INDEX OF SHEETS	
1	TITLE SHEET
2	BRIDGE STREET TYPICAL ROAD SECTIONS
3	BRIDGE SURVEY LAYOUT AND QUANTITES
4	ROADWAY LAYOUT PLAN
5	RIGHT OF WAY PLAN
6	BRIDGE STREET PROFILE
7	RAILROAD TRACK PROFILE SHEET 1
8	RAILROAD TRACK PROFILE SHEET 2
9	BRIDGE GENERAL PLAN & LONGITUDINAL SECTION
10	BRIDGE GENERAL NOTES
11	BRIDGE TYPICAL SECTION & POST TENSIONING DETAILS
12	BEAM LAYOUT AND DETAILS
13	BRIDGE WALKWAY LAYOUT AND DETAILS
14	BRIDGE CONSTRUCTION SEQUENCING SHEET 1
15	BRIDGE CONSTRUCTION SEQUENCING SHEET 2
16	DIRECT FIXATION LAYOUT AND DETAILS
17	APPROACH TRACK LAYOUT
18	BRIDGE DETAILS
19	RELIEF SLAB AND KEEPER BLOCK LAYOUT PLAN
20	PILE LOCATION AND DETAIL
21	EXISTING SOUTH ABUTMENT DETAILS
22	EXISTING NORTH ABUTMENT DETAILS
23	BRIDGE STREET SIDEWALK PLAN, ELEVATION & DETAILS
24	BRIDGE STREET ROAD SECTIONS SH 1 OF 2
25	BRIDGE STREET ROAD SECTIONS SH 2 OF 2
26	UTILITY LOCATION PLAN
27	BRIDGE STREET LIGHTING DETAILS
28	LANDSCAPING PLAN
29	PLANTING DETAILS
30	PLANTING DETAILS

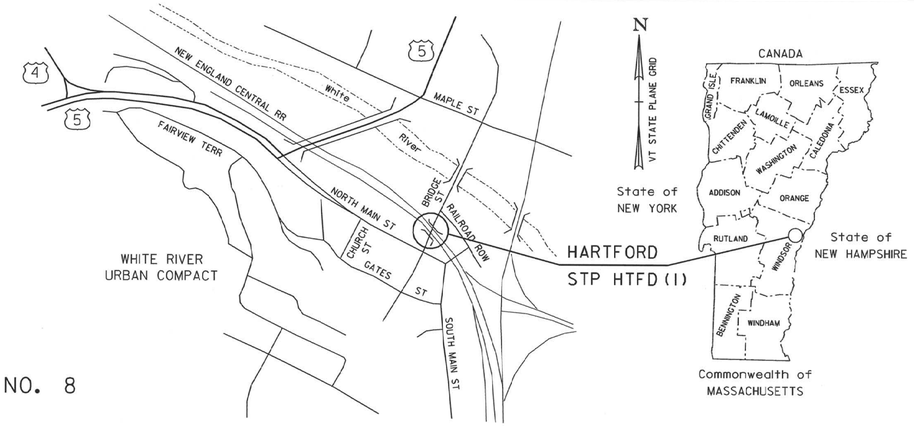
TOWN OF HARTFORD, VERMONT

PROPOSED IMPROVEMENT

BRIDGE PROJECT

TOWN OF HARTFORD
COUNTY OF WINDSOR

NEW ENGLAND CENTRAL RAILROAD (NECR) BRIDGE NO. 8



LOCATION MAP

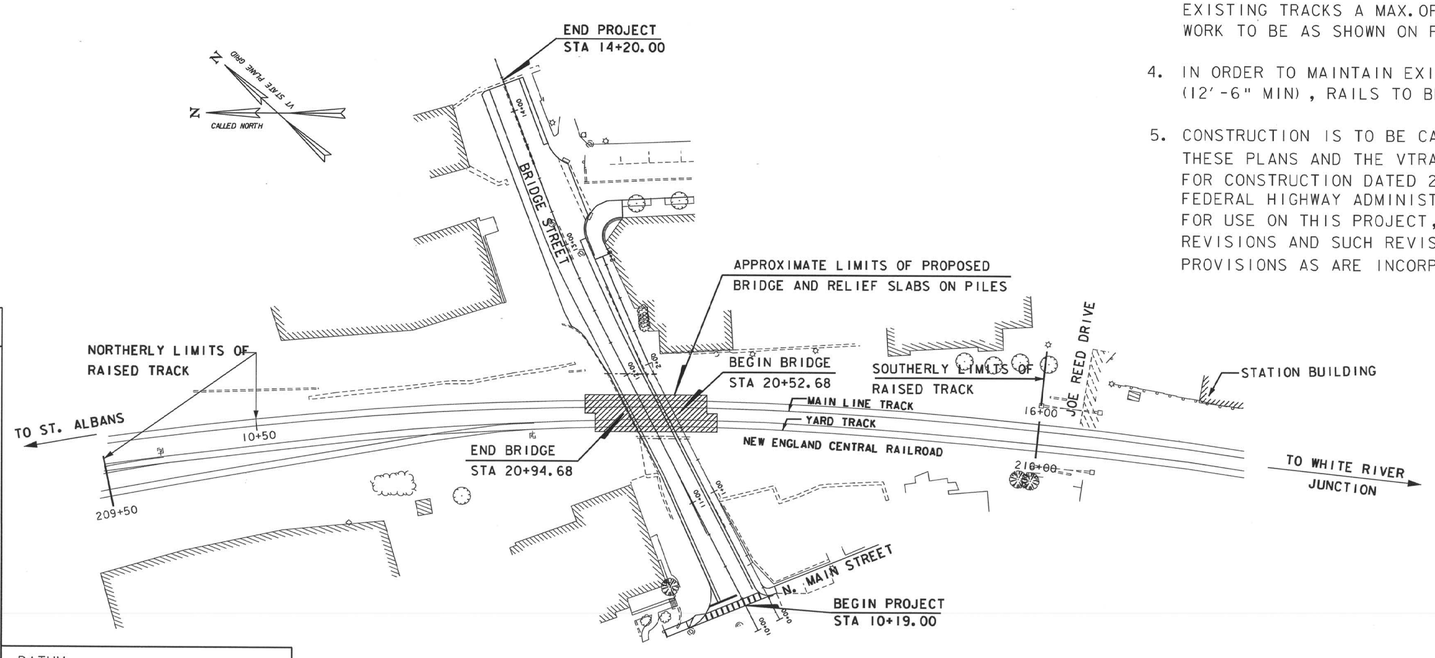
PROJECT LOCATION : NECR BRIDGE NO. 8 OVER BRIDGE STREET AT MILE POST 14.94 IN WHITE RIVER JUNCTION.

PROJECT DESCRIPTION : PHASED BRIDGE REHABILITATION INCLUDING BRIDGE SUPERSTRUCTURE REPLACEMENT, PIER REMOVAL, NEW CONCRETE BRIDGE SEATS AND COMBINATION RELIEF SLAB ON PILES, AND REHABILITATION OF EXISTING ABUTMENTS AND WINGWALLS. RELATED WORK INCLUDES TRACK PROFILE INCREASE AND ROADWAY IMPROVEMENTS.

LENGTH OF STRUCTURE : 44 FT BRIDGE, 76 FT INCLUDING RELIEF SLABS ON PILES.
LENGTH OF ROADWAY : 401 FT
LENGTH OF PROJECT : 650 FT TRACK RAISE BY 6½" ± MAX.

GENERAL NOTES:

1. BRIDGE STREET TRAFFIC WILL BE DETOURED DURING CONSTRUCTION.
2. THE BRIDGE WILL BE CONSTRUCTED IN PHASES MAINTAINING BOTH TRACKS ACTIVE AT ALL TIMES EXCEPT FOR INSTALLATION OF RELIEF SLABS AND BRIDGE BEAMS. REFER TO SHEETS 14 & 15 FOR FURTHER DETAILS.
3. PROPOSED RAILROAD TRACK MODIFICATIONS OVER THE BRIDGE INVOLVE RAISING EXISTING TRACKS A MAX. OF 6.5 INCHES AT BRIDGE SITE. LIMITS OF TRACK WORK TO BE AS SHOWN ON PLANS AND ON RAILROAD TRACK PROFILE SHEETS 7 & 8.
4. IN ORDER TO MAINTAIN EXISTING VERTICAL CLEARANCE UNDER BRIDGE (12'-6" MIN), RAILS TO BE ATTACHED BY DIRECT FIXATION TO NEW BRIDGE.
5. CONSTRUCTION IS TO BE CARRIED OUT IN ACCORDANCE WITH THESE PLANS AND THE VTRANS STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2006, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON JUNE 15, 2006 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.



PROJECT LIMITS PLAN
SCALE: 1" = 50'

SCALE 1" = 50'-0
50 0 50

CONVENTIONAL SYMBOLS

COUNTY LINE
TOWN LINE
LIMITS OF ACCESS
POINT OF ACCESS
FENCE LINE
STONE WALL
TRAVELED WAY
GUARD RAIL
RAILROAD
SURVEY LINE
CULVERT
POWER POLE
TELEPHONE POLE
TREES
CONTROL OF ACCESS
R.O.W. LINE
PROPERTY LINE
R.O.W. TAKING LINE
SLOPE RIGHTS (SR)
CLEAR ZONE (CZ)
TOP OF CUT
TOE OF SLOPE

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 SPC VT

STATE OF VERMONT
GRAHAM K. DONNISTON
NO. 5193
STRUCTURAL
LICENSED PROFESSIONAL ENGINEER
8/28/2012

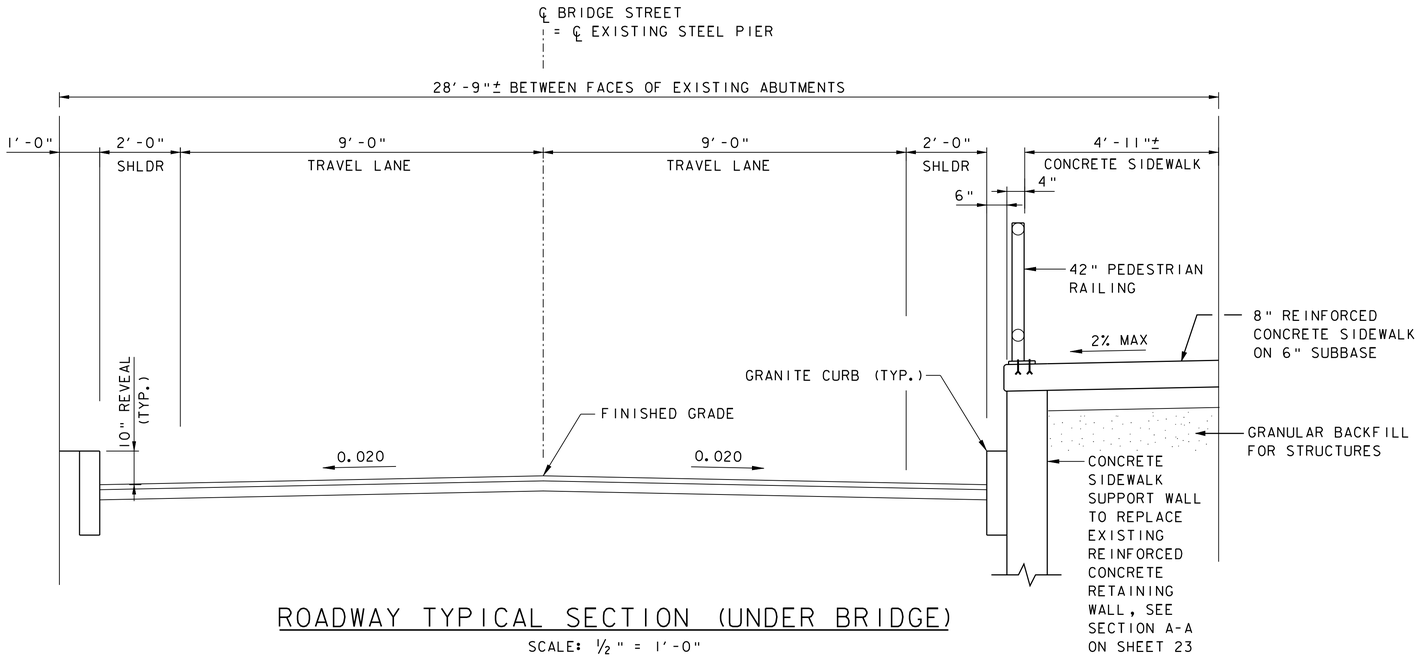
PB PARSONS BRINCKERHOFF
650 ELM STREET
MANCHESTER, NH 03101

DIRECTOR OF PUBLIC WORKS

APPROVED _____ DATE _____

PROJECT NAME : HARTFORD
PROJECT NUMBER : STP HTFD(1)

SHEET 1 OF 30 SHEETS



ROADWAY TYPICAL SECTION (UNDER BRIDGE)

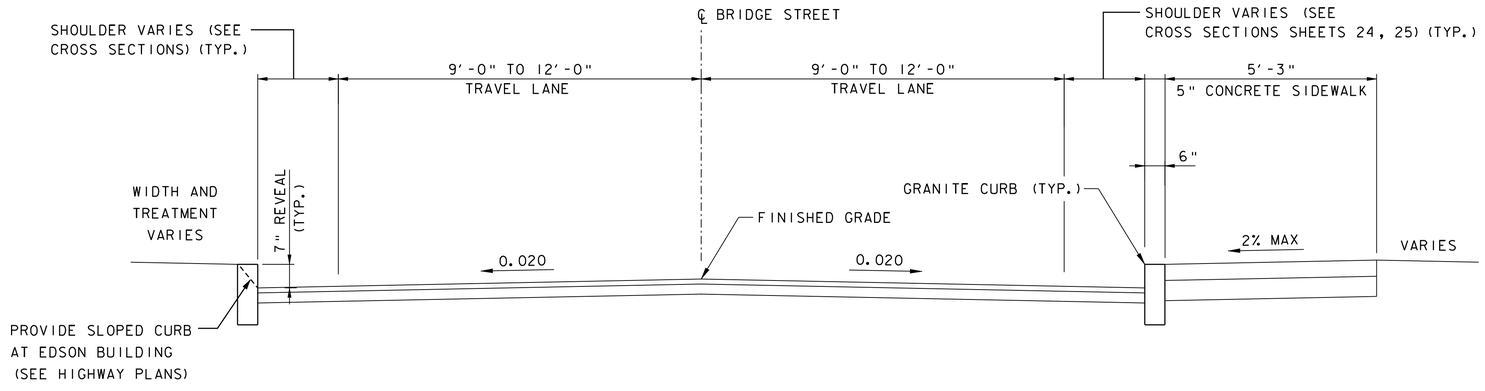
SCALE: ½" = 1'-0"

NOTES:

1. EXISTING ROAD GRADE TO BE MAINTAINED. SCARIFY ROAD AND REPAVE TO BINDER COURSE, EXCEPT LOCALLY REMOVE PAVING AT NEW CURBS AND RETAINING WALL AND CENTER PIER AND PATCH TO BINDER COURSE.
2. MAX. PAVEMENT THICKNESS ASSUMED TO BE 6" FOR COST ESTIMATING PURPOSES. 1½" WEARING COURSE AND 4½" BINDER COURSE.
3. UPON COMPLETING THE REPAVING TO THE BINDER COURSE, THE ENTIRE ROADWAY WILL RECEIVE A 1½" WEARING COURSE AT THE COMPLETION OF CONSTRUCTION.
4. STRIPE THE ROADWAY AS SHOWN ON SHEET 4.

BRIDGE STREET TRAFFIC DATA:

2003 ADT = 5300
2003 DHV = 600
2003 ADTT = 160
2023 ADT = 6700
2023 DHV = 760
2023 ADTT = 220
% D = 50
% T = 2.0



ROADWAY TYPICAL SECTION

SCALE: ½" = 1'-0"

MATERIAL ITEM	TOLERANCE
PAVEMENT	± ¼"
AGGREGATE SURFACE COURSE	± ½"
BASE COURSE	± ½"
SUBBASE	± 1"

PARSONS BRINCKERHOFF
650 ELM STREET
MANCHESTER, NH 03101

TOWN OF HARTFORD

Town Of HARTFORD, VERMONT	Bridge No. 8
	Log Sta.
Highway No. BRIDGE STREET	Surv. Sta.

N.E.C.R. BRIDGE OVER BRIDGE STREET

BRIDGE STREET TYPICAL ROAD SECTIONS

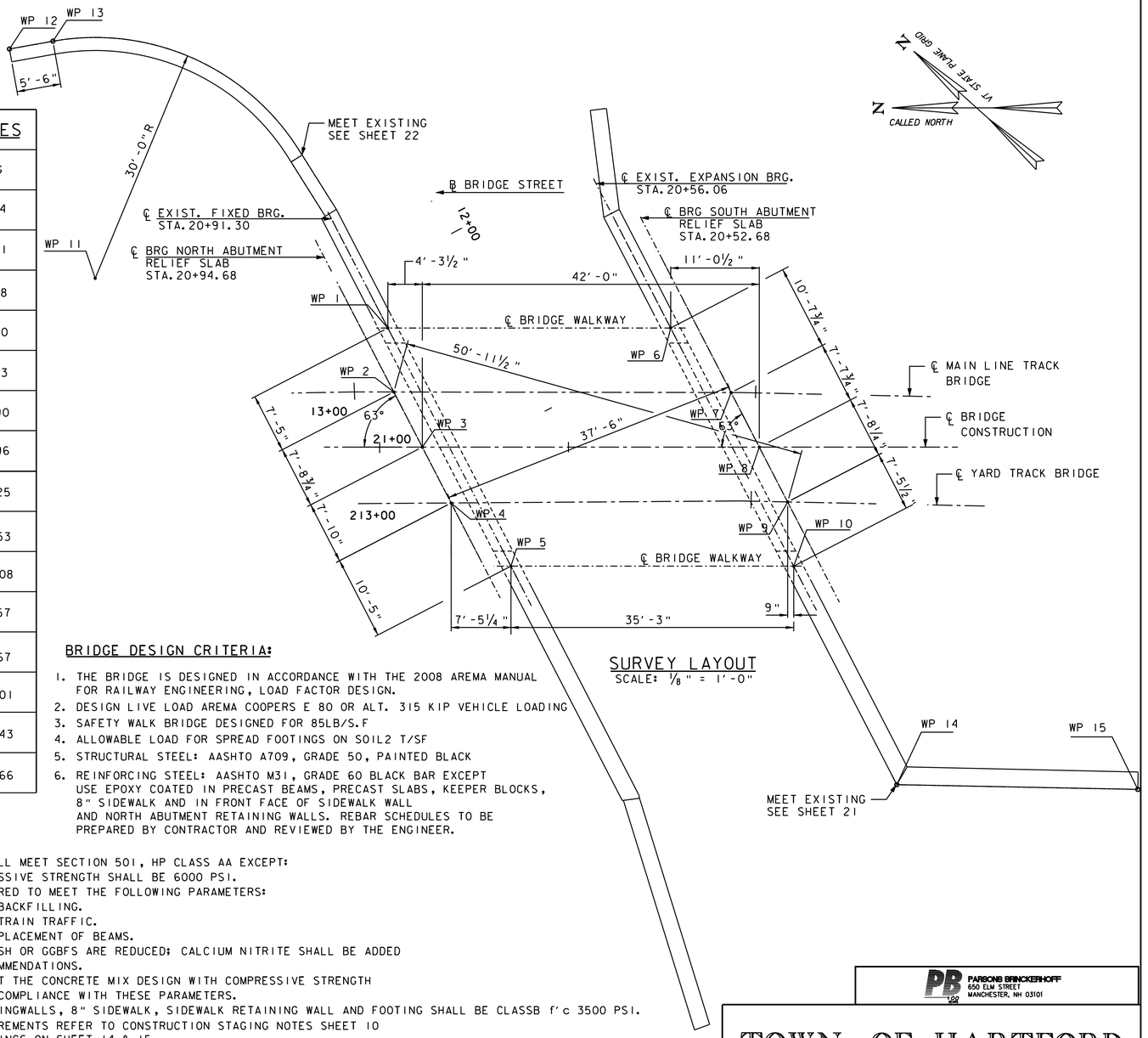
Designed By R BENJAMIN	Drawn By W GERHOLD
Checked By Date J MERCER	Bridge Design Supervisor G.K. DONINGTON Date 1/17/12
PROJECT HARTFORD	PROJECT NO. STP HTFD(1)
I.G.C. Info.	

SUMMARY OF QUANTITIES

ITEM	DESCRIPTION	QUANTITY	UNIT
201.11	CLEARING AND GRUBBING, INCLUDING INDIVIDUAL TREES AND STUMPS	0.09	ACRE
203.15	COMMON EXCAVATION	52.24	CY
203.28	EXCAVATION OF SURFACES AND PAVEMENTS	268.33	CY
203.32	GRANULAR BORROW	25	CY
204.25	STRUCTURE EXCAVATION	920	CY
204.30	GRANULAR BACKFILL FOR STRUCTURES	280	CY
208.40	COFFERDAM	1	LS
210.10	COLD PLANING, BITUMINOUS PAVEMENT	206.71	SY
301.26	SUBBASE OF CRUSHED GRAVEL, FINE GRADED	52.24	CY
406.25	BITUMINOUS CONCRETE PAVEMENT	410.73	TON
501.32	CONCRETE, HIGH PERFORMANCE CLASS AA	184	CY
502.10	SHORING SUPERSTRUCTURE	1	LS
505.35	PERMANENT STEEL SHEET PILING	900	SF
506.50	STRUCTURAL STEEL, ROLLED BEAM	10186	LB
507.15	REINFORCING STEEL	34700	LB
507.16	DRILLING AND GROUTING DOWELS	320	LF
507.17	EPOXY COATED REINFORCING STEEL	13800	LB
507.19	MECHANICAL BAR CONNECTOR	168	EACH
508.15	SHEAR CONNECTORS	1	LS
510.24	GROUTING SHEAR KEYS	92	LF
513.25	STRUCTURAL PAINTING, SHOP APPLIED	1	LS
514.10	WATER REPELLENT, SILANE	31	GAL
519.21	SHEET MEMBRANE WATERPROOFING, PREFORMED SHEET	33	SY
524.21	JOINT SEALER, POLYURETHANE	623	LF
525.10	REMOVAL OF EXISTING RAILING	171.53	LF
529.15	REMOVAL OF STRUCTURE	1	EACH
529.25	REMOVAL OF CONCRETE OR MASONRY	210	CY
531.11	BEARING DEVICE ASSEMBLY, ELASTOMERIC PAD	24	EACH
540.10	PRECAST CONCRETE STRUCTURE	1	LS
541.25	CONCRETE, CLASS B	233	CY
541.58	MORTAR, TYPE IV	10	CY
580.13	REPAIR OF CONCRETE SUBSTRUCTURE SURFACE, CLASS I	50	SY
580.14	REPAIR OF CONCRETE SUBSTRUCTURE SURFACE, CLASS II	50	SY
601.0905	12" CPEP	10	LF
602.30	REPOINTING MASONRY	135	SY
604.18	PRECAST REINFORCED CONCRETE DROP INLET WITH CAST IRON GRATE	1	EACH
616.20	GRANITE SLOPE EDGING	12	LF
616.21	VERTICAL GRANITE CURB	760	LF
604.40	CHANGING ELEVATION OF DROP INLETS, CATCH BASINS, OR MANHOLES	5	EACH
604.42	CHANGING ELEVATION OF SEWER MANHOLES	1	EACH
604.47	CAST IRON GRATE WITH FRAME, TYPE D	2	EACH
616.41	REMOVAL OF EXISTING CURB	520	LF
618.10	PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH	77.74	SY
618.30	DETECTABLE WARNING SURFACE	24	SF
621.80	REMOVAL AND DISPOSAL OF GUARDRAIL	171.53	LF
631.10	FIELD OFFICE, ENGINEERS	1	LS
641.10	TRAFFIC CONTROL	1	LS
635.11	MOBILIZATION/DEMOBILIZATION	1	LS
646.20	4 INCH WHITE LINE	800	LF
646.26	24 INCH STOP BAR	30	LF
646.31	CROSSWALK MARKING	50	LF
646.410	DURABLE 4 INCH YELLOW LINE	790	LF
651.15	SEED	5.07	LB
651.18	FERTILIZER	24.66	LB
651.20	AGRICULTURAL LIMESTONE	0.13	TON
651.25	HAY MULCH	0.08	TON
651.35	TOPSOIL	11.36	CY
653.15	HAY BALES	134	EACH
653.20	TEMPORARY EROSION MATTING	400	SY
653.41	INLET PROTECTION DEVICE, TYPE II	7	EACH
656.30	DECIDUOUS TREES	2	EACH
656.35	DECIDUOUS SHRUBS	28	EACH
656.40	GROUND COVERS AND VINES	6	EACH
656.41	PERENNIALS	16	EACH
656.80	LANDSCAPE BACKFILL, TRUCK MEASUREMENT	127.1	CY
678.23	WIRED CONDUIT	410	LF
678.25	PULL BOX, STANDARD	1	EACH
900.620	SPECIAL PROVISION (LOAD TEST FOR MICROPILES)	28	EACH
900.620	SPECIAL PROVISION (ORNAMENTAL STREET LIGHT)	4	EACH
900.620	SPECIAL PROVISION (UNDER BRIDGE LIGHT)	1	EACH
900.625	SPECIAL PROVISION (CONCRETE STAINING AND SEALING)	6.85	GAL
900.640	SPECIAL PROVISION (MICROPILES)	1700	LF
900.640	SPECIAL PROVISION (PEDESTRIAN HAND RAILING)	342	LF
900.640	SPECIAL PROVISION (SAWED PAVEMENT)	365	LF
900.645	SPECIAL PROVISION (BALLASTED TRACK CONSTRUCTION)	1	LS
900.645	SPECIAL PROVISION (DIRECT FIXATION TRACK CONSTRUCTION)	1	LS

