS THAN 5 FEET IN WIDTH, A 5 FOOT BY 5 FOOT PASSING SPACE SHOULD BE PROVIDED AT LEAST EVERY 200 FEET. THE SURFACE TPAR SHALL BE SMOOTH AND CONTINUOUS FOR THE LENGTH OF THE TPAR. THE TPAR SHALL MAINTAIN THE SAME LEVEL OF ACCESSIBILITY AS THE FACILITY THAT IS BEING CLOSED. THE TPAR SHALL NOT LEAD PEDESTRIANS INTO CONFLICTS WITH VEHICLES, EQUIPMENT, OR CONSTRUCTION OPERATIONS.
4. IF THE TPAR IS ADJACENT TO MOVING TRAFFIC, CONSTRUCTION OPERATIONS/EQUIPMENT, OR DROP-OFFS, THE CRASH WORTHY CHANNELIZING DEVICES THAT MEET THE REQUIREMENTS OF THE MUTCD SHALL BE USED.
5. THE CONTRACTOR SHALL NOT STORE OR PLACE ANY CONSTRUCTION MATERIALS, EQUIPMENT, OR SIGNS IN THE PEDESTRIAN PATH OF TRAVEL.
6. THE CONTRACTOR'S OPERATIONS SHALL NOT OCCUPY SIDEWALKS EXCEPT WHERE PROPER PROTECTION AND A TPAR HAVE BEEN PROVIDED.
7. THE CONTRACTOR SHALL PROVIDE A TEMPORARY PEDESTRIAN TRAFFIC CONTROL PLAN FOR REVIEW AND WRITTEN APPROVAL A MINIMUM OF THREE WEEKS BEFORE SUCH PLAN IS IMPLEMENTED. THIS PLAN SHALL DETAIL THE CONSTRUCTION PHASING AND SCHEDULE AND THE SPECIFIC METHODS OF MAINTAINING SAFE PEDESTRIAN ACCESS THROUGHOUT THE CONSTRUCTION AREA. THIS PLAN SHALL PROVIDE THE LOCATION AND DETAILS OF THE TEMPORARY CONSTRUCTION SIGNING, MARKINGS, BARRICADES, CHANNELIZING DEVICES, TPAR'S, AND METHODS TO MAINTAIN ACCESS TO ADJACENT PROPERTIES, BUSINESSES, RESIDENCES, ETC.

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No.	DATE	DESCRIPTION	CHECKED

CITY OF BURLINGTON, VERMONT

CLIFF STREET SIDEWALK IMPROVEMENTS

TRAFFIC CONTROL PLANS

DESIGNED JJD	PROJECT NO. 12077
DRAWN JEB	
CHECKED JJD	DRAWING NO. 10
DATE FEB. 2014	