WORKING POINT COORDINATES

WORKING POINT No.	NORTHING	EASTING
WP 1	418963.34	1688283.34
WP 2	418957.30	1688277.91
WP 3	418950.07	1688275.18
WP 4	418942.74	1688270.40
WP 5	418931.94	1688271.53
WP 6	418936.96	1688306.90
WP 7	418925.99	1688305.96
WP 8	418918.83	1688303.25
WP 9	418911.64	1688300.53
WP 10	418905.73	1688295.08
WP 11	418994.44	1688263.57
WP 12	419021.49	1688277.67
WP 13	419018.11	1688282.01
WP 14	418877.98	1688283.43
WP 15	418855.25	1688303.66



SURVEY LAYOUT
SCALE: ⅛" = 1'-0"

BRIDGE DESIGN CRITERIA:

1. THE BRIDGE IS DESIGNED IN ACCORDANCE WITH THE 2008 AREMA MANUAL FOR RAILWAY ENGINEERING, LOAD FACTOR DESIGN.
2. DESIGN LIVE LOAD AREMA COOPERS E 80 OR ALT. 315 KIP VEHICLE LOADING
3. SAFETY WALK BRIDGE DESIGNED FOR 85LB/S.F
4. ALLOWABLE LOAD FOR SPREAD FOOTINGS ON SOIL2 T/SF
5. STRUCTURAL STEEL: AASHTO A709, GRADE 50, PAINTED BLACK
6. REINFORCING STEEL: AASHTO M31, GRADE 60 BLACK BAR EXCEPT USE EPOXY COATED IN PRECAST BEAMS, PRECAST SLABS, KEEPER BLOCKS, 8" SIDEWALK AND IN FRONT FACE OF SIDEWALK WALL AND NORTH ABUTMENT RETAINING WALLS. REBAR SCHEDULES TO BE PREPARED BY CONTRACTOR AND REVIEWED BY THE ENGINEER.
7. CONCRETE FOR RELIEF SLABS SHALL MEET SECTION 501, HP CLASS AA EXCEPT:
   1. CONCRETE 28 DAY COMPRESSIVE STRENGTH SHALL BE 6000 PSI.
   2. MIX DESIGN MAY BE ALTERED TO MEET THE FOLLOWING PARAMETERS:
      A. 1500 PSI PRIOR TO BACKFILLING.
      B. 2500 PSI PRIOR TO TRAIN TRAFFIC.
      C. 4000 PSI PRIOR TO PLACEMENT OF BEAMS.
   3. IF QUANTITIES OF FLY ASH OR GGBFS ARE REDUCED; CALCIUM NITRITE SHALL BE ADDED PER MANUFACTURERS RECOMMENDATIONS.
   4. CONTRACTOR SHALL SUBMIT THE CONCRETE MIX DESIGN WITH COMPRESSIVE STRENGTH CURVES TO DEMONSTRATE COMPLIANCE WITH THESE PARAMETERS.
8. CONCRETE FOR ABUTMENT CAPS, WINGWALLS, 8" SIDEWALK, SIDEWALK RETAINING WALL AND FOOTING SHALL BE CLASSB f'c 3500 PSI.
9. FOR TRAFFIC MAINTENANCE REQUIREMENTS REFER TO CONSTRUCTION STAGING NOTES SHEET 10 AND CONSTRUCTION STAGING DRAWINGS ON SHEET 14 & 15.
10. SAFETY WALK RAILING SHALL BE 1½" DIAMETER SCHEDULE 40 BLACK BAKED ON ENAMEL. ALUMINUM PIPE RAILING.
11. ALL EXPOSED CORNERS OF CONCRETE TO HAVE ¾" X ¾" CHAMFERS.
12. ALL REBAR SPLICES TO BE CLASS C UNLESS SHOWN OTHERWISE.
13. DESIGN PILE LOADS: ESTIMATED LENGTHS:

    FRONT ROW = 90 TONS COMPRESSION — MEASURED BELOW UNDERSIDE OF RELIEF SLAB
    REAR ROW = 35 TONS COMPRESSION — FRONT ROW = 80'
    12 TONS TENSION — REAR ROW = 35'
14. LOADS GIVEN ARE DESIGN WORKING LOADS. ESTIMATED LENGTHS GIVEN ARE APPROXIMATE. CONTRACTOR IS RESPONSIBLE TO DETERMINE ACTUAL LENGTHS NEEDED TO OBTAIN REQUIRED CAPACITIES. CONTRACTOR TO TEST ONE NON-PRODUCTION PILE LOCATED NEAR THE R.R. TRACKS IN A LOCATION APPROVED BY THE ENGINEER.
15. PRECAST CONCRETE FOR BRIDGE BEAMS, BRIDGE WALKWAYS AND KEEPER BLOCKS SHALL BE PAID UNDER ITEM 540.10, PRECAST CONCRETE STRUCTURE. HOWEVER THE CONTRACTOR HAS THE OPTION TO CAST THESE STRUCTURES ON SITE WITH APPROVAL BY THE ENGINEER. CONCRETE STRENGTH AT 28 DAYS SHALL BE 8000 PSI. MIN.

PARSONS BRINCKERHOFF
650 ELM STREET
MANCHESTER, NH 03101

TOWN OF HARTFORD

Town Of HARTFORD, VERMONT	Bridge No. 8
	Log Sta.
Highway No. BRIDGE STREET	Surv. Sta.

N.E.C.R. BRIDGE OVER BRIDGE STREET

BRIDGE SURVEY LAYOUT AND QUANTITIES

Designed By A STOCKIN	Drawn By W. GERHOLD
Checked By P. ARMANO Date 1/17/12	Bridge Design Supervisor G. K. DONINGTON Date 1/17/12
PROJECT HARTFORD	PROJECT NO. STP HTFD(1)
I.G.C. Info.	

N
VT STATE PLANE GRID
N
CALLED NORTH

END APPROACH
STA 14+20.00

CURVE 1
PC = STA. 12+34.22
PT = STA. 13+26.89
DELTA= 6°38'14"RT
D = 7°09'43"
R = 800.00 FT.
T = 46.39 FT.
L = 92.67 FT.
E = 1.34 FT.

KEY:
INDICATES APPROXIMATE LIMITS OF PROPOSED BRIDGE AND RELIEF SLABS ON PILES

CONSTRUCT SIDEWALK RAMP TYPE 5, EXAMPLE 2 PER VAOT STANDARD C-3A (SUBSIDIARY TO ITEM 618.10)

3 STORY BUILDING

BRIDGE STREET TO US-4 & HARTFORD TOWN HALL

LIMIT OF NEW SIDEWALK AND VERTICAL CURB

REMOVE AND REPLACE EXISTING SIDEWALK W/ 5" CONCRETE, EXCEPT 8" ALONG SIDEWALK WALL

LOCATION OF TEMPORARY ROAD CLOSURE

RECONSTRUCT EXISTING CATCH BASINS AS NEEDED (SUBSIDIARY) TO INSTALL NEW FRAMES AND GRATES, TYPE D AT THE NEW CURB LINE AND PAVEMENT ELEVATION (ITEM 604.47)

N/F
DANIEL B. JOHNSON
CREIGH MOFFAT

1 STORY BUILDING

N/F
RAILROAD ROW LLC

3 STORY BUILDING

3 STORY BUILDING

CONCRETE BLOCK WALL

JOE REED DRIVE

END VERTICAL CURB

EXISTING STONE RETAINING WALL

B-1
B-2
B-3
B-4

TO ST. ALBANS
TO WHITE RIVER JUNCTION
NECR MAINLINE TRACK
NECR YARD TRACK
11+00
12+00
13+00
14+00
15+00
16+00
211+00
212+00
213+00
214+00
215+00
216+00

EXISTING BRIDGE SPAN AND CENTER PIER TO BE REMOVED

CHAIN LINK FENCE

CENTRAL VERMONT RAILROAD
3,745SQ.FT. BETWEEN LEASE AND EXISTING FENCE

REMOVE EXISTING WALL AND FOUNDATION TO 6" BELOW EXISTING GRADE

LEASE AGREEMENT LAND #8524

POLKA DOT DINER

SCALE 1" = 20'-0"
20 0 20

12'-0" SLOPED CURB CENTERED ON DOORWAY

REMOVE AND REPLACE EXISTING SIDEWALK W/ 5" CONCRETE, EXCEPT 8" ALONG SIDEWALK WALL

N/F
PAULINE A. STEBBINS
WILLIAM PAUL STEBBINS

RAISE FRAME & GRATE AND REGRADE (ITEM 604.40)

2 STORY BUILDING

NEW DROP INLET, CONNECT TO EXIST.

REMOVE EXISTING ASPHALT PAVING FOR FUTURE PLANTING AREA

N/F
ELIZABETH F. EDSON

TO DOWNTOWN HARTFORD

MAIN STREET

PROJECT LIMIT STA. 10+29

LIMIT OF NEW SIDEWALK, BEGIN VERTICAL CURB

PROVIDE 5' SIDEWALK AND RAMP TYPE 5, EXAMPLE 2 PER VAOT STANDARD C-3A (SUBSIDIARY TO ITEM 618.10)

BEGIN VERTICAL CURB

PROVIDE 5' SIDEWALK AND RAMP TYPE 5 EXAMPLE 2 PER VAOT STANDARD C-3A (SUBSIDIARY TO ITEM 618.10)

PROJECT LIMIT BRIDGE STREET AND LOCATION OF TEMPORARY ROAD CLOSURE

NOTES:

1. PROPOSED STREET LIGHTS (4 REQUIRED) SEE UTILITY PLAN.
2. FOR UTILITY PLAN SEE SHEET 26
3. FOR RIGHT-OF-WAY PLAN SEE SHEET 5.

PLAN
SCALE: 1" = 20'

TOWN OF HARTFORD

Town Of HARTFORD, VERMONT	Bridge No.
	Log Sta.
Highway No. BRIDGE STREET	Surv. Sta.

N.E.C.R. BRIDGE OVER BRIDGE STREET

ROADWAY LAYOUT PLAN

Designed By R. BENJAMIN	Drawn By W. GERHOLD
Checked By J. MERCER Date 10/8/10	Bridge Design Supervisor G. K. DONINGTON 1/17/12
PROJECT HARTFORD	PROJECT NO. STP HTFD(1)
I.G.C. Info.	

PARSONS BRINCKERHOFF
650 ELM STREET
MANCHESTER, NH 03101

BEGIN R.O.W. PROJECT
STA 14+20.00

END PROJECT
STA 13+95.00

VT STATE PLANE GRID
N
CALLED NORTH

CURVE 1
PC = STA. 12+34.22
PT = STA. 13+26.89
DELTA= 6°38'14"RT
D = 7°09'43"
R = 800.00 FT.
T = 46.39 FT.
L = 92.67 FT.
E = 1.34 FT.

US - 4 & HARTFORD
TOWN HALL
BRIDGE STREET
14+00
13+00

3 STORY BUILDING

EXISTING EASEMENT
EXISTING EASEMENT
P L
EXISTING EASEMENT
P L

N/F
DANIEL B. JOHNSON
CREIGH MOFFAT

1 STORY BUILDING

TOWN OF HARTFORD RIGHT-OF-WAY
NECR E&T

12+58.74
45.9' LT.
1
TEMPORARY CONSTRUCTION EASEMENT
18'
8'
CONST. (T)
19'
12+54.27
28.8' LT.
PC
12+46.73
29.3' LT.
12+51.73
48.1' LT.
NECR R.O.W.
NECR RIGHT-OF-WAY

3 STORY BUILDING

N/F
RAILROAD ROW LLC

2
TEMPORARY CONSTRUCTION EASEMENT

21+26.49
21.8' RT.
19+30.32
31.6' RT.
8'
12'
CONST. (T)
12+01.97
26.7' RT.
14+91.76
26.7' RT.
12+00

3 STORY BUILDING

NECR RIGHT-OF-WAY
JOE REED DRIVE

TO ST. ALBANS
11+00
12+00
211+00
212+00
213+00
14+00
214+00
NECR MAINLINE TRACK
NECR YARD TRACK
15+00
215+00
16+00
216+00
TO WHITE RIVER JUNCTION
NECR RIGHT-OF-WAY
104.50'

PROPOSED BRIDGE REPLACEMENT
OUTLINE OF EXISTING BRIDGE (TO BE REMOVED)

CENTRAL VERMONT RAILROAD
3,745SQ.FT. BETWEEN LEASE
AND EXISTING FENCE
P L
P L
LEASE AGREEMENT
LAND #8524

POLKA DOT DINER

NECR RIGHT-OF-WAY

N/F
PAULINE A. STEBBINS
WILLIAM PAUL STEBBINS

TOWN OF HARTFORD RIGHT-OF-WAY
TO DOWNTOWN HARTFORD
PROJECT LIMIT
P L
BRIDGE STREET
N. MAIN
00+01

2 STORY BUILDING

N/F
ELIZABETH F. EDSON

END OF R.O.W. PROJECT
STA 10+20.00

PLAN
SCALE: 1" = 20'

SCALE 1" = 20'-0"
20 0 20

PB PARSONS BRINCKERHOFF
60 ELM STREET
MANCHESTER, NH 03101

TOWN OF HARTFORD

Town Of HARTFORD, VERMONT	Bridge No.
	Log Sta.
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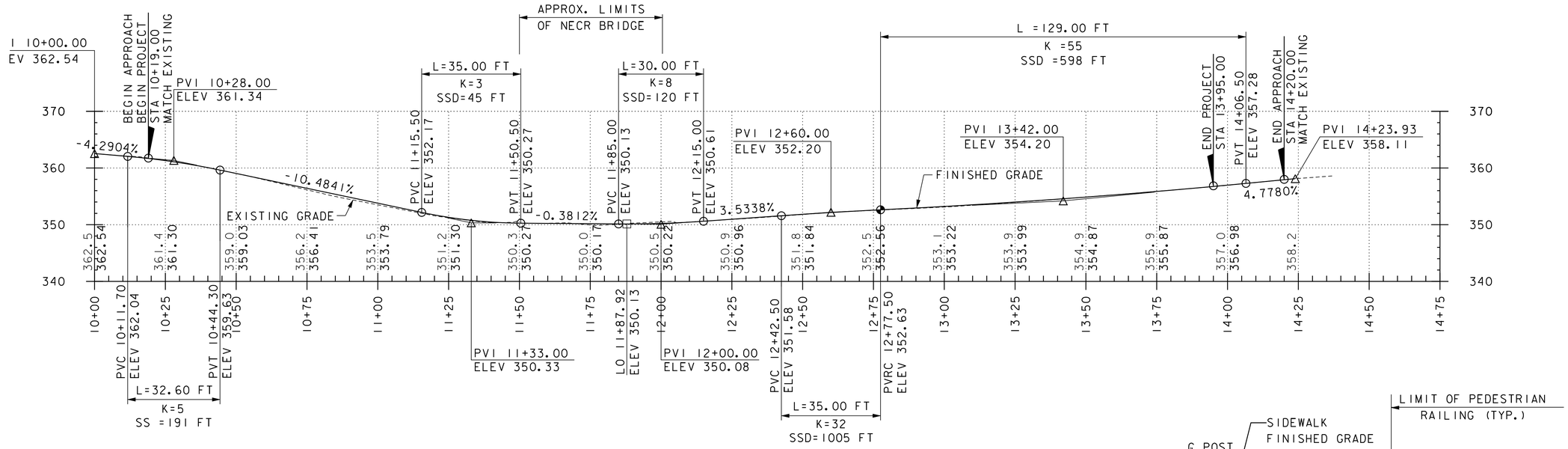
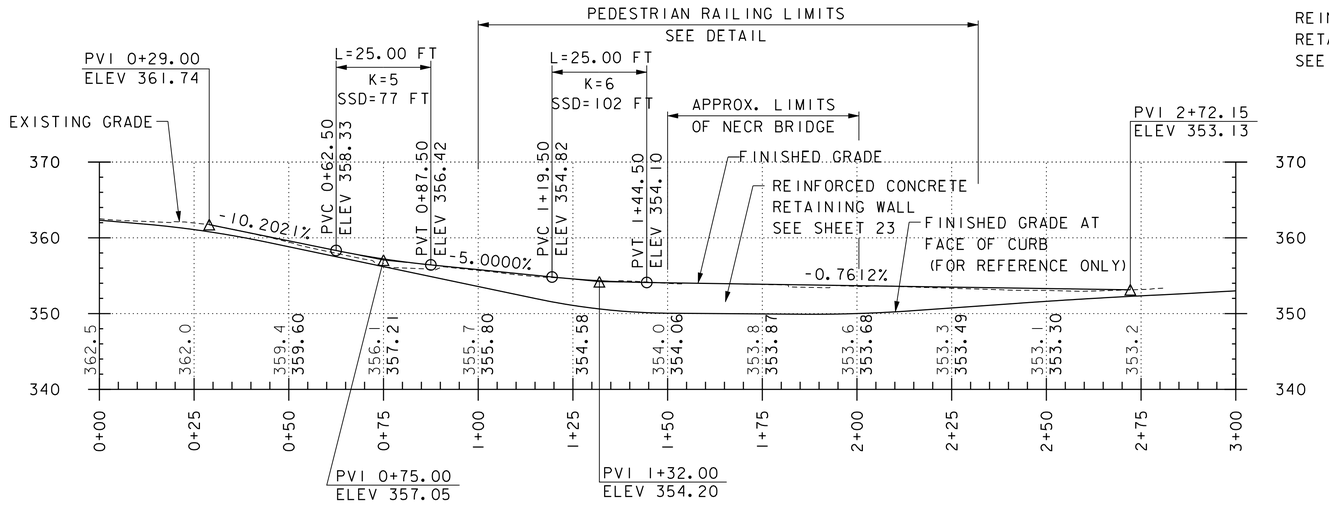
N.E.C.R. BRIDGE OVER BRIDGE STREET

RIGHT-OF-WAY PLAN

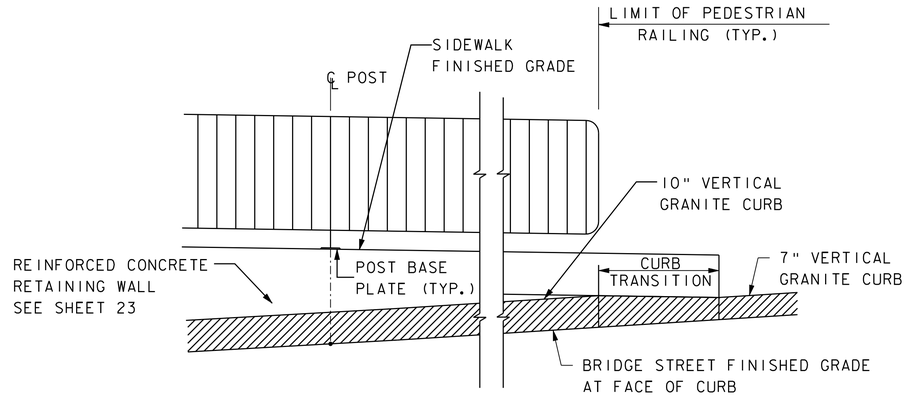
Designed By G.K.DONINGTON	Drawn By W.GERHOLD
Checked By A. STOCKIN Date 1/17/12	Bridge Design Supervisor G.K.DONINGTON Date 1/17/12
PROJECT HARTFORD	PROJECT NO. STP HTFD(1)
I.G.C. Info.	



BRIDGE STREET

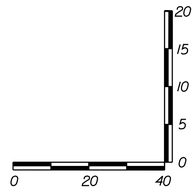


BACK OF BRIDGE STREET SIDEWALK



CURB TRANSITION DETAIL

NOT TO SCALE

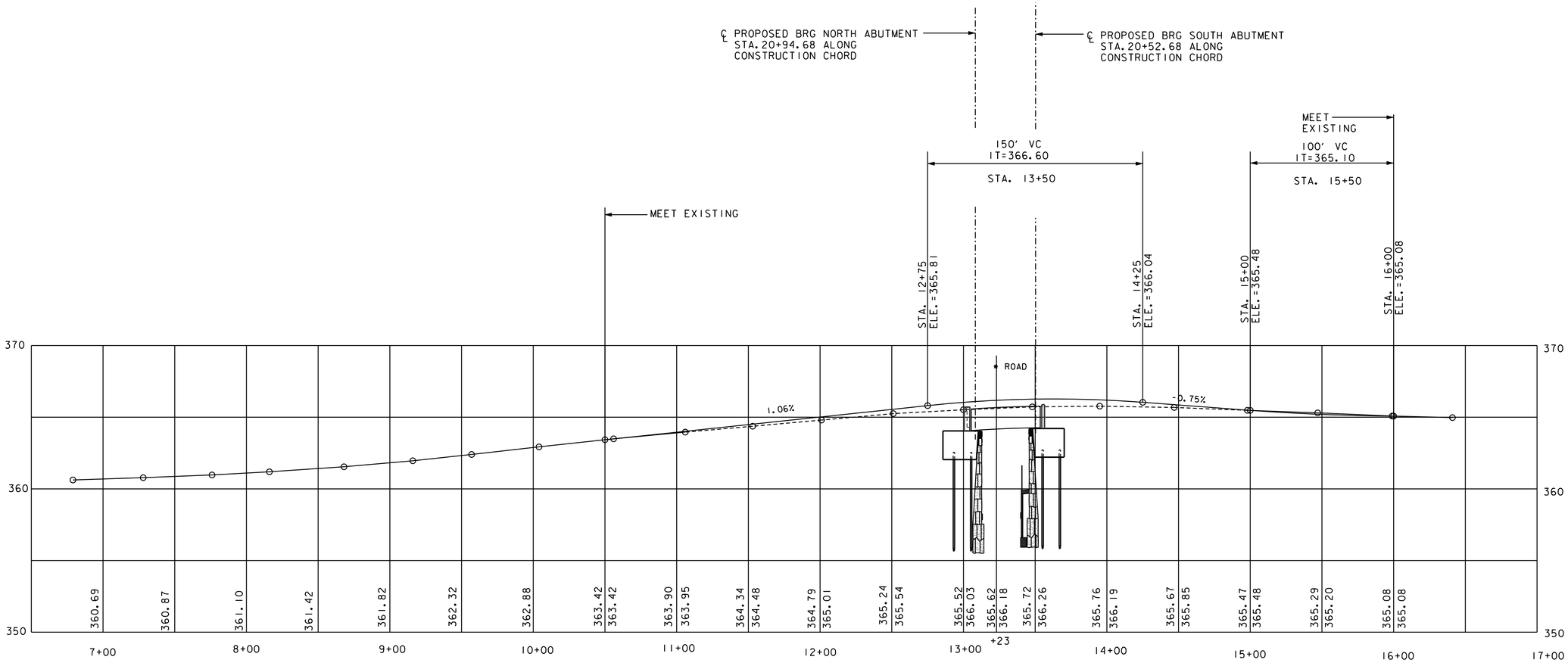


HORIZONTAL SCALE = 1" = 20'
VERTICAL SCALE = 1" = 10'

PARSONS BRINCKERHOFF
650 ELM STREET
MANCHESTER, NH 03101

TOWN OF HARTFORD

Town Of HARTFORD, VERMONT	Bridge No.
	Log Sta.
Highway No. BRIDGE STREET	Surv. Sta.
N.E.C.R. BRIDGE OVER BRIDGE STREET	
BRIDGE STREET PROFILE	
Designed By R ANGJELI	Drawn By K MOULTON
Checked By R. BENJAMIN 10/8/10 Date	Bridge Design Supervisor G.K. DONINGTON Date 1/17/12
PROJECT HARTFORD	PROJECT NO. STP HTFD(1)
I.G.C. Info.	



NECR MAINLINE TRACK

HORIZ. 1"=40'
VERT. 1"=4'

NOTES:

1. STATIONING ALONG ℄ OF TRACK PROFILE GRADE LINE IS LOW RAIL
2. STA. 14+00 MAINLINE TRACK EQUALS STA. 214+00 YARD TRACK
3. CONTRACTOR IS ADVISED THAT EXISTING TRACK GRADE ELEVATIONS ARE APPROXIMATE. CONTRACTOR TO SURVEY TRACKS AT BEGINNING OF PROJECT TO CONFIRM ACTUAL EXISTING GRADES.
4. CONTRACTOR AT START OF PROJECT TO SURVEY EXISTING TRACKS AT STATION POINTS GIVEN IN PROFILE AND SUBMIT ELEVATIONS TO ENGINEER FOR REVIEW.
5. SUPERELEVATION OF BOTH MAIN AND YARD TRACKS TO BE 1".

0 10 20
SCALE IN FEET

PARSONS BRINCKERHOFF
650 ELM STREET
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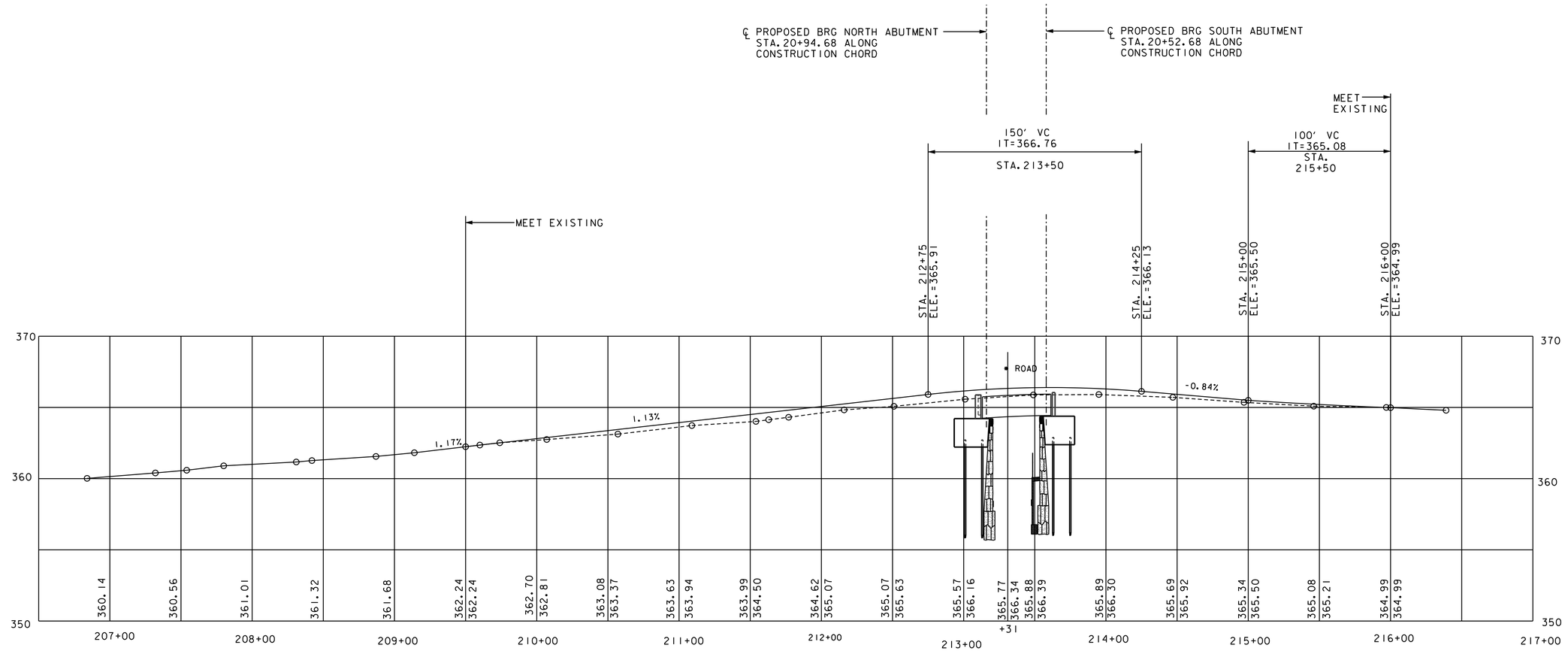
TOWN OF HARTFORD

Town Of HARTFORD, VERMONT	Bridge No.
	Log Sta.
Highway No. BRIDGE STREET	Surv. Sta.

N.E.C.R. BRIDGE OVER BRIDGE STREET

RAILROAD TRACK PROFILE SHEET 1

Designed By K MOULTON	Drawn By K MOULTON
Checked By R ORO Date 10/8/10	Bridge Design Supervisor G.K. DONINGTON Date 1/17/12
PROJECT HARTFORD	PROJECT NO. STP HTFD(1)
I.G.C. Info.	



NOTES:

1. SEE SHEET 7 FOR NOTES

NECR YARD TRACK

HORIZ. 1"=40'
VERT. 1"=4'

0 10 20

SCALE IN FEET

PARSONS BRINCKERHOFF
650 ELM STREET
MANCHESTER, NH 03101

TOWN OF HARTFORD

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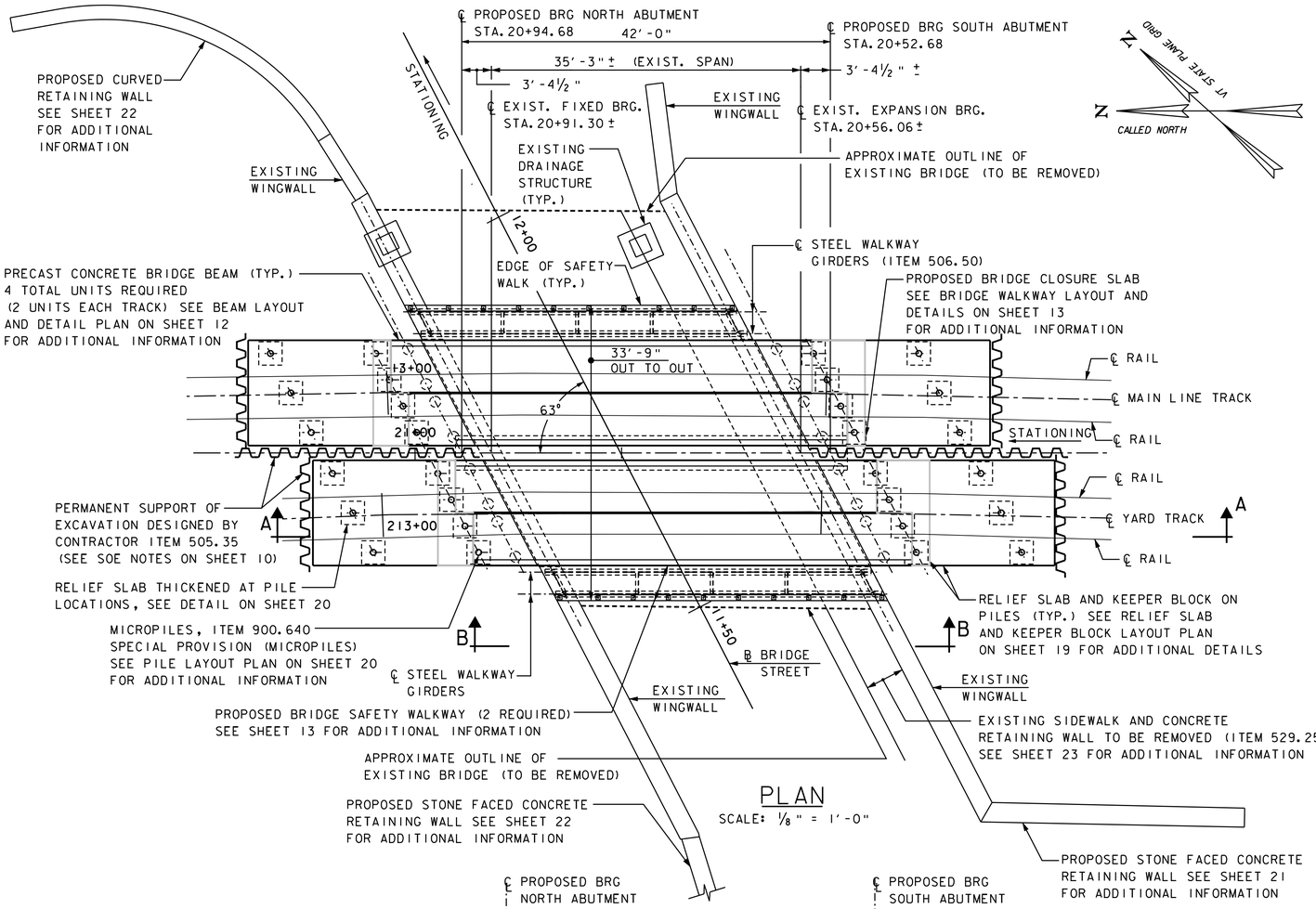
	Log Sta.
Highway No. BRIDGE STREET	Surv. Sta.

N.E.C.R. BRIDGE OVER BRIDGE STREET

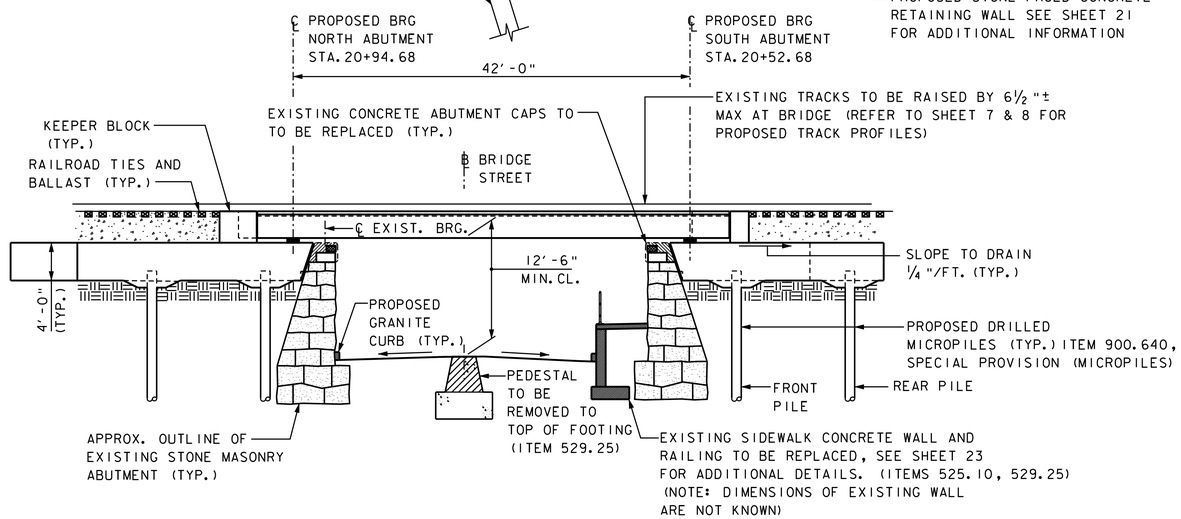
RAILROAD TRACK PROFILE SHEET 2

Designed By K MOULTON	Drawn By K MOULTON
Checked By R ORO Date 10/8/10	Bridge Design Supervisor G.K. DONINGTON Date 1/17/12
PROJECT HARTFORD	PROJECT NO. STP HTFD(1)
I.G.C. Info.	



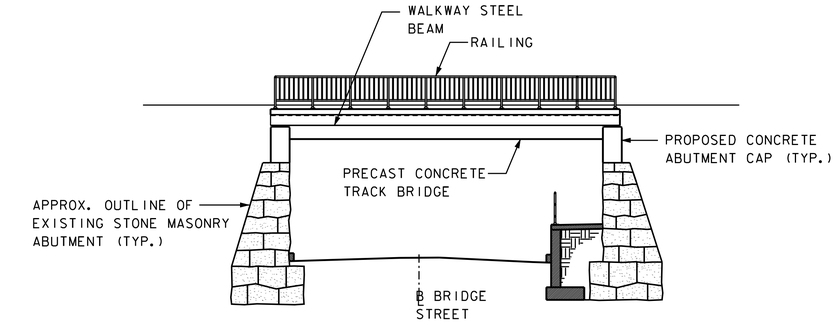
PLAN

SCALE: ⅛" = 1'-0"



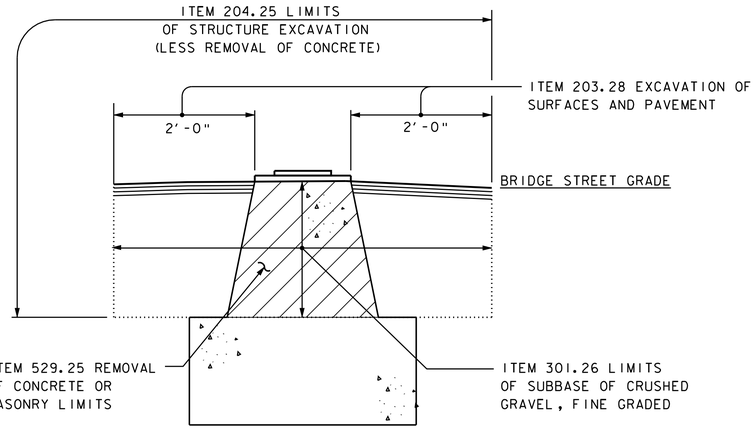
LONGITUDINAL SECTION A-A (WITH EXISTING SUPERSTRUCTURE AND CENTER PIER REMOVED)

SCALE: ⅛" = 1'-0"



SECTION B-B (WEST ELEVATION)

SCALE: ⅛" = 1'-0"



TYPICAL PEDESTAL REMOVAL SHOWING PAY ITEMS

SCALE: ½ = 1'-0"

PB PARSONS BRINCKERHOFF
650 ELM STREET
MANCHESTER, NH 03101

TOWN OF HARTFORD

Town Of HARTFORD, VERMONT	Bridge No. 8
	Log Sta.
Highway No. BRIDGE STREET	Surv. Sta.

N.E.C.R. BRIDGE OVER BRIDGE STREET

BRIDGE GENERAL PLAN & LONGITUDINAL SECTION

Designed By A. STOCKIN	Drawn By W. GERHOLD
Checked By Date G.K. DONINGTON 10/8/10	Bridge Design Supervisor G.K. DONINGTON Date 1/17/12
PROJECT HARTFORD	PROJECT NO. STP HTFD(1)
I.G.C. Info.	

CONSTRUCTION STAGING NOTES

THE EXISTING BRIDGE SHALL BE REPLACED USING ACCELERATED BRIDGE CONSTRUCTION TECHNIQUES USING THE FOLLOWING CONSTRUCTION SEQUENCE AS SUMMARIZED IN THE FOLLOWING NOTES. AFTER BID AWARD, THE CONTRACTOR MAY SUBMIT ALTERNATE CONSTRUCTION STAGING SCHEMES TO THE ENGINEER FOR CONSIDERATION AND APPROVAL.

1. EXISTING UTILITIES:
   A) WITH REFERENCE TO THE UTILITIES SHOWN ON SHEET 26, THE CONTRACTOR SHALL FULLY COORDINATE AND COOPERATE WITH UTILITY COMPANIES TO ENSURE THAT ALL BURIED AND ABOVE GROUND/OVERHEAD UTILITIES THAT INTERFERE WITH CONTRACTORS ACCESS AND PROGRESSION OF THE WORK HAVE BEEN RELOCATED IN ADVANCE OF THE CONTRACTORS NEED TO PERFORM THE INTENDED WORK.
   B) THE FOLLOWING UTILITY RELOCATIONS ARE INVOLVED WITH PILE INSTALLATION AND TRACK BRIDGE INSTALLATION .OTHER UTILITIES ARE IMPACTED WITH STREET WORK.

GREEN MOUNTAIN POWER

* EXISTING POLES AND ASSOCIATED OVERHEAD LINES RUNNING BETWEEN POLES 1, 2, AND 5 ON THE NORTH SIDE OF BRIDGE STREET HAVE BEEN RELOCATED BY GREEN MOUNTAIN POWER TO 1, 3, 5.
* LINES RUNNING NORTH AND SOUTH BETWEEN RELOCATED POLES 1 & 7 TO REMAIN IN SERVICE.

LEVEL 3

* EXISTING DIRECTIONALLY DRILLED LINE LOCATED UNDER TRACKS BEHIND NORTH ABUTMENT IS TO BE DETOURED OVERHEAD BY LEVEL 3 PRIOR TO INSTALLING PILES.

SPRINT

* AT BEGINNING OF PROJECT, SPRINT CONTRACTOR WILL UNCOVER THE LINE AND ADD SPLIT DUCT PROTECTION TO EXISTING ORANGE CONDUIT.
* DUE TO SLACK IN CABLE, THE LINE CAN BE MOVED TO THE NORTH, AND CONTRACTOR TO SUITABLY TEMPORARILY SUPPORT ABOVE BRIDGE STREET.
* ONCE NEW STEEL WALKWAY BEAMS ARE ERECTED, AND PRIOR TO INSTALLING DECK SLAB, THE CABLE IS TO BE MOVED SIDEWAYS INTO PERMANENT LOCATION, IN SPLIT SLEEVE CONDUIT. SPLIT SLEEVE CONDUIT ON WALKWAY BRIDGE TO BE SUPPLIED AND INSTALLED BY SPRINT CONTRACTOR. (80 FT. APPROXIMATE)
* MOVING CABLE TO BE DONE BY SPRINT.
* CONTRACTOR TO COORDINATE WITH SPRINT. FIBER OPTIC LINE IS TO REMAIN IN SERVICE DURING THE WORK. CONTRACTOR IS RESPONSIBLE FOR NOT DAMAGING THE CABLE. CABLE IS TO BE PROTECTED AND TEMPORALLY SUPPORTED AS NECESSARY.

NECR

* OVER HEAD LINE BETWEEN POLES 9 & 10 TO BE REMOVED BY CONTRACTOR AFTER CONFIRMING WITH NECR THAT LINE IS DEAD.

2. BRIDGE STREET DETOUR:
   CONTRACTOR SHALL COORDINATE WITH THE ABUTTERS AND THE TOWN OF HARTFORD IN THE PREPARATION OF A DETOUR PLAN THAT MUST BE SUBMITTED FOR REVIEW AND APPROVAL BY THE TOWN OF HARTFORD PUBLIC WORKS DEPARTMENT. THE CONTRACTORS DETOUR PLAN SHALL DEPICT THE CLOSURE OF BRIDGE STREET LOCALLY AT THE BRIDGE SITE TO ALL THROUGH PEDESTRIAN AND VEHICULAR TRAFFIC. THE APPROXIMATE LOCATIONS OF BRIDGE STREET ROAD CLOSURES ARE SHOWN ON SHEET 4. IN ADDITION, THE CONTRACTORS PLAN MUST REFLECT ALL VEHICULAR DETOURS AND MAINTAIN UNIMPEDED PEDESTRIAN AND VEHICULAR ACCESS TO ADJACENT BUSINESSES AT ALL TIMES FOR THE DURATION OF THE PROJECT.

3. RAILROAD BRIDGE - EXISTING CONDITION:
   A. THE CONTRACTOR NEEDS TO BE AWARE THAT THE EXISTING BRIDGE IS IN A DETERIORATED CONDITION AND AS A NOTED EXAMPLE, THE CENTER PIER IS HEAVILY CORRODED AT THE BASE OF THE COLUMNS. THE CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN THE EXISTING BRIDGE IN A SAFE CONDITION AT ALL TIMES DURING ALL STAGES OF THE CONTRACTORS WORK.
   B. PRIOR TO ANY WORK TAKING PLACE ON THE EXISTING BRIDGE, THE CONTRACTOR SHALL HIRE A VT STRUCTURAL P.E. EXPERIENCED IN RAILROAD BRIDGE ENGINEERING TO INSPECT THE BRIDGE STRUCTURE, COMPUTE EXISTING BRIDGE LOAD CAPACITY, AND DESIGN SUITABLE SHORING TO SAFEGUARD THE BRIDGE DURING ALL STAGES OF ITS REPLACEMENT FOR ALL CONSTRUCTION STAGES OF THE WORK. THE EXISTING BRIDGE SHALL BE CHECKED FOR COOPERS E80 LOADING TAKING INTO ACCOUNT THE ACTUAL DETERIORATED CONDITION. TEMPORARY SHORING MUST BE ASSESSED FOR THE PARTIAL DEMOLITION STAGE WHEN HALF OF THE BRIDGE HAS BEEN REMOVED DURING TRAIN MOVEMENTS WITH RUNNING ON THE OTHER HALF. AS A MINIMUM, THE CONTRACTOR SHALL ASSUME THAT THE CENTER PIER WILL NEED TO BE SHORED ALONG BOTH SIDES OF THE EXISTING PIER.
   C. CONTRACTOR SHALL SUBMIT TO THE ENGINEER FOR REVIEW, A WORK PLAN WITH MEANS AND METHODS FOR EACH CONSTRUCTION STAGE OF THE WORK, INCLUDING THE ENGINEERS INSPECTION REPORT, LOAD RATING CALCULATIONS, AND THE SHORING DESIGN ALONG WITH THE APPROPRIATE SHOP DRAWINGS.
   D. GENERAL - AS THE CONTRACTORS WORK EXPOSES THE EXISTING BRIDGE ELEMENTS THE CONTRACTORS ENGINEER SHALL MAKE FURTHER ON SITE PROGRESS ASSESSMENTS OF THE AMOUNT OF CORROSION AND DETERIORATION. IF EXISTING CONDITIONS ARE WORSE THAN PREVIOUSLY ESTIMATED BY THE ENGINEER AND DO NOT SUPPORT THE INTENT OF THE CONTRACT DOCUMENTS, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY.
   E. ALL OF THIS WORK SHALL BE PAID UNDER ITEM 502.10.

4. RAILROAD PROFILE RAISE:
   A. AFTER THE BRIDGE HAS BEEN SHORED, THE EXISTING TWO TRACK ALIGNMENT IS TO BE RAISED IN SMALL INCREMENTS BY RE-BALLASTING. INCREMENTS SHALL BE SUFFICIENTLY GRADUAL (AS APPROVED BY NECR), TO PERMIT THIS PROCESS TO TAKE PLACE BETWEEN TRAINS WITHOUT TRACK SHUTDOWNS. LIMITS OF TRACK RAISING ARE GIVEN ON SHEETS 7 & 8. THE MAXIMUM RAISE AT THE CENTER OF THE BRIDGE IS APPROXIMATELY 6.5 INCHES BOTH TRACKS ARE TO BE RAISED VERTICALLY. TRANSVERSE LOCATION AND SUPER ELEVATION ARE TO REMAIN.
   B. PRIOR TO RAISING TRACKS CONTRACTOR TO SURVEY THE EXISTING TRACK LOCATIONS WITHIN THE LIMITS OF WORK AND SUBMIT TO THE ENGINEER FOR REVIEW AND APPROVAL.
   C. ON COMPLETION OF TRACK RAISING TO THE NEW PROFILES, CONTRACTOR SHALL SURVEY THE AS BUILT LOCATIONS OF THE TRACKS AND SUBMIT TO THE ENGINEER. THE SURVEY SHALL COVER THE ENTIRE TRACK CURVE IN WHICH THE BRIDGE IS LOCATED. TO A MINIMUM DISTANCE OF 200 FEET OUT INTO ADJOINING TANGENT AREAS. THE SURVEY SHALL INCLUDE THE FOLLOWING AT MAXIMUM INTERVALS OF 31 FEET:
   * HORIZONTAL AND VERTICAL COORDINATES OF THE TRACK CENTERLINE.
   * TRACK CROSS LEVEL/SUPERELEVATION.
   * TRACK STRING LINE MEASUREMENTS, TAKEN IN ACCORDANCE WITH AREMA MANUAL OF HIGHWAY ENGINEERING, CHAPTER 5, SECTION 3.2
   FOR REVIEW AND APPROVAL BY NECR. THE AS BUILT TRACK VERTICAL AND HORIZONTAL GEOMETRY IS TO BE COMPARED TO THE SURVEY (IN NOTE B) AND SHALL BE LOCATED ON THE PROPOSED PRECAST BEAM FRAMING LAYOUTS SO THAT THE GEOMETRY OF THE BEAMS CAN BE VERIFIED AND ADJUSTED (IF NECESSARY) BY THE CONTRACTOR.
   D. THE WORK DESCRIBED ABOVE TO BE PAID UNDER ITEM 900.645 - BALLASTED TRACK CONSTRUCTION.

5. RAILROAD TRACK CLOSURES:
   ALL WORK ON THE RAILROAD BRIDGE REPLACEMENT (INCLUDING RAISING THE EXISTING TRACK PROFILES, INSTALLING RELIEF SLAB SUPPORT EXCAVATION, PILE INSTALLATION, AND CONCRETE) SHALL BE CARRIED OUT BETWEEN TRAINS(WITHOUT TRACK CLOSURES) MAINTAINING THE EXISTING TWO TRACKS AT ALL TIMES. MODULARIZED SECTIONS OF TRACK/TIES THAT CAN BE QUICKLY UNBOLTED AND REINSTALLED AFTER BACKFILLING WILL BE NECESSARY TO PERMIT CONSTRUCTION BETWEEN TRAINS.

   EXCEPTIONS TO THE ABOVE NOTE: THE ONLY TIMES TRACK OUTAGES WILL BE ALLOWED ARE AS FOLLOWS:
   A. THE INSTALLATION OF THE RELIEF SLABS(REMOVE TRACK SECTIONS, EXCAVATE, PLACE REBAR, PLACE CONCRETE, CURE, BACKFILL, REPLACE TRACKS) (ONE TRACK AT A TIME).
   B. HALF SECTION REMOVAL OF EXISTING BRIDGE, AND INSTALLATION OF THE NEW PRECAST REINFORCED CONCRETE TRACK BRIDGES AND KEEPER BLOCKS (ONE TRACK AT A TIME)

   FOR CASE 5A - THE TRAINS SHALL BE SHIFTED TO SHARE ONE TRACK FOR A TWO DAY MAXIMUM DURATION. PER TRACK BRIDGE (I.E. INSTALL BOTH YARD TRACK RELIEF SLABS IN 2 DAYS, AND THOSE FOR MAINLINE TRACK IN ANOTHER 2 DAYS. (I.E. 4 DAYS TOTAL))
   FOR CASE 5B - THE DURATION SHALL BE 2 DAYS PER TRACK BRIDGE. (I.E. 4 DAYS TOTAL)

   C. THE WORK DESCRIBED ABOVE SHALL BE PAID UNDER ITEM 900.645 - BALLASTED TRACK CONSTRUCTION.

6. EXISTING ABUTMENT WALL REPAIRS, SIDEWALK RETAINING WALL REPLACEMENTS, AND WINGWALL REPAIR/REPLACEMENTS. SHALL NOT BE CARRIED OUT UNTIL AFTER THE EXISTING BRIDGE SUPERSTRUCTURE HAS BEEN COMPLETELY REMOVED/REPLACED AND RAILROAD TRAFFIC IS OPERATING ON THE NEW SPANS AND RELIEF SLABS ON PILES.

EXISTING RAILROAD CONDITIONS

1. ON AVERAGE, 4 FREIGHT TRAINS CROSS THIS BRIDGE PER DAY.
2. ON AVERAGE, 2 AMTRACK TRAINS CROSS THIS BRIDGE PER DAY, ONCE IN THE MORNING AND ONCE IN THE EVENING.
3. ALL MATERIAL REMOVED IS TO BE PROPERTY OF THE RAILROAD.
4. THE CONTRACTOR SHALL STOCKPILE EXISTING RAILROAD TIES ON RAILROAD PROPERTY.
5. RAILROAD SHALL DISPOSE OF ALL EXISTING RAILROAD TIES IN AN APPROVED MANNER.

SUMMARY OF BRIDGE REPLACEMENT SEQUENCE

STAGE 1 RELOCATE UTILITIES
STAGE 2 DETOUR BRIDGE STREET
STAGE 3 SHORE EXISTING BRIDGE
STAGE 4 RAISE TRACKS
STAGE 5 INSTALL PILES
STAGE 6 INSTALL YARD TRACK RELIEF SLABS
STAGE 7 INSTALL MAINLINE TRACK RELIEF SLABS
STAGE 8 DEMO EXIST AND INSTALL YARD TRACK BRIDGE, INSTALL PERMANENT TRANSVERSE BEAM POST TENSIONING
INSTALL PRECAST KEEPER BLOCKS
STAGE 9 REPEAT STAGE 8 FOR MAINLINE TRACK BRIDGE
STAGE 10 INSTALL WALKWAY STRUCTURES, RELOCATE SPRINT CABLE.
STAGE 11 MAKE REPAIRS/REPLACE EXISTING ABUTMENT WALLS, WINGWALLS, AND SIDEWALK RETAINING WALLS.
STAGE 12 INSTALL STREET LIGHTING UNDER BRIDGE, REPAVE SIDEWALKS, REPLACE BRIDGE STREET PAVING AND STRIPING
STAGE 13 INSTALL LANDSCAPING.

SUPPORT OF EXCAVATION NOTES:

1. SUPPORT OF EXCAVATION TO BE DESIGNED TO SUPPORT THE EXCAVATION OF THE RELIEF SLABS. DEBOND RELIEF SLABS FROM SOE BY USING 3/4" PLYWOOD OR APPROVED EQUAL.

2. DESIGN SHALL BE CARRIED OUT BY A P.E. REGISTERED IN VERMONT TO MEET AREMA CODE REQUIREMENTS FOR COOPERS E 80 LOADING.

ROADWAY NOTES:

1. EXISTING STONE ABUTMENTS AND CONCRETE CAP/WINGWALLS TO BE REHABILITATED. SEE SHEETS 18, 21 & 22 FOR DETAILS.

2. REGARDING THE EXISTING SIDEWALK CONCRETE RETAINING WALL:
   AT START OF PROJECT, CONTRACTOR TO EXCAVATE TEST PITS TO DETERMINE DEPTH OF EXISTING FOOTING AS AGREED BY THE ENGINEER. WALL REMOVAL SHALL NOT TAKE PLACE UNTIL AFTER THE BRIDGE SUPERSTRUCTURE HAS BEEN TOTALLY REPLACED, ALL OF THIS WORK SHALL BE PAID UNDER ITEM 529.25 REMOVAL OF CONCRETE OR MASONRY.

BORING NOTES:

1. FOR BORING LOCATIONS SEE SHEET 4.
2. FOR BORING LOGS SEE "CONTRACT DOCUMENTS AND TECHNICAL SPECIFICATIONS."

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TOWN OF HARTFORD

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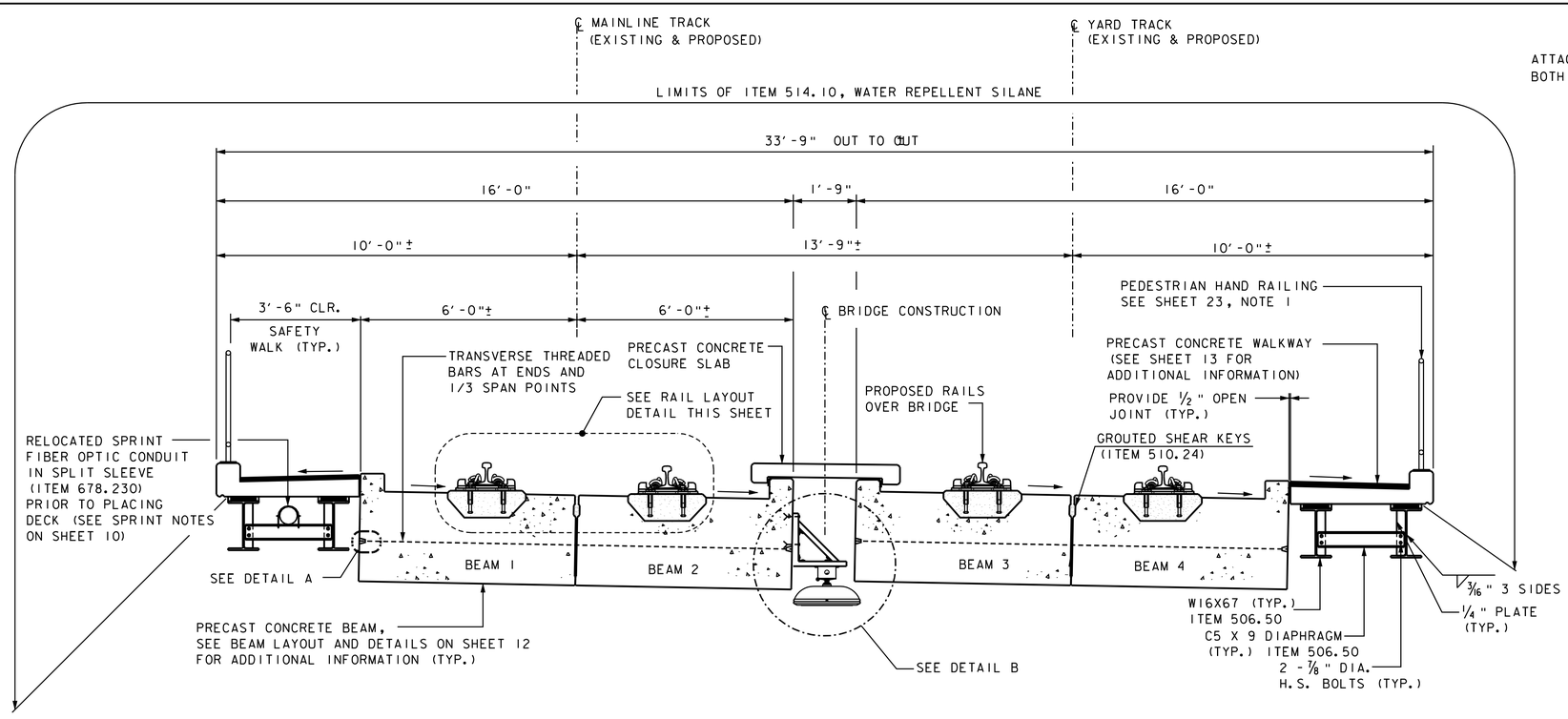
N.E.C.R. BRIDGE OVER BRIDGE STREET

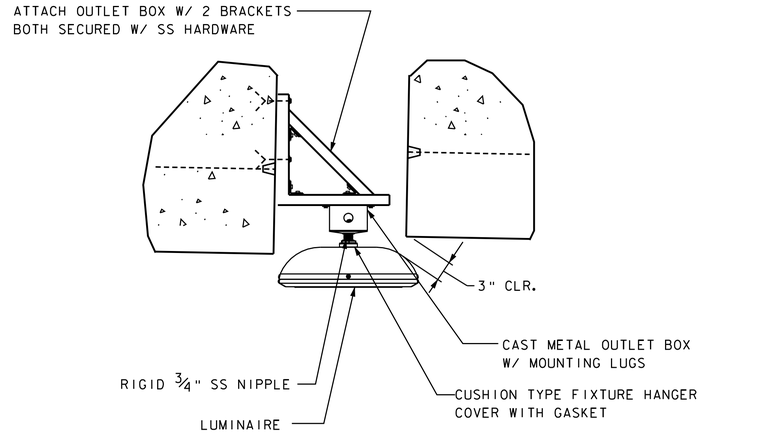
BRIDGE GENERAL NOTES

Designed By A STOCKIN	Drawn By W.GERHOLD
Checked By Date G.K.DONINGTON 1/17/12	Bridge Design Supervisor G.K.DONINGTON Date1/17/12
PROJECT HARTFORD	PROJECT NO. STP HTFD(1)
I.G.C. Info.	



BRIDGE TYPICAL SECTION

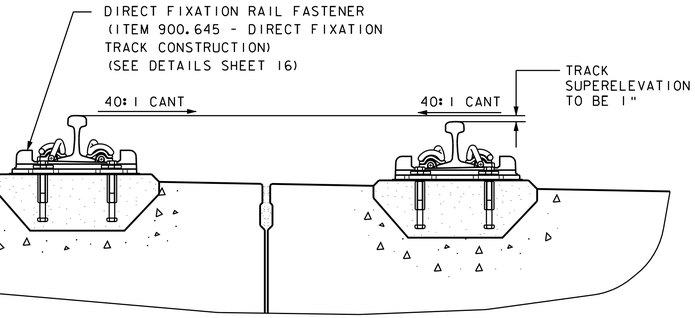
SCALE: ½"= 1'-0"



DETAIL B

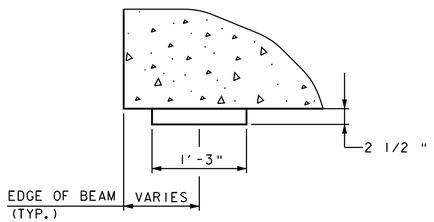
(ITEM 900.620 SPECIAL PROVISION
UNDER BRIDGE LIGHT)

SCALE: 1" = 1'-0"



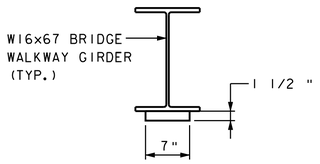
RAIL LAYOUT DETAIL

SCALE: 1" = 1'-0"



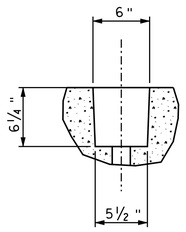
SECTION A-A

SCALE: 1" = 1'-0"

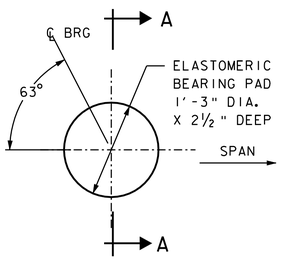


SECTION B-B

SCALE: 1" = 1'-0"

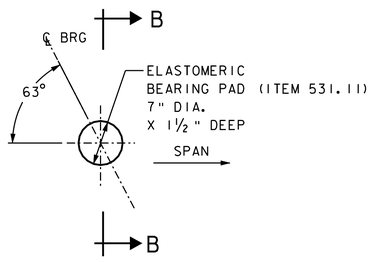


PLAN OF POCKET



PLAN
BRIDGE BEAM BEARING

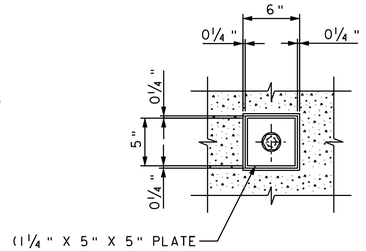
SCALE: 1" = 1'-0"



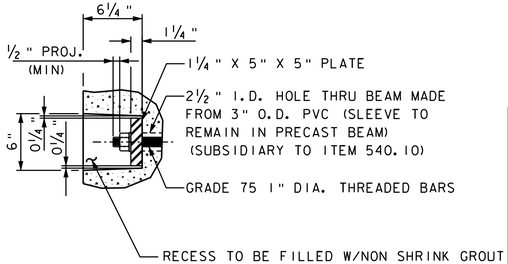
PLAN
BRIDGE WALKWAY BEARING

SCALE: 1" = 1'-0"

BEARING DETAILS



FASCIA ELEVATION



SECTION AT CENTER LINE

DETAIL A (POST TENSIONING DETAILS)

SCALE: 1½" = 1'-0"

PB PARSONS BRINCKERHOFF
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TOWN OF HARTFORD

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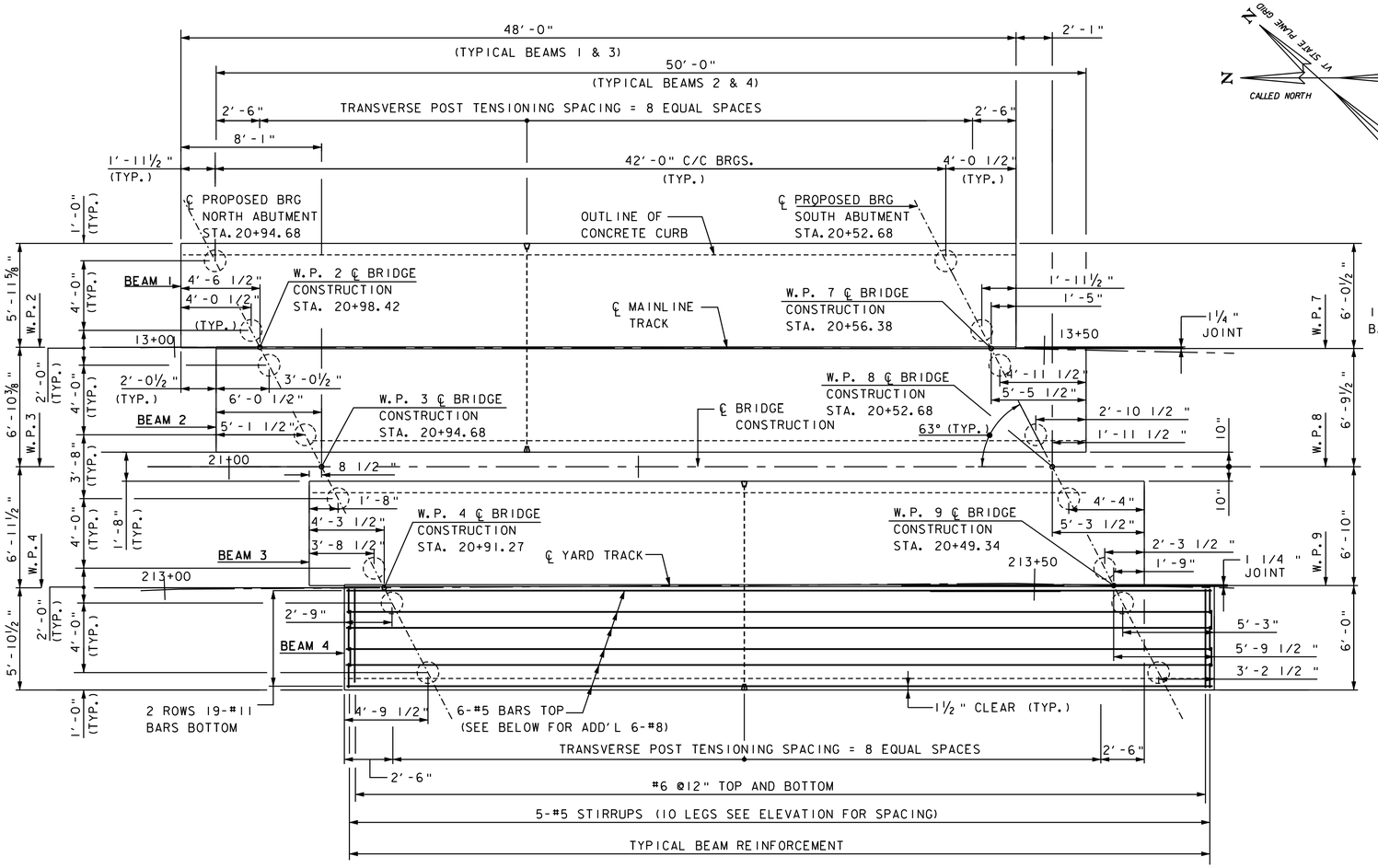
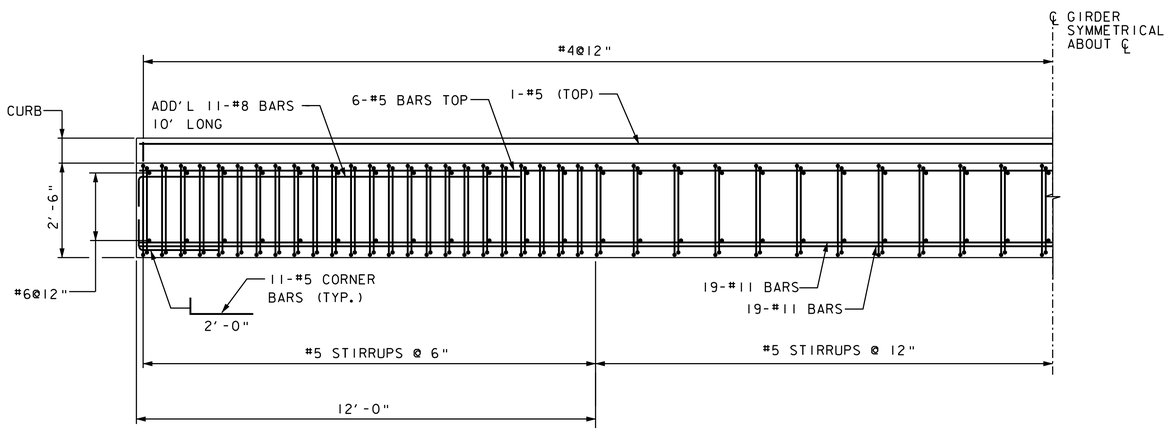
Highway No. BRIDGE STREET	Log Sta. / Surv. Sta.
N.E.C.R. BRIDGE OVER BRIDGE STREET	
BRIDGE TYPICAL SECTION, POST TENSIONING & BEARING DETAILS	
Designed By A STOCKIN	Drawn By W. GERHOLD
Checked By G.K. DONINGTON Date 1/17/12	Bridge Design Supervisor G.K. DONINGTON Date 1/17/12
PROJECT HARTFORD	PROJECT NO. STP HTFD(1)
I.G.C. Info.	
	Sheet 11 of 30



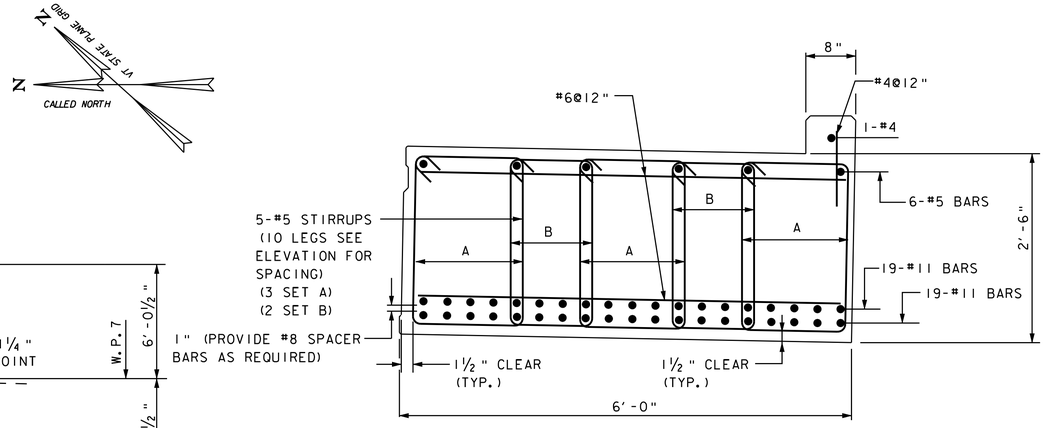
PLAN - BEAM LAYOUT AND REINFORCEMENT

SCALE: ¼" = 1'-0"



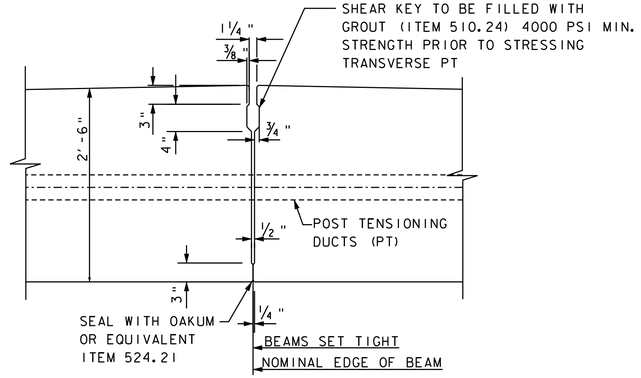
ELEVATION - BEAM LAYOUT AND REINFORCEMENT

SCALE: ½" = 1'-0"



TYPICAL BEAM REINFORCING

SCALE: 1" = 1'-0"



SHEAR KEY DETAIL

SCALE: 1" = 1'-0"

NOTE: ALL REINFORCING TO BE EPOXY COATED ITEM 507.17

PARSONS BRINCKERHOFF
650 ELM STREET
MANCHESTER, NH 03101

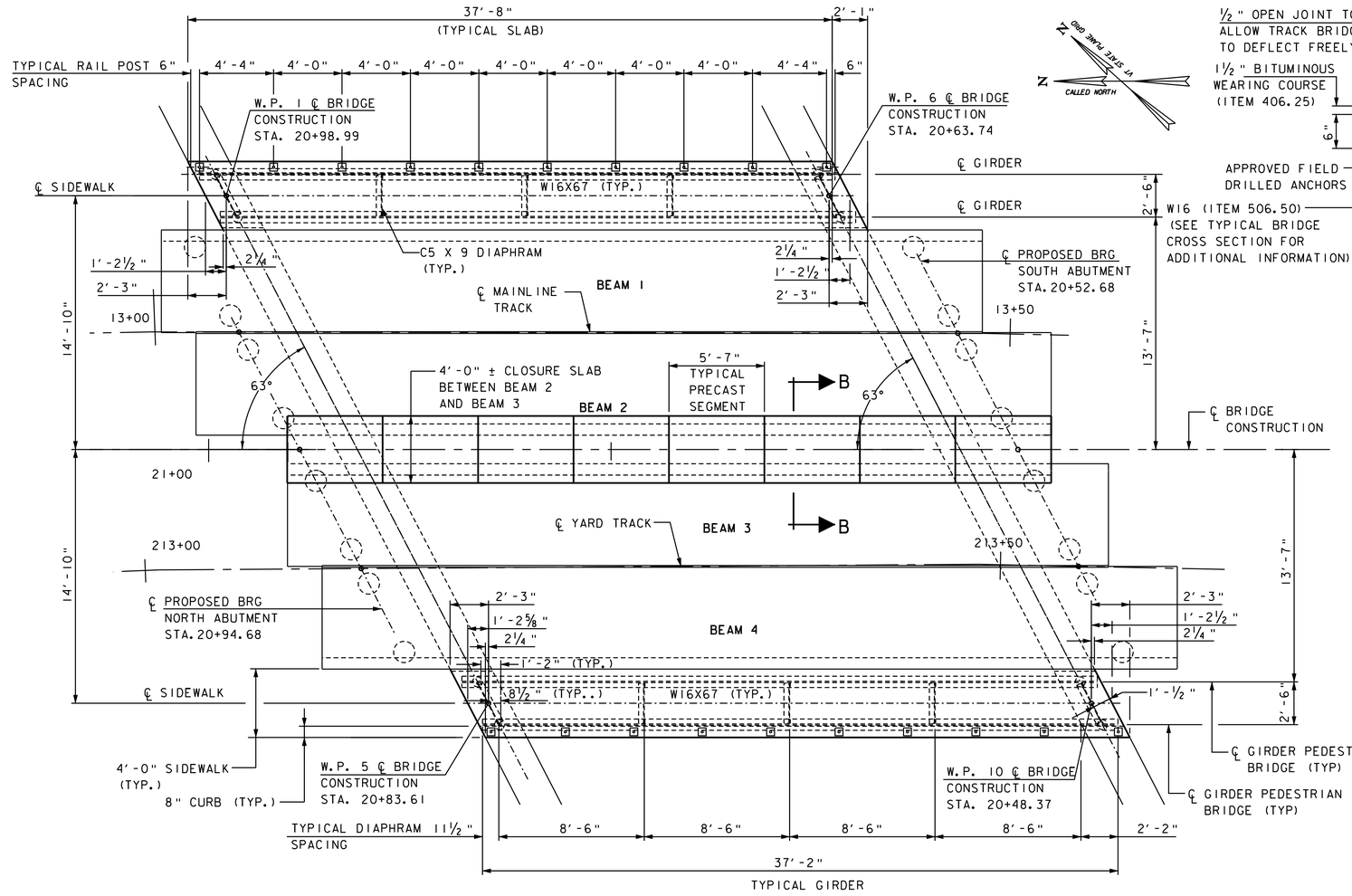
TOWN OF HARTFORD

Town Of HARTFORD, VERMONT	Bridge No. 8
	Log Sta.
Highway No. BRIDGE STREET	Surv. Sta.

N.E.C.R. BRIDGE OVER BRIDGE STREET

BEAM LAYOUT AND DETAILS

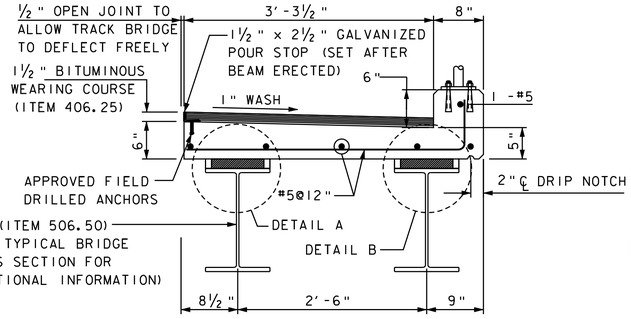
Designed By F. MAYBURY	Drawn By W. GERHOLD
Checked By J. ELWELL — Date 10/8/10	Bridge Design Supervisor G. K. DONINGTON — Date 1/17/12
PROJECT HARTFORD	PROJECT NO. STP HTFD (1)
I.G.C. Info.	



PLAN - PEDESTRIAN BRIDGE WALKWAY LAYOUT

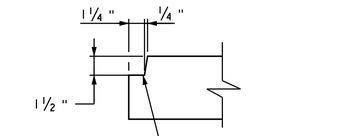
SCALE: ¼" = 1'-0"

NOTE: ALL REINFORCING TO BE EPOXY COATED ITEM 507.17



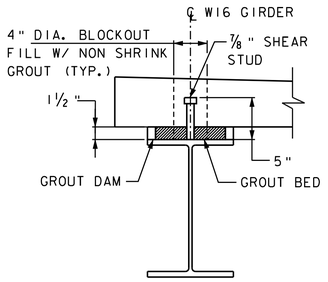
SECTION A-A

SCALE: 1" = 1'-0"



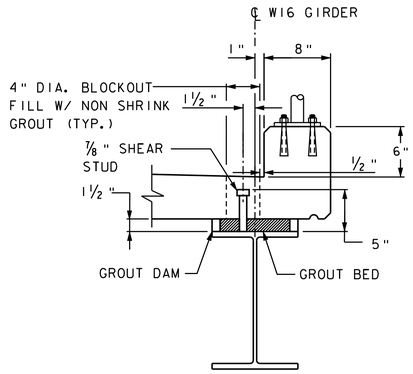
PRECAST CONCRETE PANEL NOTCH DETAIL

SCALE: 2" = 1'-0"



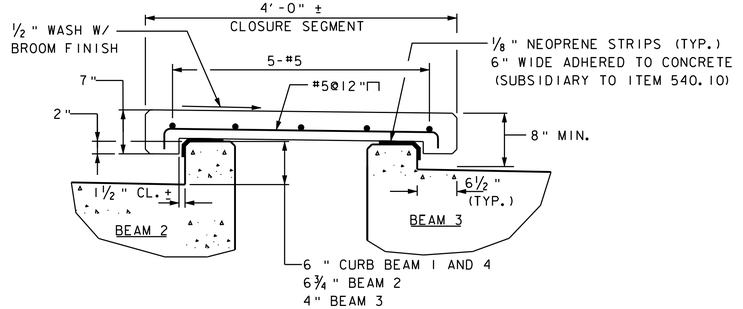
DETAIL A

SCALE: 1½" = 1'-0"



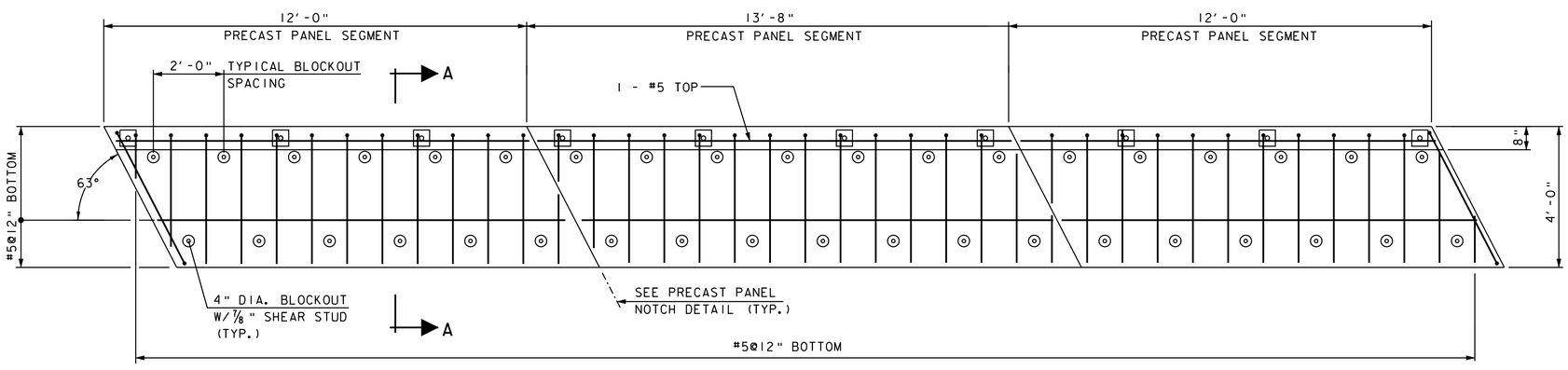
DETAIL B

SCALE: 1½" = 1'-0"



SECTION B-B

SCALE: 1" = 1'-0"



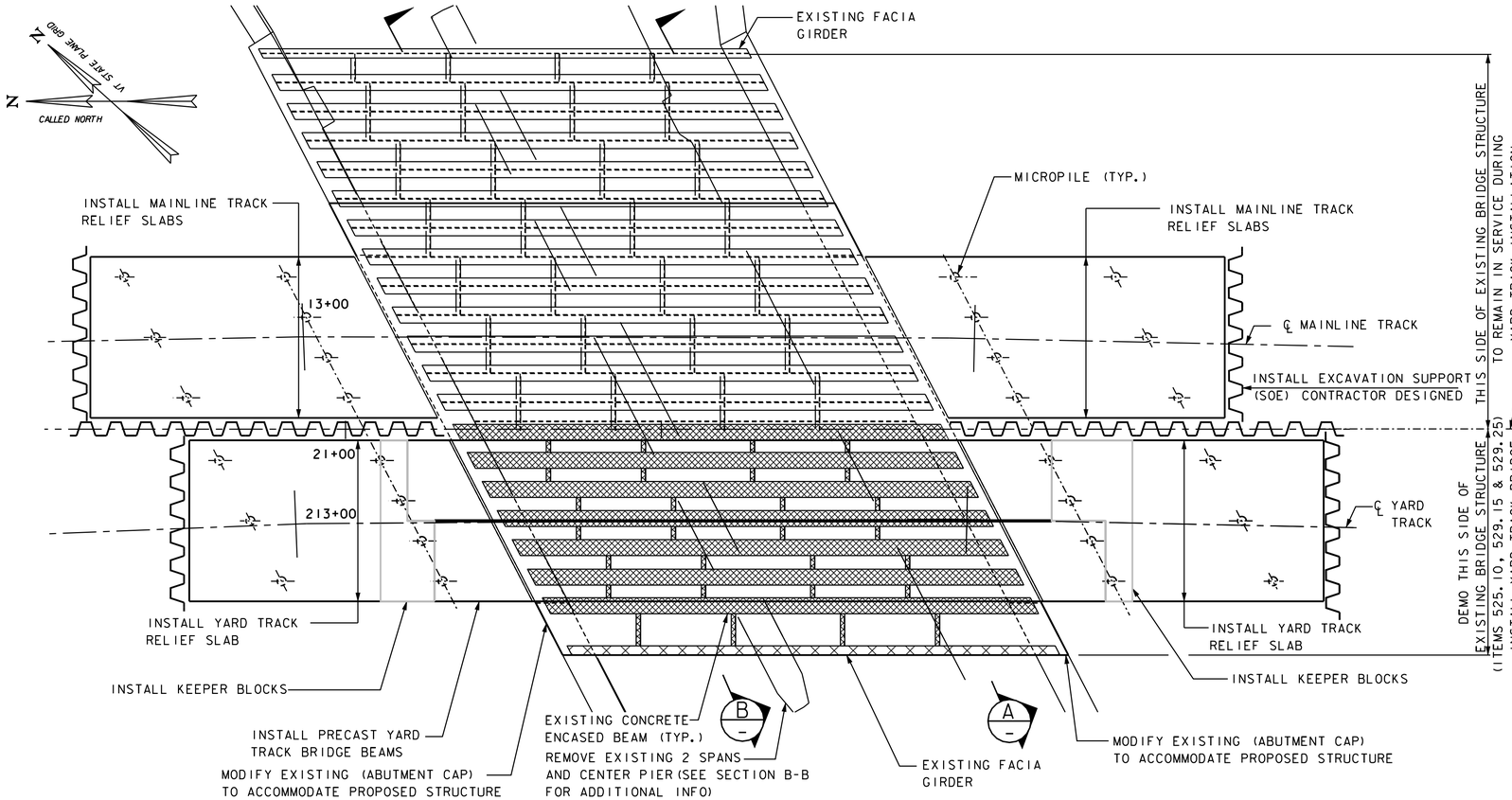
PLAN - PEDESTRIAN BRIDGE WALKWAY REINFORCING

SCALE: ½" = 1'-0"

TOWN OF HARTFORD

Town Of HARTFORD, VERMONT	Bridge No. 8
Highway No. BRIDGE STREET	Log Sta. / Surv. Sta.
N.E.C.R. BRIDGE OVER BRIDGE STREET	
BRIDGE WALKWAY LAYOUT AND DETAILS	
Designed By G.K. DONINGTON	Drawn By W. GERHOLD
Checked By G.K. DONINGTON Date 1/17/12	Bridge Design Supervisor G.K. DONINGTON Date 1/17/12
PROJECT HARTFORD	PROJECT NO. STP HTFD(1)
I.G.C. Info.	

PARSONS BRINCKERHOFF
650 ELM STREET
MANCHESTER, NH 03101

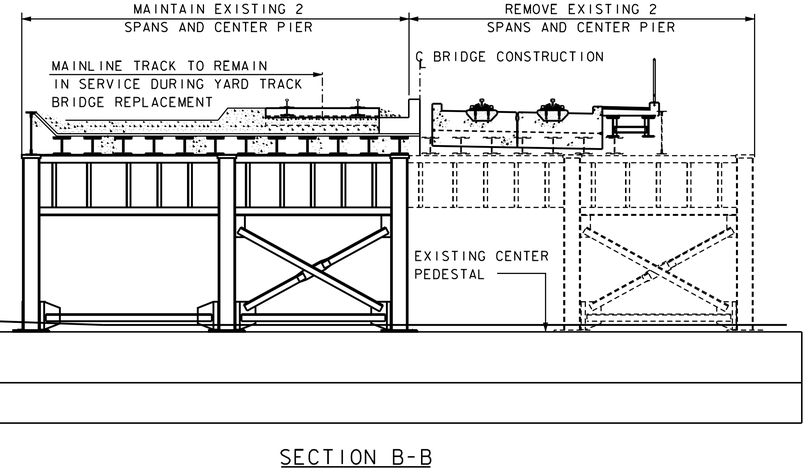


PLAN - YARD TRACK BRIDGE CONSTRUCTION SEQUENCE

SCALE: 3/16" = 1'-0"

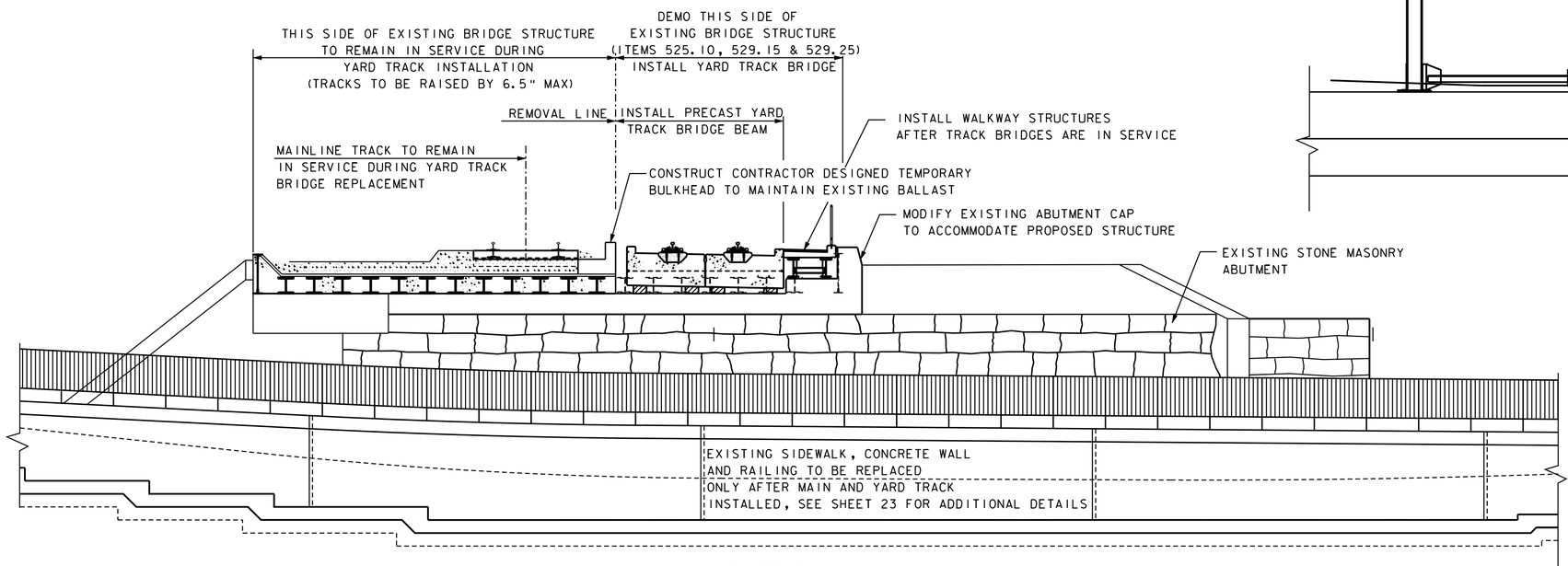
NOTES

1. DRAWING TO BE READ IN CONJUNCTION WITH STAGING NOTES ON SHEET 10.



SECTION B-B

SCALE: 3/16" = 1'-0"



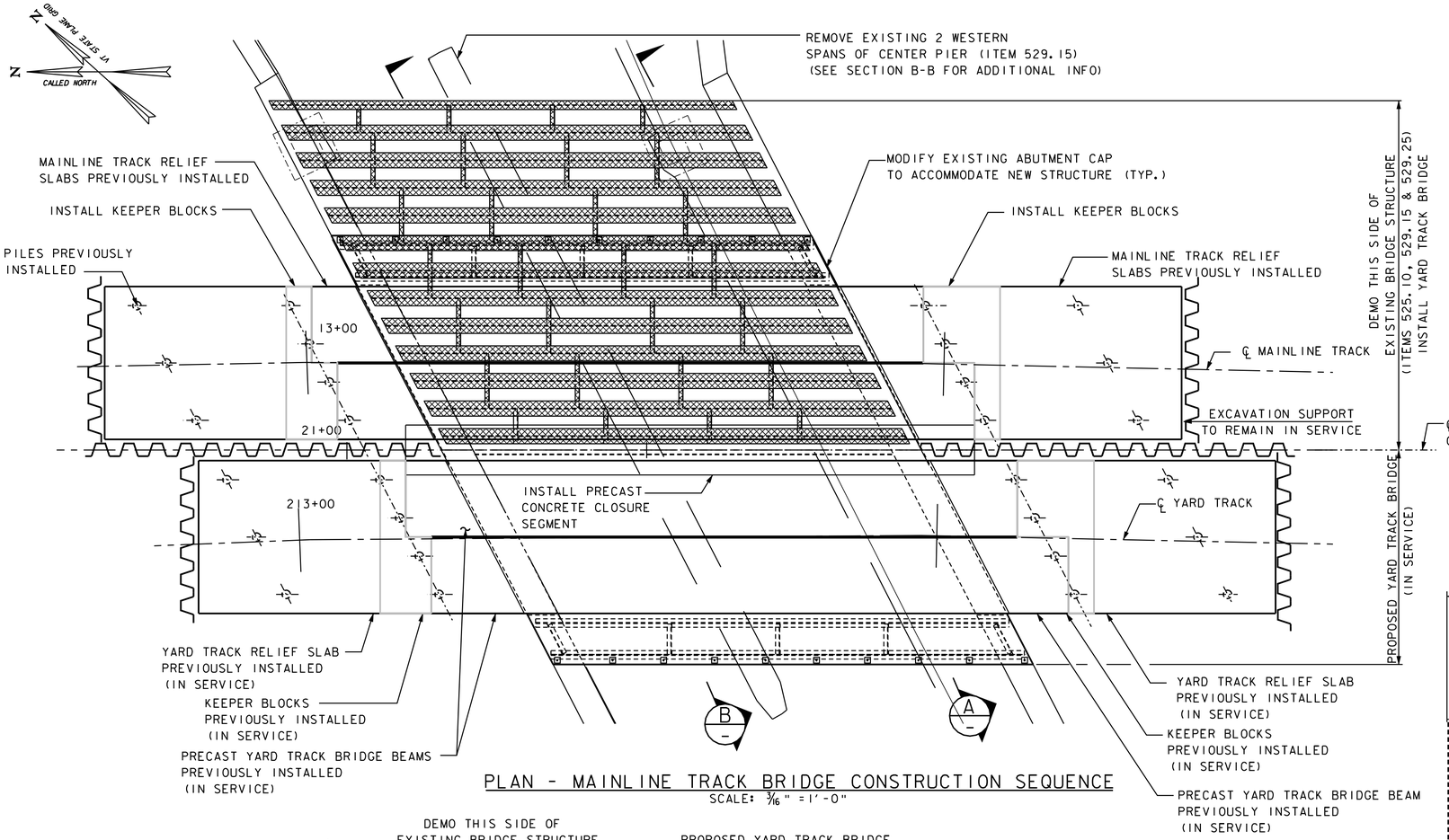
SECTION A-A

SCALE: 3/16" = 1'-0"

TOWN OF HARTFORD

Town Of HARTFORD, VERMONT	Bridge No. 8
Highway No. BRIDGE STREET	Log Sta. / Surv. Sta.
N.E.C.R. BRIDGE OVER BRIDGE STREET	
BRIDGE CONSTRUCTION SEQUENCING SHEET 1	
Designed By A. STOCKIN	Drawn By W. GERHOLD
Checked By G.K. DONINGTON Date 10/8/10	Bridge Design Supervisor G.K. DONINGTON Date 1/17/12
PROJECT HARTFORD	PROJECT NO. STP HTFD(1)
I.G.C. Info.	
	Sheet 14 of 30

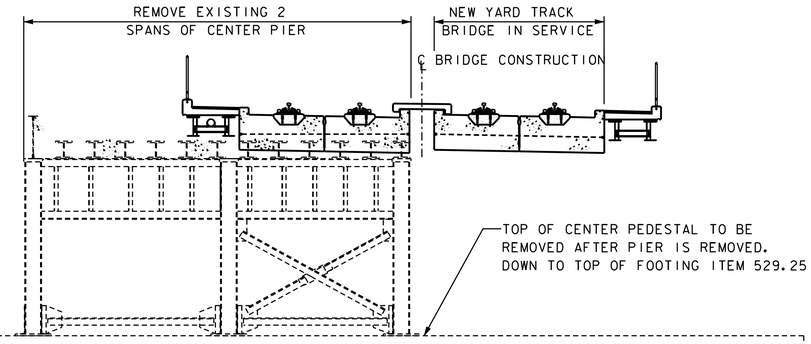
PARSONS BRINCKERHOFF
650 ELM STREET
MANCHESTER, NH 03101



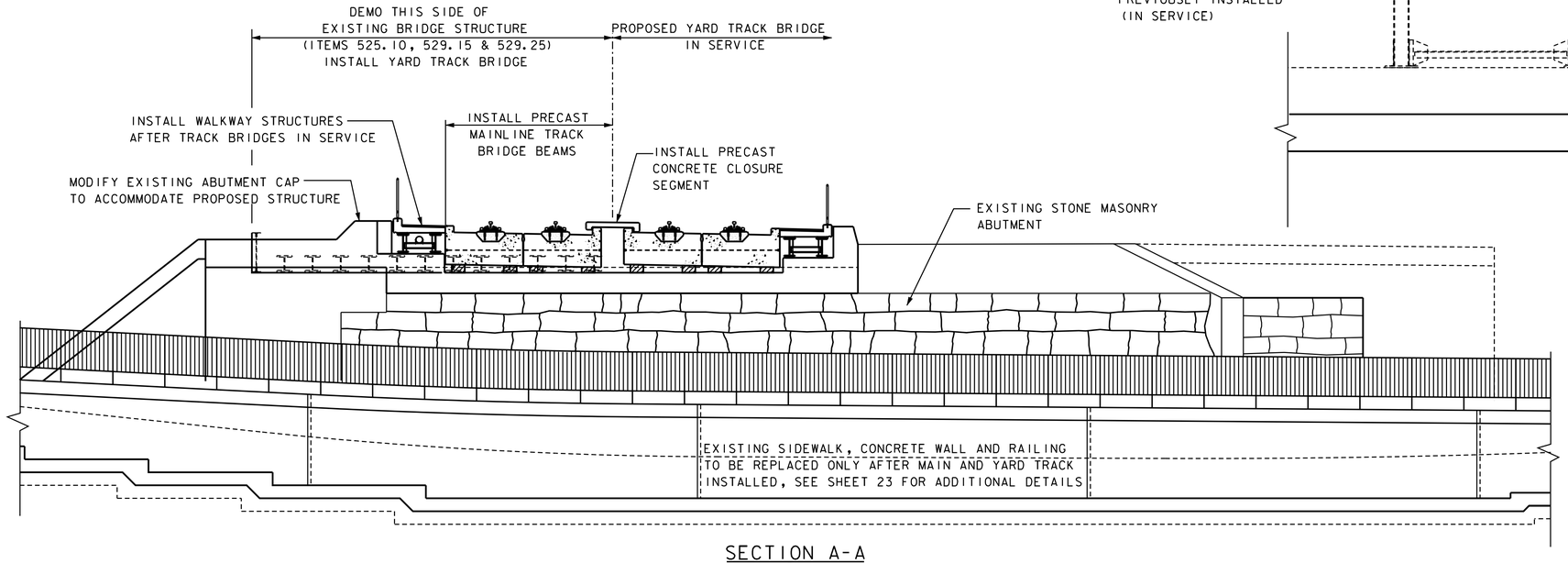
PLAN - MAINLINE TRACK BRIDGE CONSTRUCTION SEQUENCE
SCALE: 3/16" = 1'-0"

NOTES

1. DRAWING TO BE READ IN CONJUNCTION WITH STAGING NOTES ON SHEET 10.



SECTION B-B
SCALE: 3/16" = 1'-0"

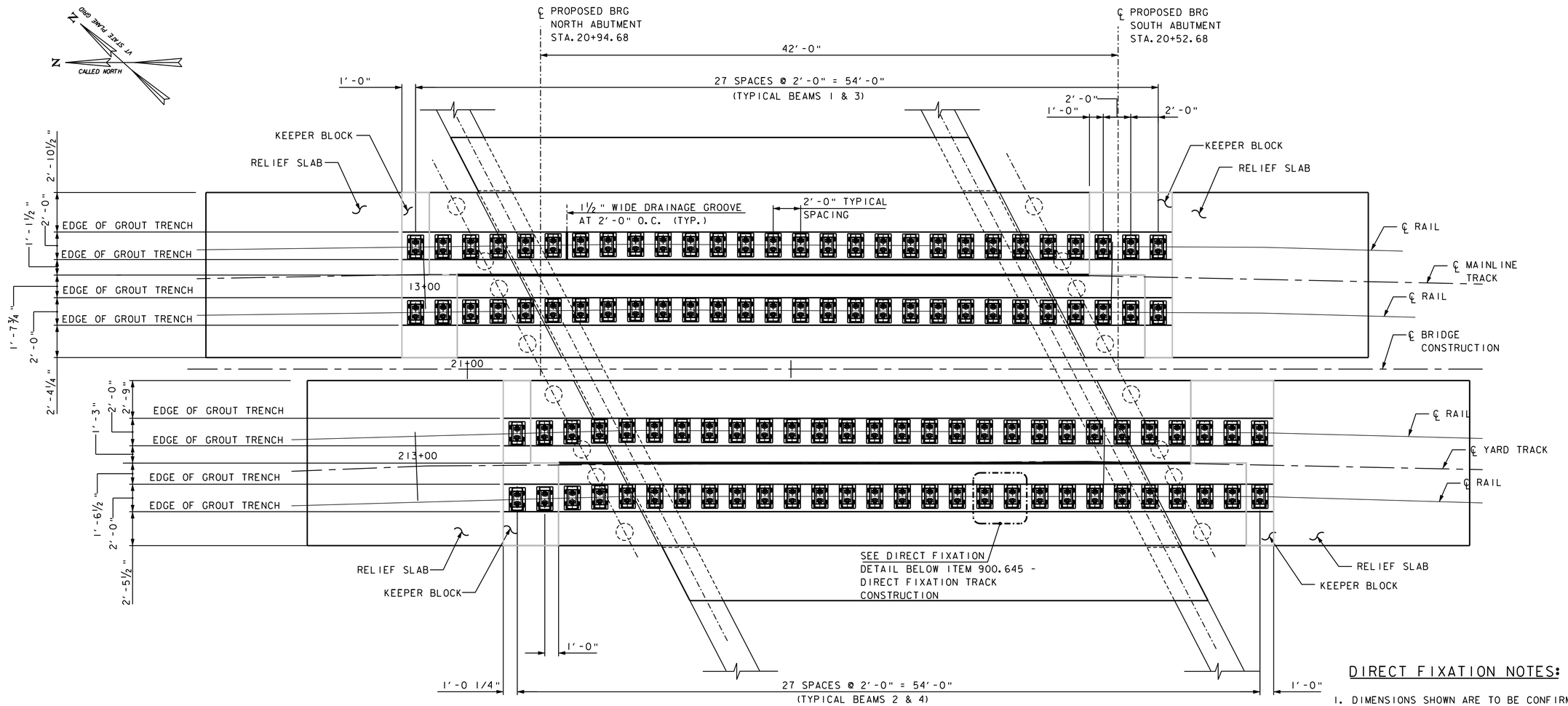


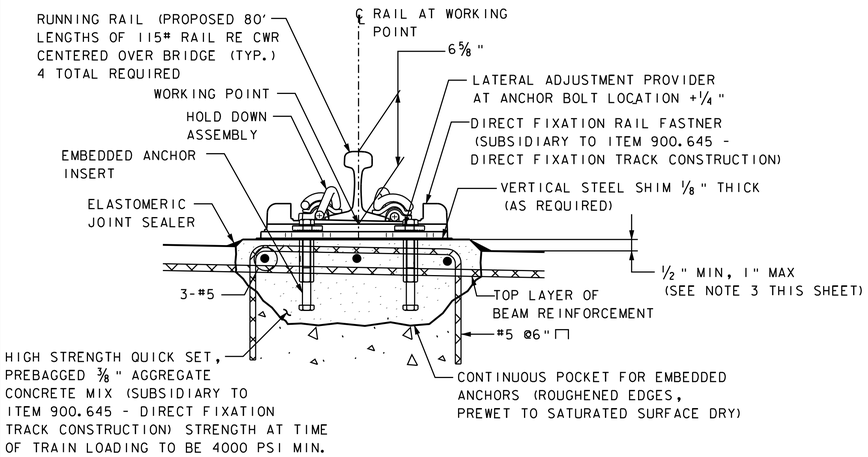
SECTION A-A
SCALE: 3/16" = 1'-0"

PARSONS BRINCKERHOFF
650 ELM STREET
MANCHESTER, NH 03101

TOWN OF HARTFORD

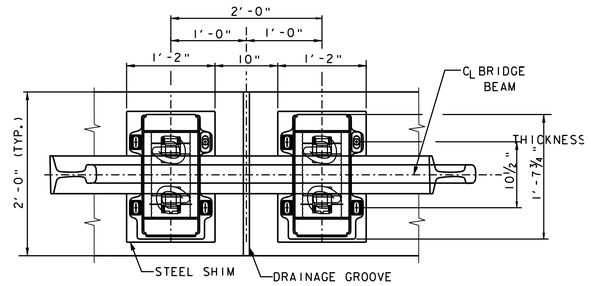
Town Of HARTFORD, VERMONT	Bridge No. 8
Highway No. BRIDGE STREET	Log Sta. Surv. Sta.
N.E.C.R. BRIDGE OVER BRIDGE STREET	
BRIDGE CONSTRUCTION SEQUENCING SHEET 2	
Designed By A. STOCKIN	Drawn By W. GERHOLD
Checked By G. K. DONINGTON Date 10/8/10	Bridge Design Supervisor G. K. DONINGTON Date 1/17/12
PROJECT HARTFORD	PROJECT NO. STP HTFD(1)
I.G.C. Info.	
	Sheet 15 of 30



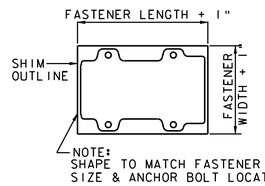


TYPICAL SECTION
DIRECTION FIXATION ASSEMBLY
SCALE: 1½" = 1'-0"

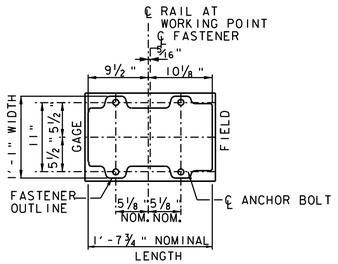
DIRECT FIXATION LOCATION PLAN
SCALE: ¼" = 1'-0"



PLAN - DIRECT FIXATION ASSEMBLY
SCALE: 1" = 1'-0"



SHIM CONFIGURATION
SIZES: 1/16" 1/8" ¼"



DF FASTENER PLAN

DIRECT FIXATION NOTES:

1. DIMENSIONS SHOWN ARE TO BE CONFIRMED BY CONTRACTOR AND SUBMITTED AS PART OF PRECAST BEAM SHOP DRAWING SUBMITTAL. CONTRACTOR TO LAY OUT BEAM POCKETS ON TOP OF THE BEAMS.
2. ALL STEEL HARDWARE TO BE GALVANIZED.
3. RAILS TO BE SET AT 1" SUPERELEVATION AND 40:1 CANT ON THE DESIGN TRACK PROFILE ELEVATIONS.
4. GROUT HEIGHT VARIES AS REQUIRED TO ADJUST DIFFERENCES IN BEAM CAMBER COMPARED TO LONGITUDINAL TRACK PROFILE, AND TRACK SUPERELEVATION AND TRANSVERSE BEAM SLOPE.

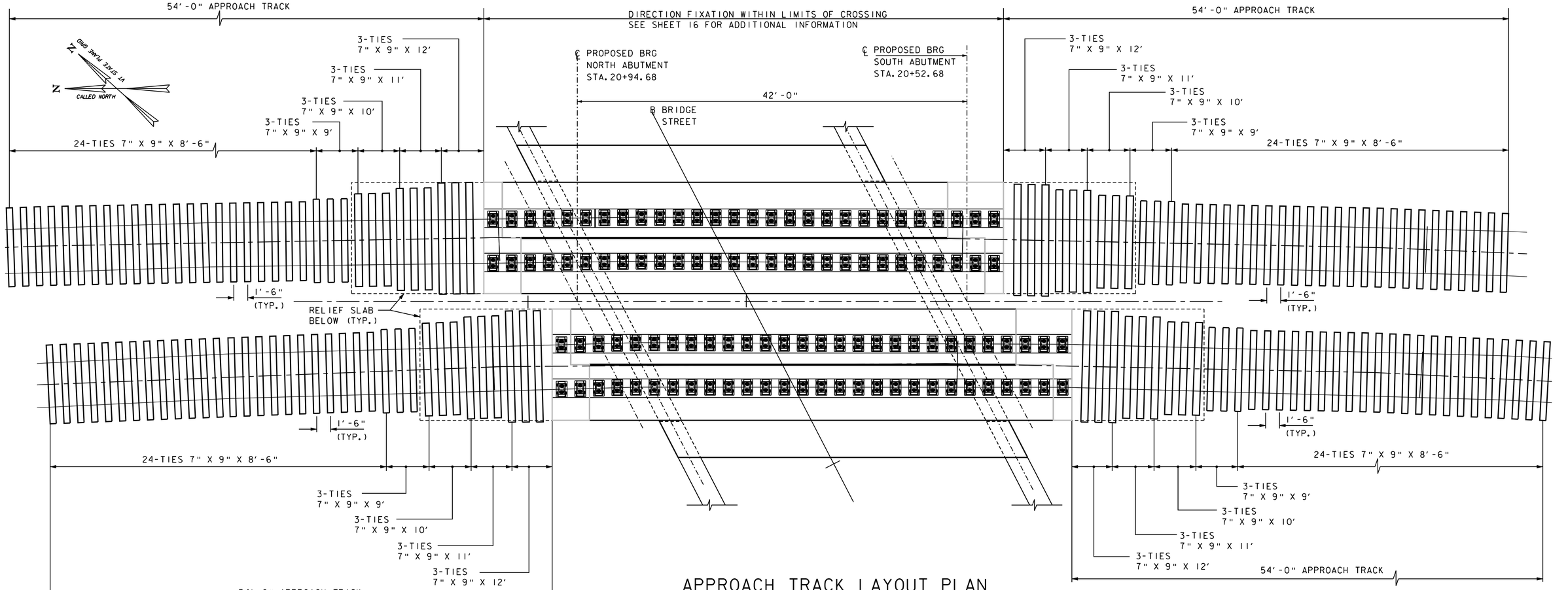
PB PARSONS BRINCKERHOFF
650 ELM STREET
MANCHESTER, NH 03101

TOWN OF HARTFORD

Town Of HARTFORD, VERMONT	Bridge No. 8
Highway No. BRIDGE STREET	Log Sta. / Surv. Sta.
N.E.C.R. BRIDGE OVER BRIDGE STREET	

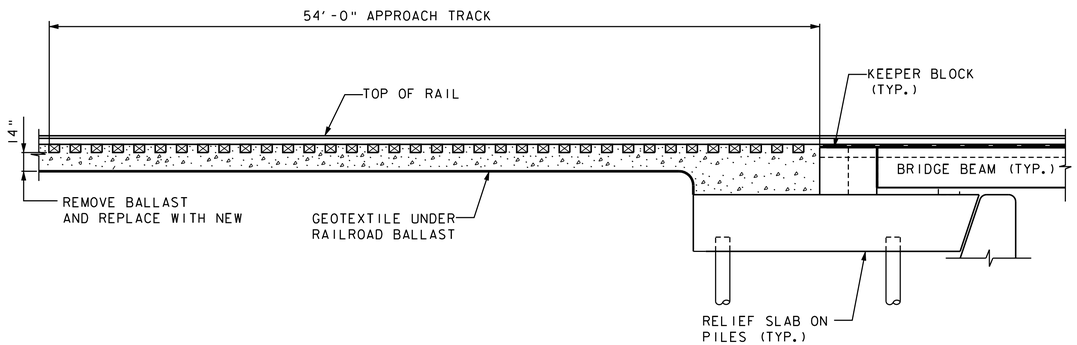
DIRECT FIXATION LAYOUT AND DETAILS

Designed By A STOCKIN	Drawn By W. GERHOLD
Checked By G.K. DONINGTON Date 10/8/10	Bridge Design Supervisor G.K. DONINGTON Date 1/17/12
PROJECT HARTFORD	PROJECT NO. STP HTFD(1)
I.G.C. Info.	



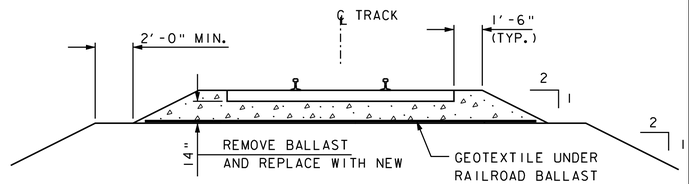
APPROACH TRACK LAYOUT PLAN

SCALE: 3/16" = 1'-0"



TYPICAL LONGITUDIANL APPROACH SECTION

SCALE: 3/16" = 1'-0"



TYPICAL TRANSVERSE APPROACH SECTION

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

MAIN TRACK CONSTRUCTION LIMITS:

ITEM 900.645 SPECIAL PROVISION (BALLASTED TRACK CONSTRUCTION)
STA. 10+50.00 BEGIN
STA. 12+98.38 END
STA. 13+54.68 BEGIN
STA. 16+00.00 END
ITEM 900.645 SPECIAL PROVISION (DIRECT FIXATION TRACK CONSTRUCTION)
STA. 12+98.38 BEGIN
STA. 13+54.68 END

YARD TRACK CONSTRUCTION LIMITS:

ITEM 900.645 SPECIAL PROVISION (BALLASTED TRACK CONSTRUCTION)
STA. 209+50.00 BEGIN
STA. 213+06.31 END
STA. 213+62.34 BEGIN
STA. 216+00.00 END
ITEM 900.645 SPECIAL PROVISION (DIRECT FIXATION TRACK CONSTRUCTION)
STA. 213+06.31 BEGIN
STA. 213+62.34 END

TOWN OF HARTFORD

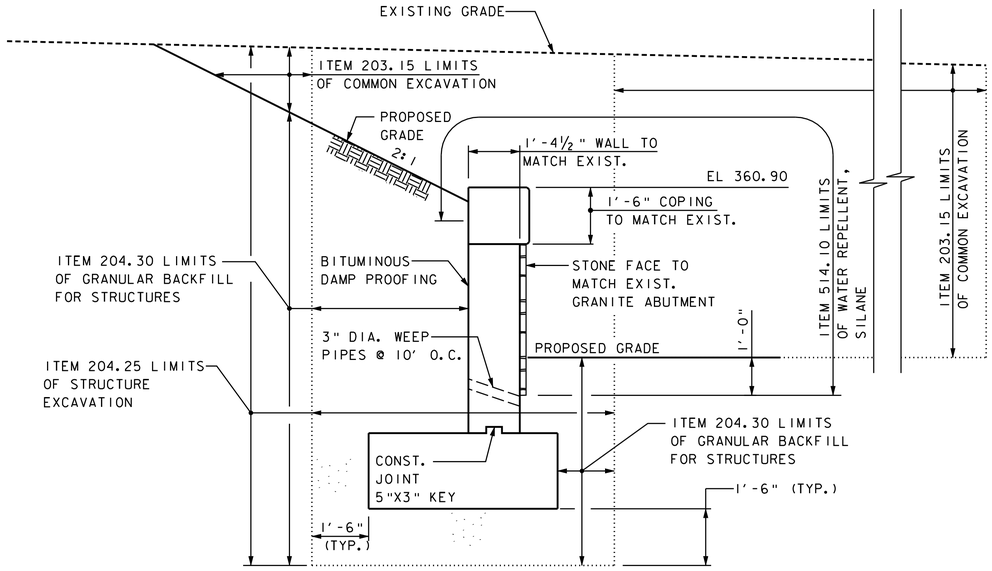
Town Of HARTFORD, VERMONT	Bridge No. 8
	Log Sta.
Highway No. BRIDGE STREET	Surv. Sta.

N.E.C.R. BRIDGE OVER BRIDGE STREET

APPROACH TRACK LAYOUT

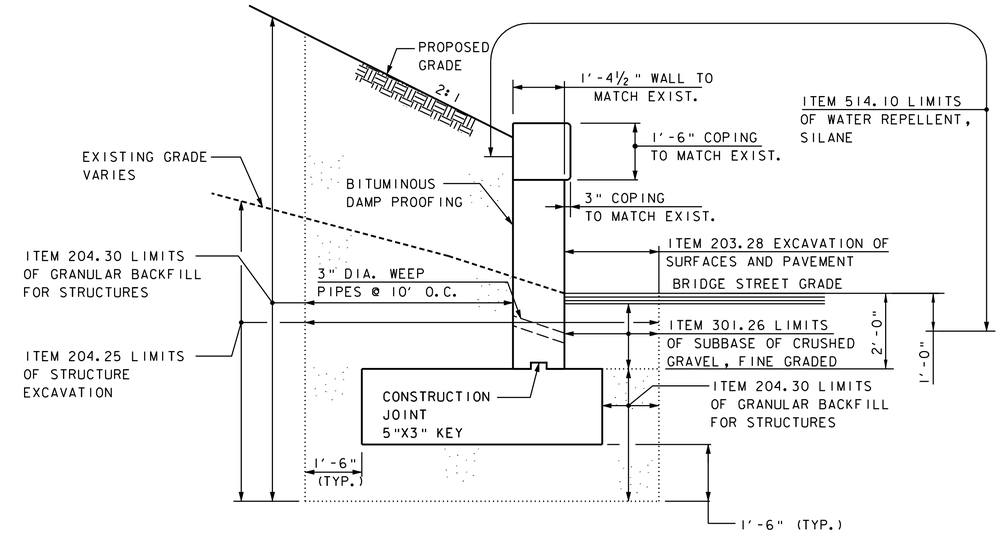
Designed By A STOCKIN	Drawn By W. GERHOLD
Checked By Date G.K. DONINGTON 1/17/12	Bridge Design Supervisor G.K. DONINGTON Date 1/17/12
PROJECT HARTFORD	PROJECT NO. STP HTFD(1)
I.G.C. Info.	

PARSONS BRINCKERHOFF
650 ELM STREET
MANCHESTER, NH 03101



TYPICAL WINGWALL CROSS SECTION THRU S.W. WINGWALL SHOWING PAY ITEMS

SCALE: ½ = 1'-0"

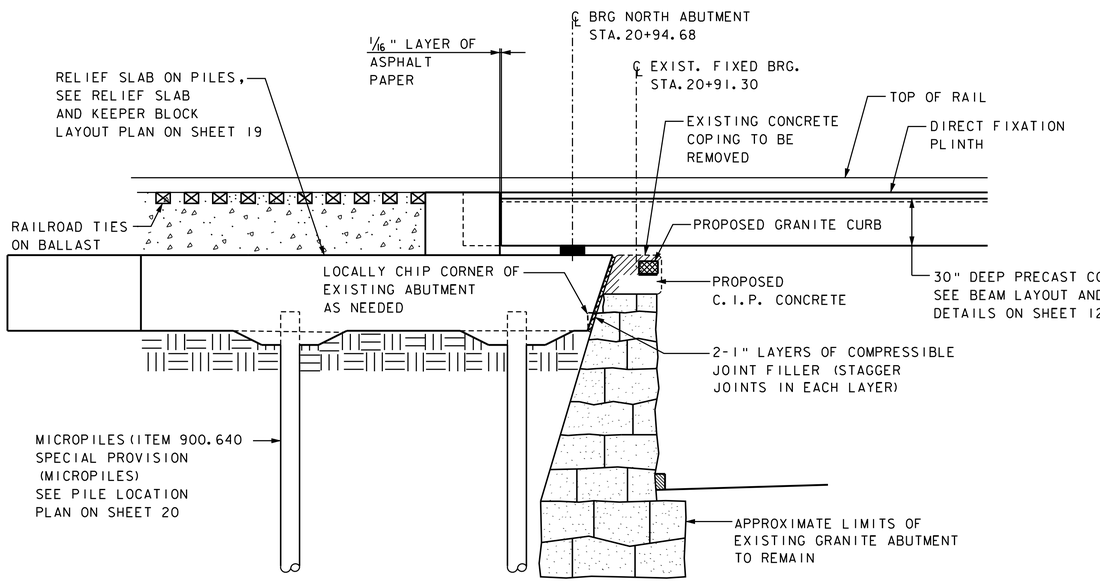


TYPICAL WINGWALL CROSS SECTION THRU N.E. WINGWALL SHOWING PAY ITEMS

SCALE: ½ = 1'-0"

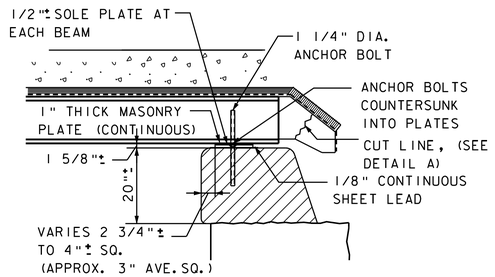
NOTES:

1. FOR EXISTING BRIDGE DETAILS, REFER TO 1929 SHOP DRAWINGS.
2. ENTIRE EXISTING SUPERSTRUCTURE TO BE REMOVED ABOVE TOP OF CONCRETE ABUTMENT CAPS.



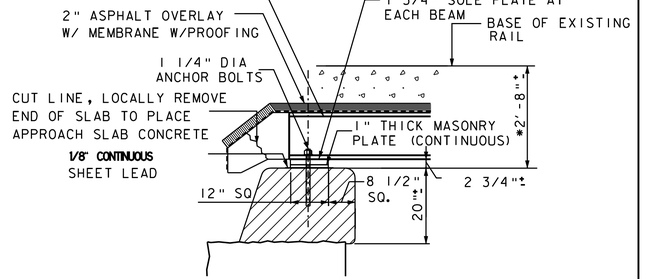
PARTIAL SECTION NORTH ABUTMENT (SOUTH ABUTMENT SIMILAR)

SCALE: ¼" = 1'-0"



EXISTING DETAIL A (EXPANSION END)

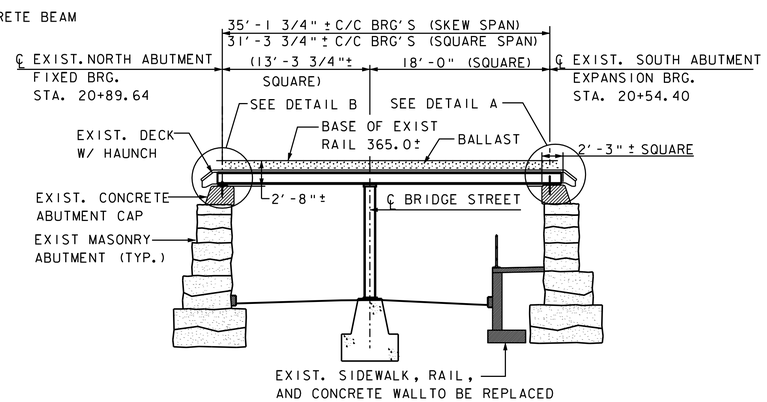
SCALE: 1/2" = 1'-0"



* FROM 1929 SHOP DRAWINGS (TO BE VERIFIED FROM SURVEY)

EXISTING DETAIL B (FIXED END)

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



ELEVATION (EXISTING CONDITION)

SCALE: ⅛" = 1'-0"

PB PARSONS BRINCKERHOFF
650 ELM STREET
MANCHESTER, NH 03101

TOWN OF HARTFORD

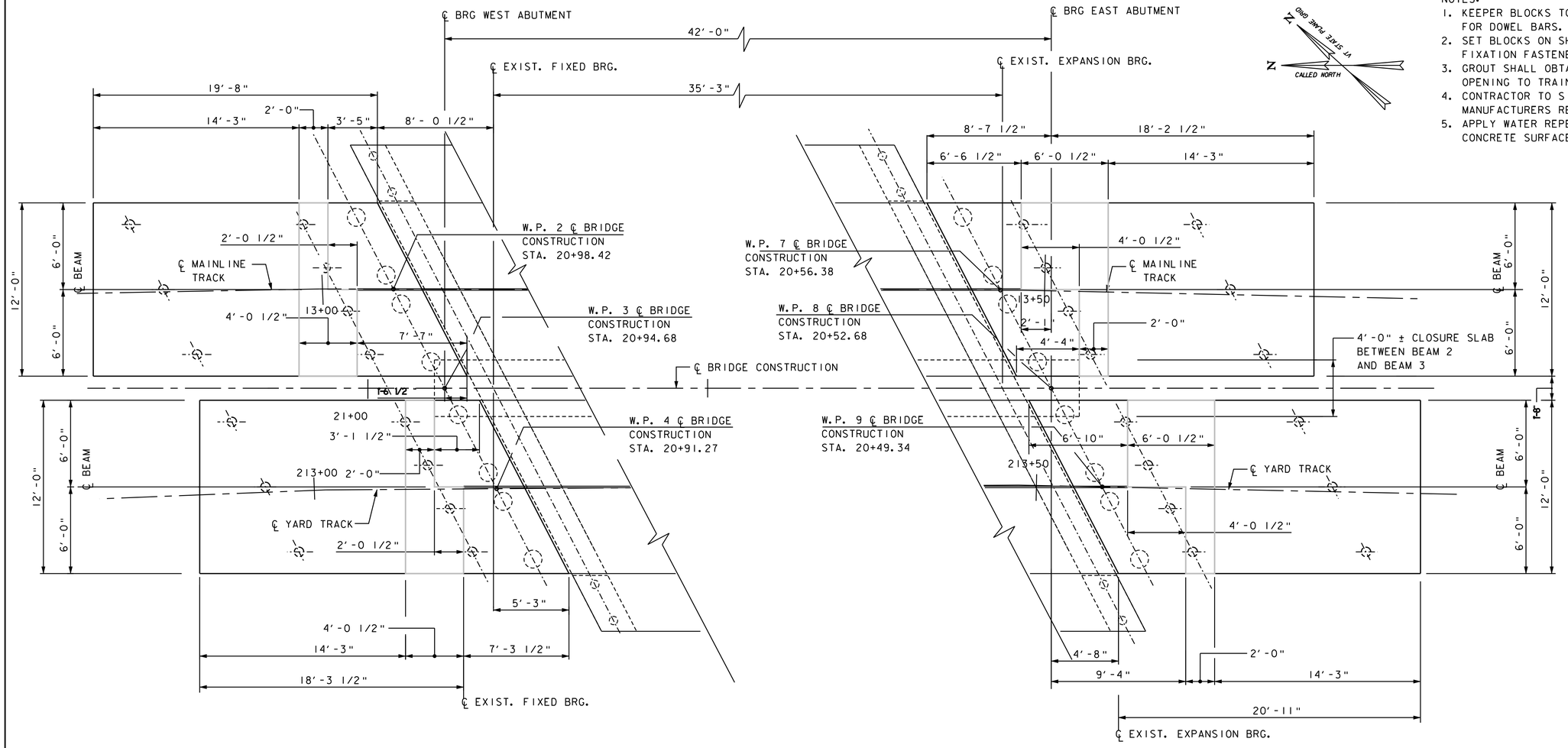
Town Of HARTFORD, VERMONT	Bridge No. 8
	Log Sta.
Highway No. BRIDGE STREET	Surv. Sta.

N.E.C.R. BRIDGE OVER BRIDGE STREET

BRIDGE DETAILS

Designed By G.K. DONINGTON	Drawn By W. GERHOLD
Checked By A. STOCKIN Date 10/8/10	Bridge Design Supervisor G.K. DONINGTON Date 1/17/12
PROJECT HARTFORD	PROJECT NO. STP HTFD(1)
I.G.C. Info.	

NOTES:
1. KEEPER BLOCKS TO BE PRECAST CONCRETE WITH SLEEVES FOR DOWEL BARS.
2. SET BLOCKS ON SHIMS TO CORRECT HEIGHT FOR DIRECT FIXATION FASTENERS AND GROUT.
3. GROUT SHALL OBTAIN 4000 PSI STRENGTH PRIOR TO OPENING TO TRAIN TRAFFIC.
4. CONTRACTOR TO SIZE SLEEVE ACCORDING TO GROUT MANUFACTURERS REQUIREMENTS.
5. APPLY WATER REPELLANT, SILANE (ITEM 514.10) TO EXPOSED CONCRETE SURFACES OF KEEPER BLOCKS.

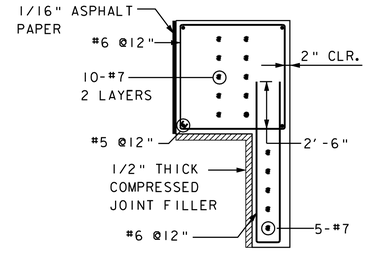


PLAN - NORTH RELIEF SLAB AND KEEPER BLOCK LAYOUT

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

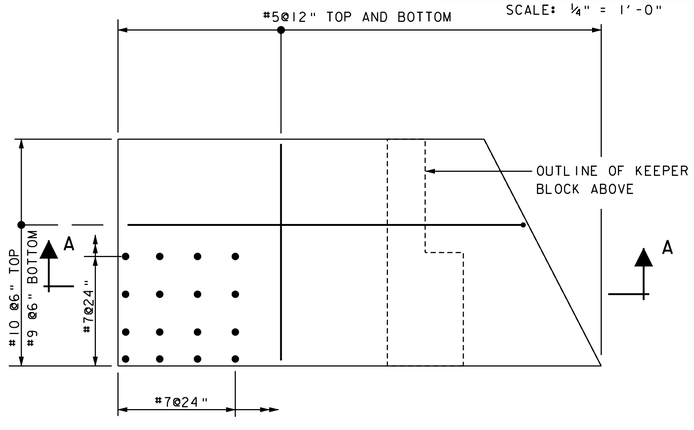
PLAN - SOUTH RELIEF SLAB AND KEEPER BLOCK LAYOUT

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



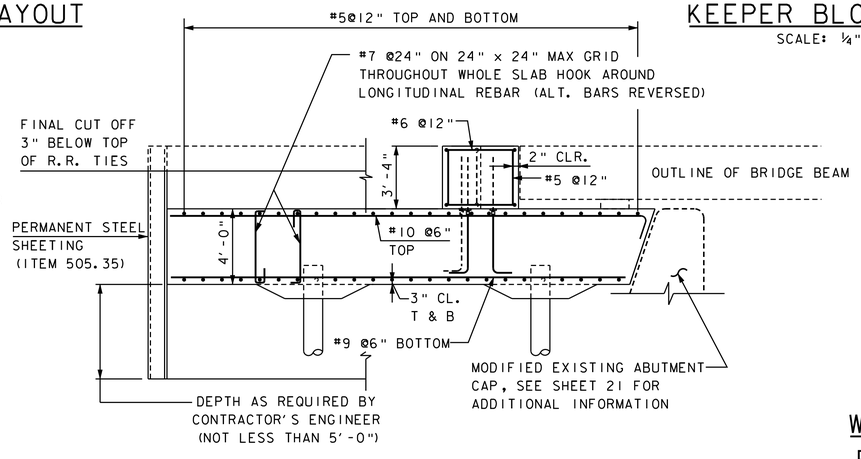
EAST KEEPER BLOCK REINFORCING PLAN

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



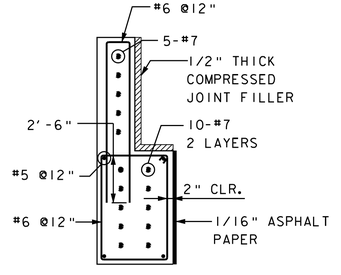
PLAN - RELIEF SLAB REINFORCING

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



SECTION A-A

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



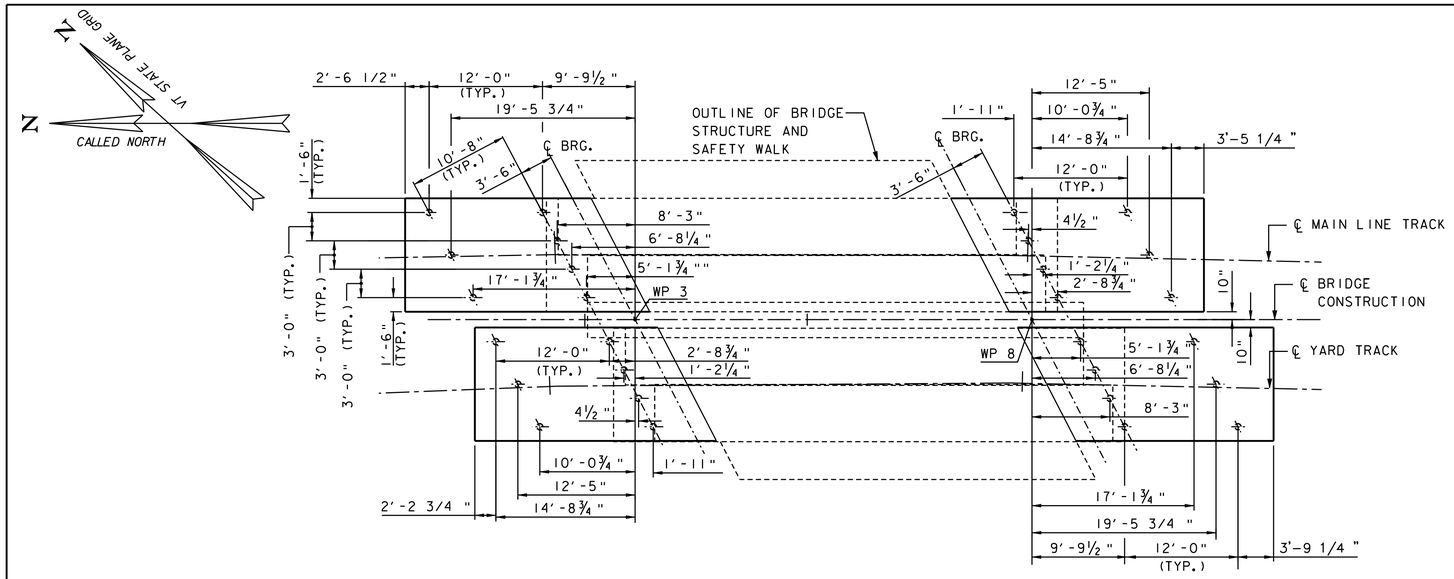
WEST KEEPER BLOCK REINFORCING PLAN

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

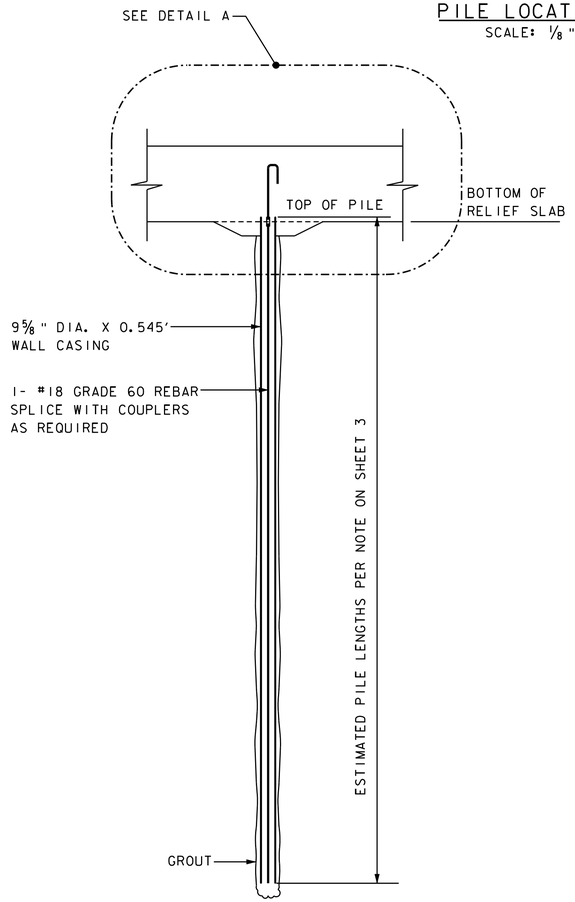
PARSONS BRINCKERHOFF
650 ELM STREET
MANCHESTER, NH 03101

TOWN OF HARTFORD

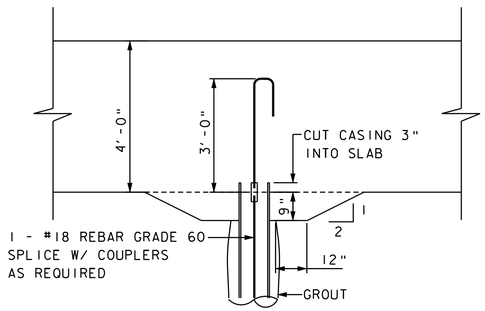
Town Of HARTFORD, VERMONT	Bridge No. 8
Highway No. BRIDGE STREET	Log Sta. / Surv. Sta.
N.E.C.R. BRIDGE OVER BRIDGE STREET	
RELIEF SLAB AND KEEPER BLOCK LAYOUT PLAN	
Designed By A STOCKIN	Drawn By W. GERHOLD
Checked By G.K. DONINGTON Date 10/8/10	Bridge Design Supervisor G.K. DONINGTON Date 10/8/10
PROJECT HARTFORD	PROJECT NO. STP HTFD(1)
I.G.C. Info.	



PILE LOCATION PLAN
SCALE: ⅛" = 1'-0"



PILE ELEVATION
SCALE: ¼" = 1'-0"



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

PARSONS BRINCKERHOFF
650 ELM STREET
MANCHESTER, NH 03101

TOWN OF HARTFORD

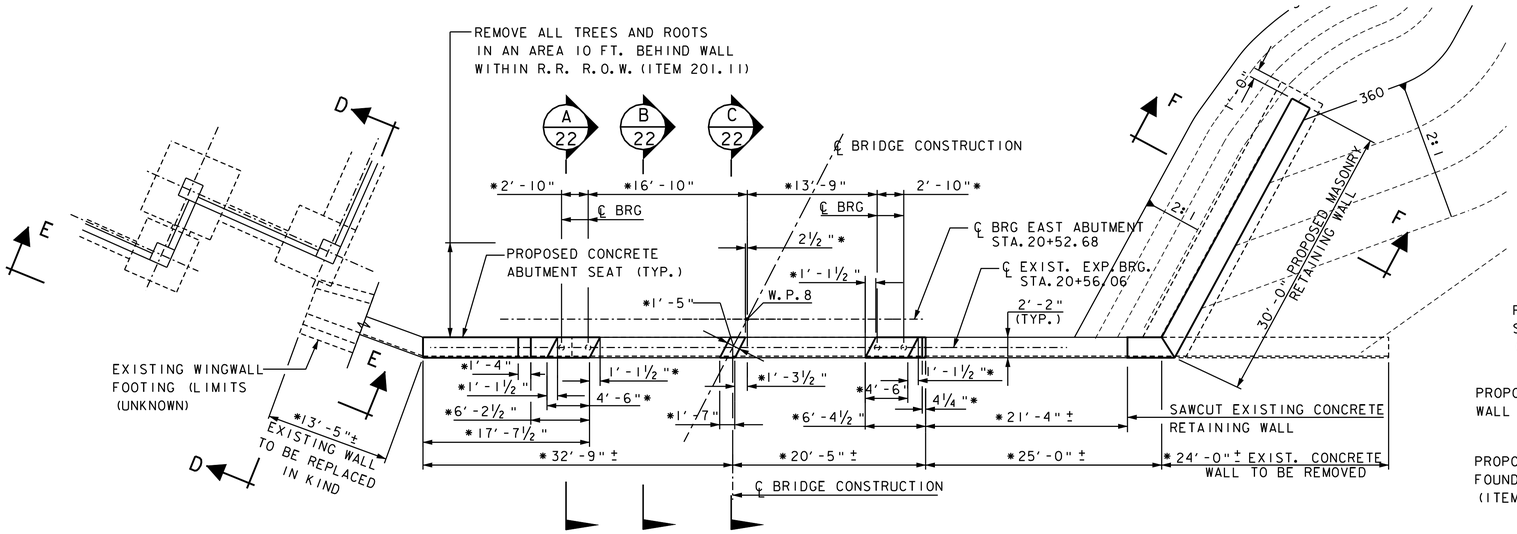
Town Of HARTFORD, VERMONT	Bridge No. 8
	Log Sta.
Highway No. BRIDGE STREET	Surv. Sta.

N.E.C.R. BRIDGE OVER BRIDGE STREET

PILE LOCATION AND DETAIL

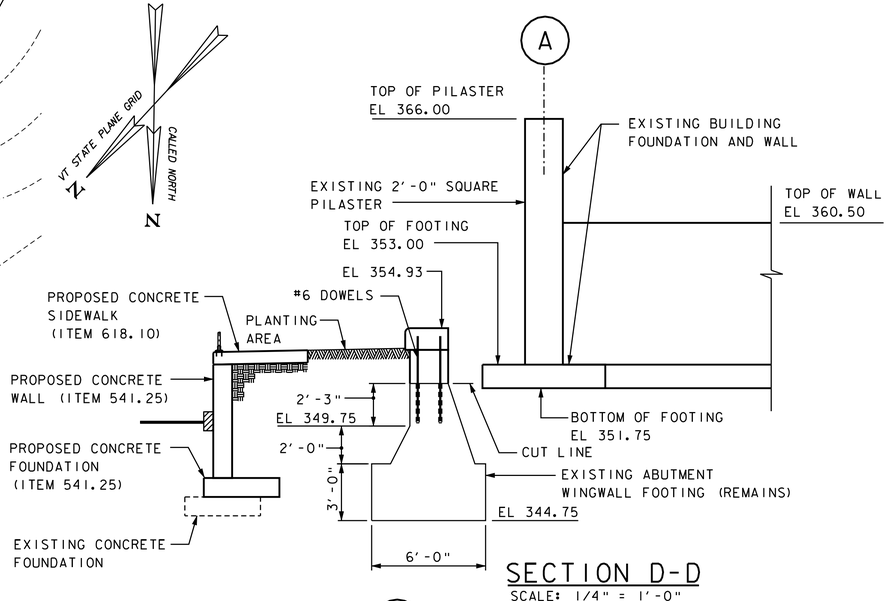
Designed By A STOCKIN	Drawn By W. GERHOLD
Checked By Date G.K. DONINGTON 10/8/10	Bridge Design Supervisor G.K. DONINGTON Date 10/8/10
PROJECT HARTFORD	PROJECT NO. STP HTFD (1)
I.G.C. Info.	

Sheet 20 of 30



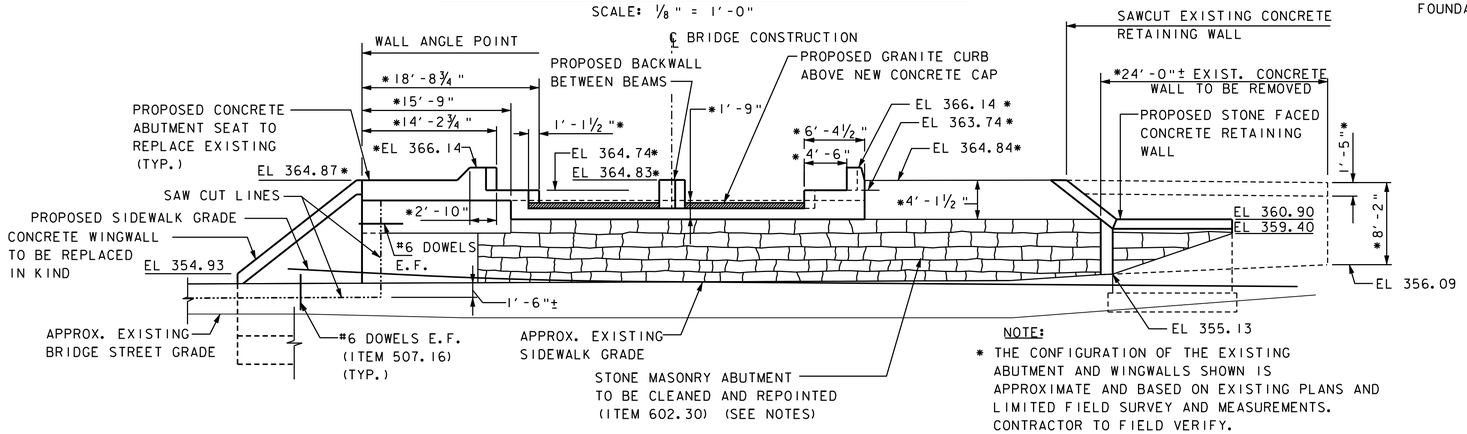
PLAN - EXISTING SOUTH ABUTMENT

SCALE: ⅛" = 1'-0"



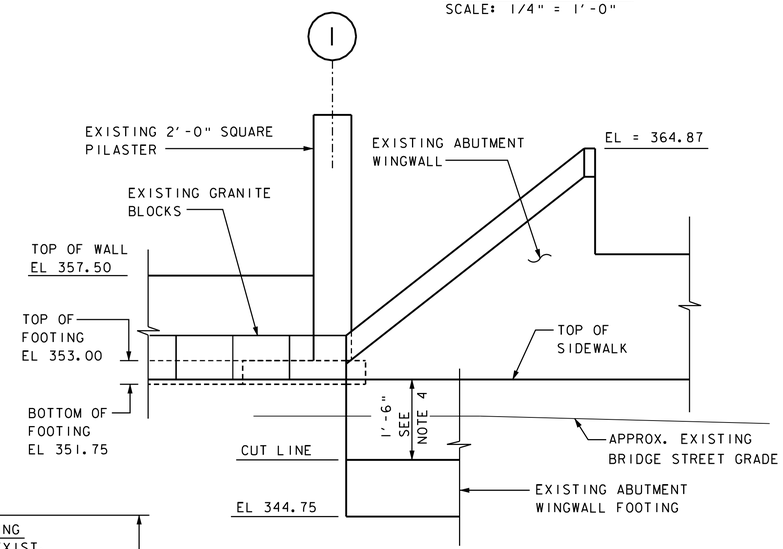
SECTION D-D

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



ELEVATION - EXISTING SOUTH ABUTMENT

SCALE: ⅛" = 1'-0"



SECTION E-E

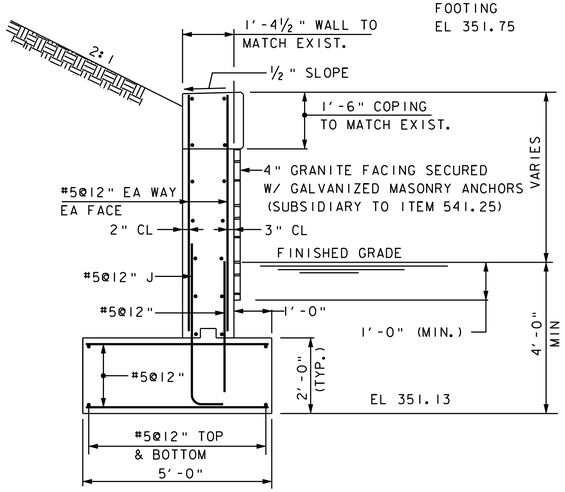
SCALE: 1/4" = 1'-0"

EXISTING ABUTMENT REPAIR NOTES:

1. EXPOSED SURFACES OF EXISTING STONE ABUTMENTS AND CONCRETE WALLS TO REMAIN SHALL BE SAND BLASTED TO REMOVE EXISTING PAINT. ITEM 900.645 SPECIAL PROVISION (CONTAINMENT AND DISPOSAL OF LEAD PAINT RESIDUES).
2. CONTRACTOR IS ADVISED THAT PAINT CONTAINS LEAD AND CONTRACTOR IS RESPONSIBLE TO REMOVE PAINT AND DISPOSE OF PER VTRANS REQUIREMENTS. ITEM 900.645 - SPECIAL PROVISION (CONTAINMENT AND DISPOSAL OF LEAD PAINT RESIDUES)
3. EXISTING STONE MASONRY JOINTS TO BE REPOINTED. ANY LARGE VOIDS GREATER THAN 2" SHALL BE CHINKED AND THEN REPOINTED. (ITEM 602.30)
4. EXISTING CONCRETE TO REMAIN, AFTER SANDBLASTING, ANY CRACKS ARE TO BE REPAIRED AS SHOWN. (ITEM 580.13)
5. ALL EXPOSED CONCRETE SURFACES - NEW AND EXISTING TO BE COATED WITH AN APPROVED CONCRETE STAIN/SEALER TO PROVIDE A NEAT AND UNIFORM APPEARANCE. ITEM 900.625 SPECIAL PROVISION (CONCRETE STAINING AND SEALING) THE GRANITE WALLS MUST NOT BE COATED.
6. ▨ DENOTES EXISTING CONCRETE TO BE REPAIRED. CHIP OUT ALL LOOSE CONCRETE AND SHOTCRETE. ITEM 580.14 (SEE SHEET 22)

S.E. WINGWALL

1. REMOVE EXISTING CONCRETE GRAVITY WALL TO LIMITS SHOWN. REPLACE WITH SECTION SAME DIMENSIONS AS EXISTING. (ITEMS 529.25 & 541.25)
2. REFER TO EXISTING BRIDGE PLAN FOR DETAILS.
3. DRILL AND GROUT #6 - 4'-0" LONG DOWELS INTO EXISTING CONCRETE TO CONNECT NEW CONCRETE TO OLD. DOWELS TO BE 24" O.C., EACH FACE, 2'-0" EMBEDMENT, DRILLED 4" FROM EDGE OF CONCRETE. (ITEM 507.16)
4. THE 1'-6" DIMENSION IS APPROX. ONLY AND IS TO BE CONFIRMED IN THE FIELD ONCE SIDEWALK HAS BEEN REPAIRED AND EXCAVATED. CONTRACTOR IS RESPONSIBLE MAINTAINING THE STABILITY OF THE EXISTING BUILDING FOUNDATION, AND MUST NOT UNDER MINE THE FOOTING.



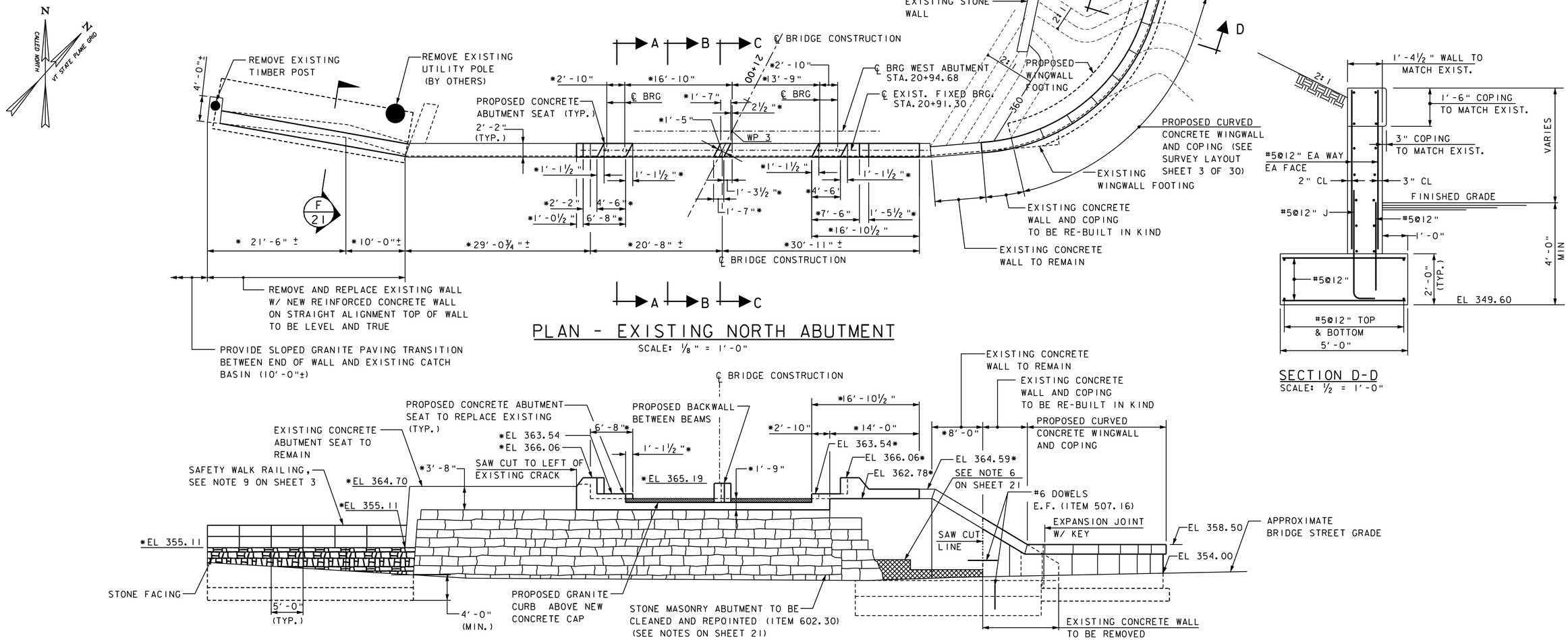
SECTION F-F

SCALE: ½ = 1'-0"

TOWN OF HARTFORD

Town Of HARTFORD, VERMONT	Bridge No. 8
Highway No. BRIDGE STREET	Log Sta. / Surv. Sta.
N.E.C.R. BRIDGE OVER BRIDGE STREET	
EXISTING SOUTH ABUTMENT DETAILS	
Designed By A STOCKIN	Drawn By W GERHOLD
Checked By G.K. DONINGTON Date 10/8/10	Bridge Design Supervisor G.K. DONINGTON Date 1/17/12
PROJECT HARTFORD	PROJECT NO. STP HTFD(1)
I.G.C. Info.	

PARSONS BRINCKERHOFF
650 ELM STREET
MANCHESTER, NH 03101



PLAN - EXISTING NORTH ABUTMENT

SCALE: ⅛" = 1'-0"

SECTION D-D

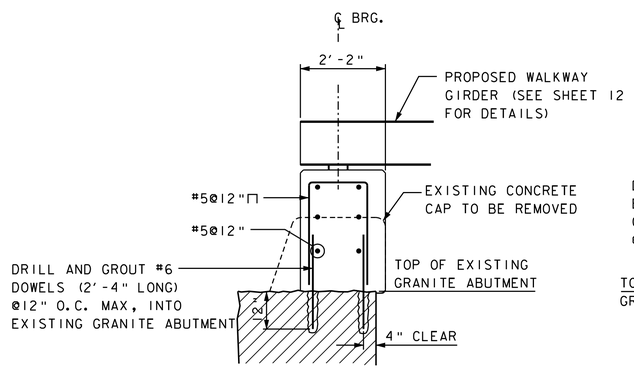
SCALE: ½ = 1'-0"

ELEVATION - EXISTING NORTH ABUTMENT

SCALE: ⅛" = 1'-0"

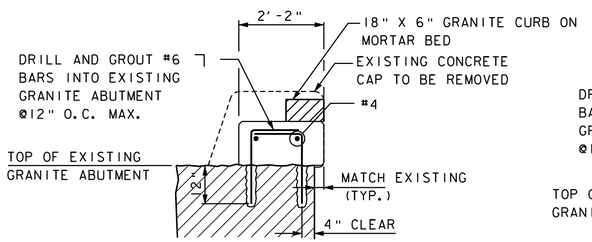
NOTE:

* THE CONFIGURATION OF THE EXISTING ABUTMENT AND WINGWALLS SHOWN IS APPROXIMATE AND BASED ON EXISTING PLANS AND LIMITED FIELD SURVEY AND MEASUREMENTS. CONTRACTOR TO FIELD VERIFY.



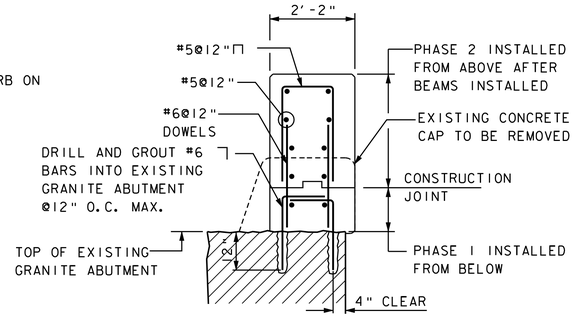
SECTION A-A

SCALE: ½" = 1'-0"



SECTION B-B

SCALE: ½" = 1'-0"



SECTION C-C

SCALE: ½" = 1'-0"

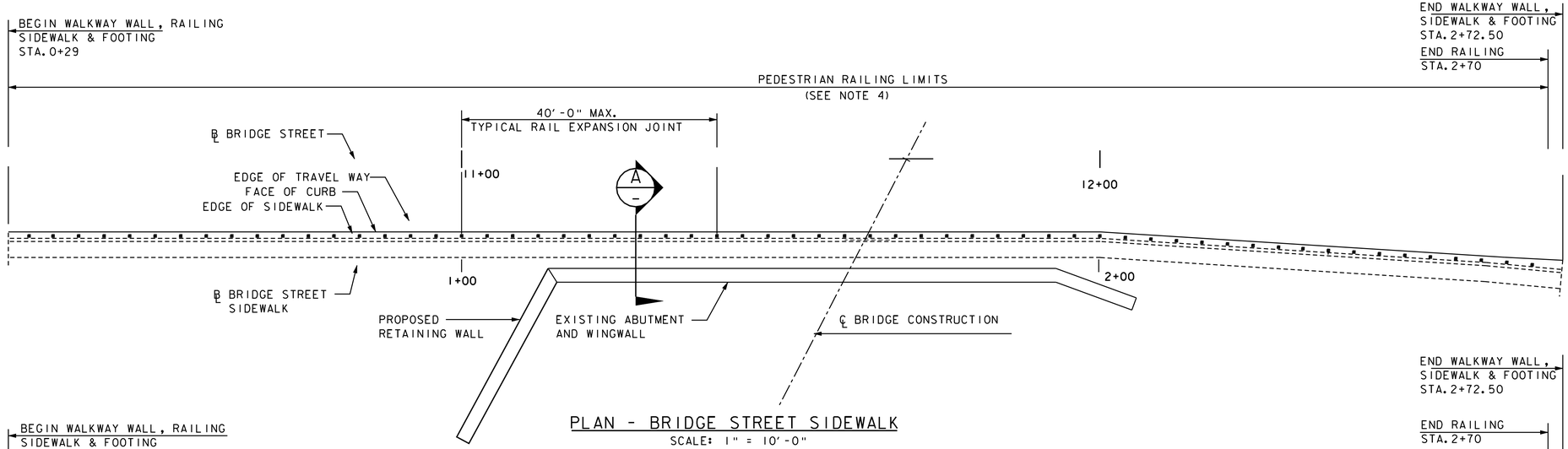
PARSONS BRINCKERHOFF
650 ELM STREET
MANCHESTER, NH 03101

TOWN OF HARTFORD

Town Of HARTFORD, VERMONT	Bridge No. 8
Highway No. BRIDGE STREET	Log Sta. / Surv. Sta.
N.E.C.R. BRIDGE OVER BRIDGE STREET	

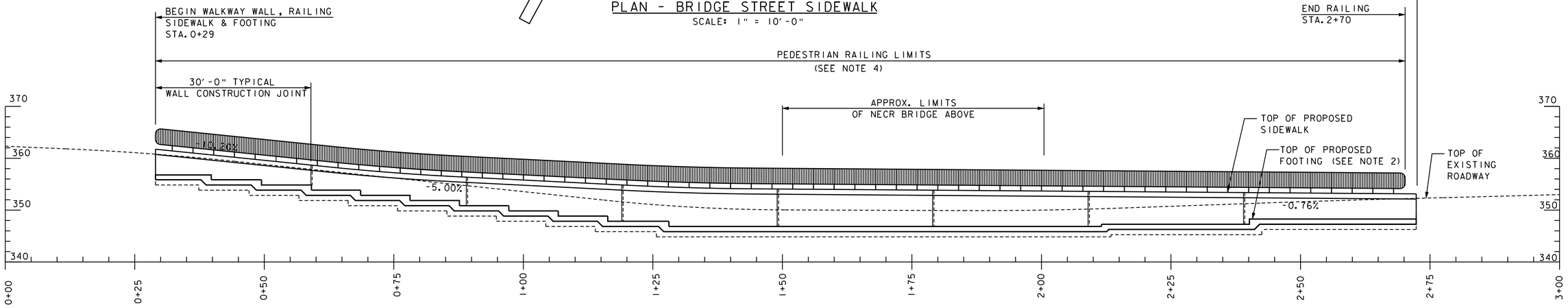
EXISTING NORTH ABUTMENT DETAILS

Designed By A STOCKIN	Drawn By W GERHOLD
Checked By G.K. DONINGTON Date 10/8/10	Bridge Design Supervisor G.K. DONINGTON Date 1/17/12
PROJECT HARTFORD	PROJECT NO. STP HTFD(1)
I.G.C. Info.	



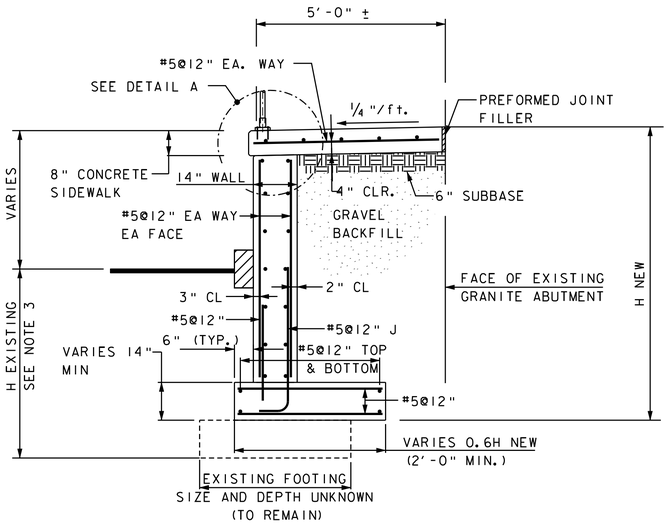
PLAN - BRIDGE STREET SIDEWALK

SCALE: 1" = 10'-0"



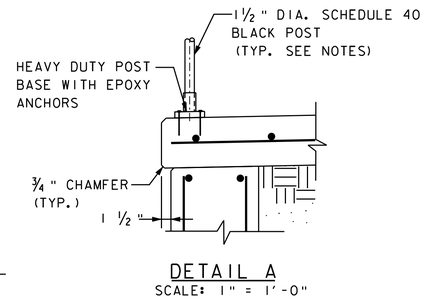
ELEVATION - BRIDGE STREET SIDEWALK

SCALE: 1" = 10'-0" HORIZ. & VERTICAL



SECTION A-A

SCALE: ½" = 1'-0"



DETAIL A

SCALE: 1" = 1'-0"

NOTES:

1. PEDESTRIAN HAND RAILING SHALL BE 1½" DIAMETER SCHEDULE 40 BLACK BAKED ENAMEL ALUMINUM PIPE RAILING WITH BALUSTERS. ITEM 900.640 SPECIAL PROVISION (PEDESTRIAN HAND RAILING)

2. EXISTING WALL DETAILS ARE NOT KNOWN. CONTRACTOR TO SET NEW FOOTING ON TOP OF EXISTING FOOTING SO AS TO LIMIT EXCAVATION DEPTH IN CLOSE PROXIMITY TO EXISTING UTILITIES. CONTRACTOR TO DIG TEST PITS TO LOCATE EXISTING WALL. NEW WALL FOOTINGS WILL BE STEPPED ACCORDINGLY. STEPPED FOOTING LAYOUT IS APPROXIMATE ONLY. CONTRACTOR TO SUBMIT PROPOSED STEPPED FOOTING LAYOUT BASED ON AS-BUILT CONDITIONS TO THE ENGINEER FOR APPROVAL.

3. FOR BID PURPOSES, CONTRACTOR TO ASSUME WALL FOOTING IS AT 5'-0" BELOW EXISTING GRADE.

4. RAILING TO START AT 10" CURB REVEAL, EXACT EXTENT OF RAILING TO BE DETERMINED IN FIELD BY CONTRACTOR PRIOR TO ORDERING MATERIALS.

5. CONTRACTOR IS RESPONSIBLE FOR NOT DAMAGING EXISTING STONE ABUTMENTS, UTILITIES AND OTHER STRUCTURES DURING THE REMOVAL OF THE EXISTING WALLS. THIS APPLIES TO ALL WALLS SHOWN ON THIS PLAN SET. THE METHOD OF CONCRETE REMOVAL (ITEM 529.25) SHALL BE SUBMITTED TO THE RESIDENT ENGINEER FOR APPROVAL.

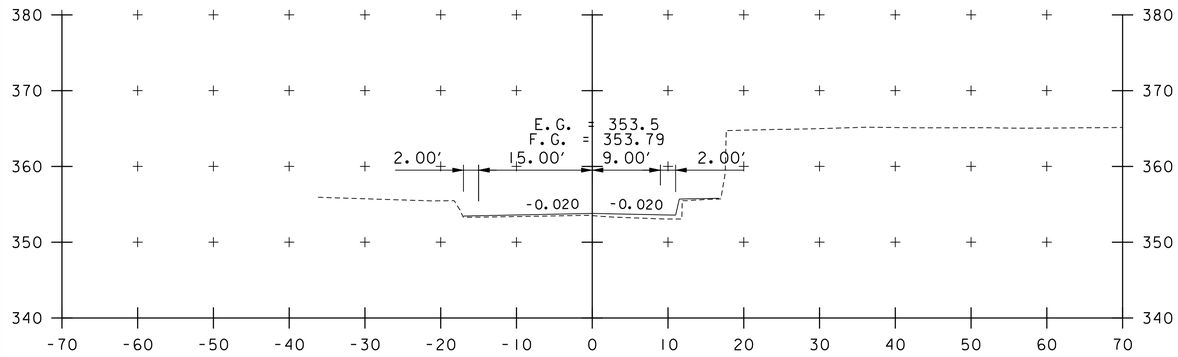
PARSONS BRINCKERHOFF
650 ELM STREET
MANCHESTER, NH 03101

TOWN OF HARTFORD

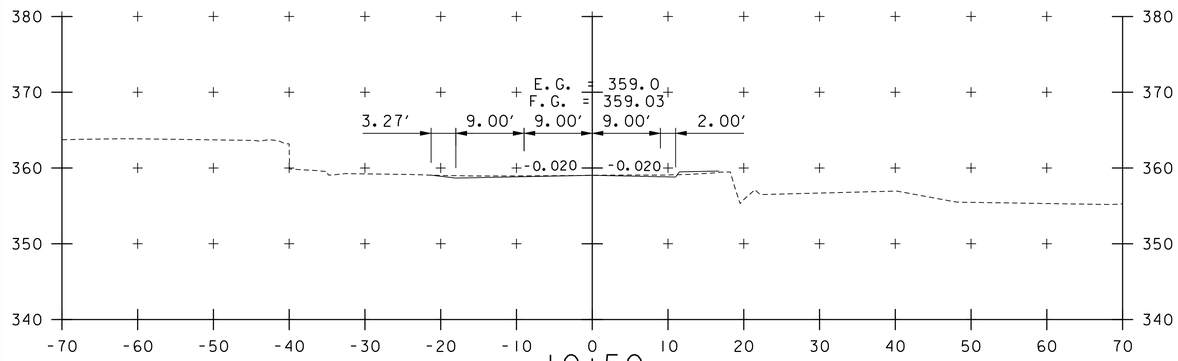
Town Of HARTFORD, VERMONT	Bridge No. 8
Highway No. BRIDGE STREET	Log Sta. / Surv. Sta.
N.E.C.R. BRIDGE OVER BRIDGE STREET	

BRIDGE ST. SIDEWALK PLAN, ELEVATION & DETAILS

Designed By A. STOCKIN	Drawn By W. GERHOLD
Checked By G. K. DONINGTON — Date 10/8/10	Bridge Design Supervisor G. K. DONINGTON Date 1/17/12
PROJECT HARTFORD	PROJECT NO. STP HTFD (1)
I.G.C. Info.	

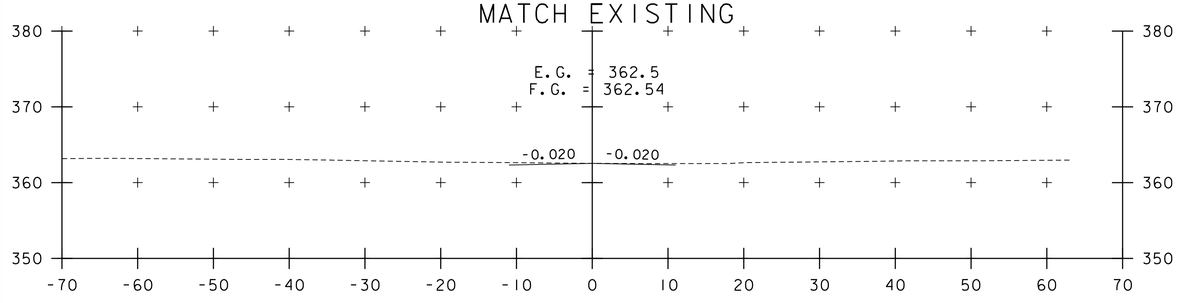


11+00



10+50

BEGIN APPROACH STA 10+19.00
BEGIN PROJECT STA 10+19.00
MATCH EXISTING



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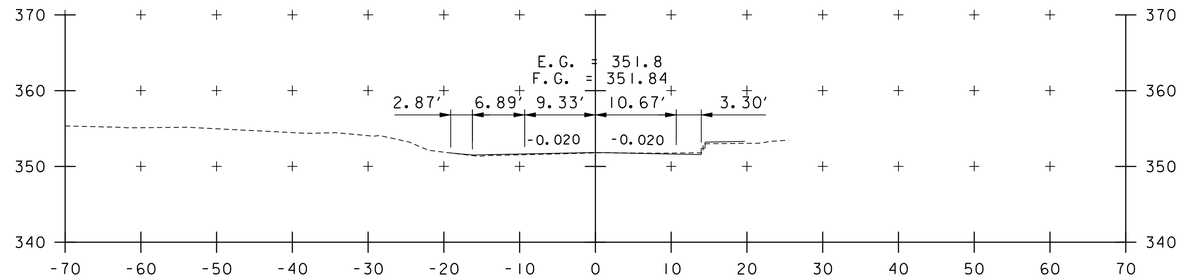
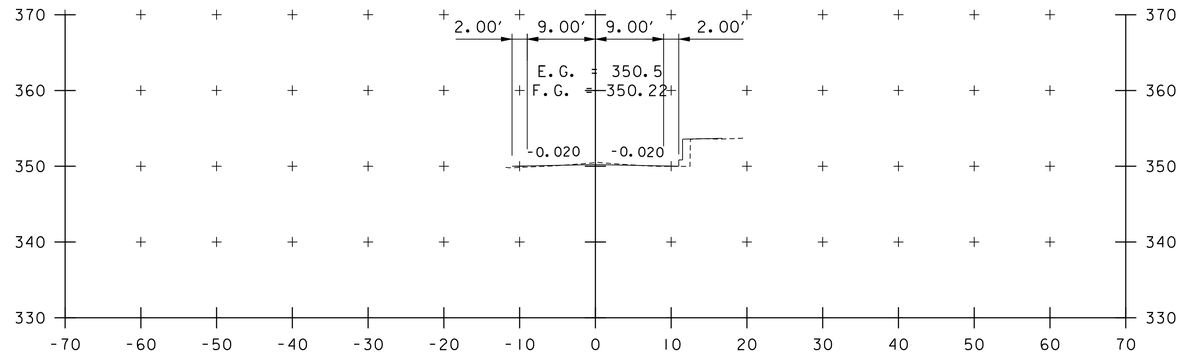


12+50



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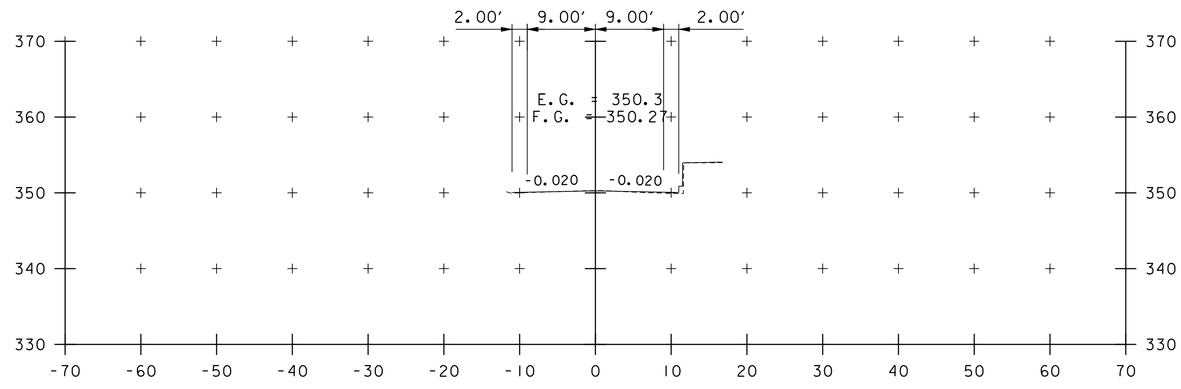


11+50

BRIDGE STREET ROAD SECTIONS SH 1 OF 2

0 10 20

SCALE IN FEET

PARSONS BRINCKERHOFF
650 ELM STREET
MANCHESTER, NH 03101

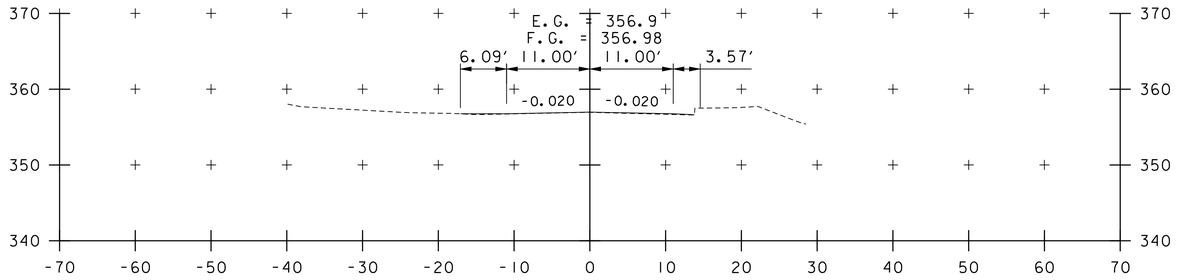
PROJECT NAME: HARTFORD
PROJECT NUMBER: STP HTFD(1)

DESIGNED BY: R. ANGJELI
FILE NAME: z93gl90xsPB.dgn
SECTION 10+00 THROUGH 12+50

DRAWN BY: K. MOULTON
CHECKED BY: R ORO
PLOT DATE: 4 JAN 2009
SHEET 24 OF 30

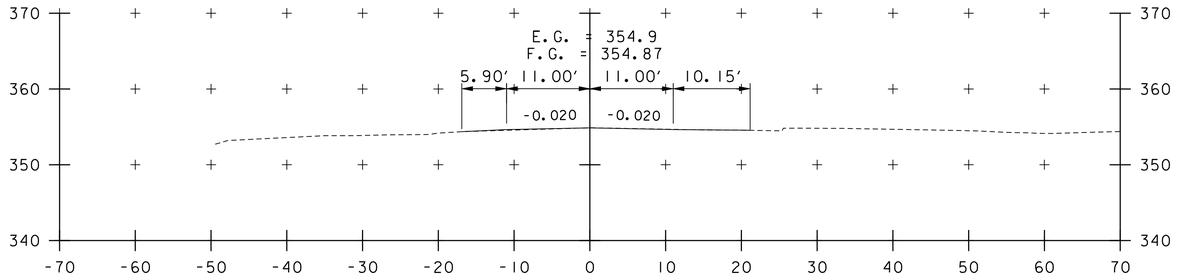
END APPROACH STA 14+20.00

MATCH EXISTING

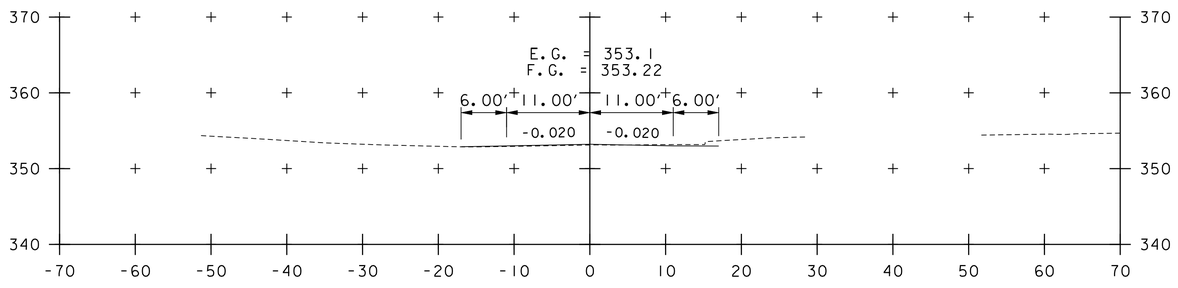


14+00

END PROJECT STA 13+95.00



13+50



13+00

BRIDGE STREET ROAD SECTIONS SH 2 OF 2

0 10 20

SCALE IN FEET

PARSONS BRINCKERHOFF
650 ELM STREET
MANCHESTER, NH 03101

PROJECT NAME: HARTFORD

PROJECT NUMBER: STP HTFD(1)

DESIGNED BY: R. ANGJELI

FILE NAME: z93gl90xsPB.dgn

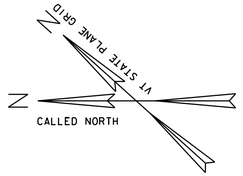
SECTION 13+00 THROUGH 14+00

DRAWN BY: K. MOULTON

CHECKED BY: R ORO

PLOT DATE: 4 JAN 2009

SHEET 25 OF 30



KEY:

- O = EXISTING UTILITY POLE
- ● = PROPOSED UTILITY POLE
- ----- = EXISTING UTILITY
- ——— = PROPOSED UTILITY
- ☼ = PROPOSED STREET LIGHTS (SEE NOTE 1)

TO US 4 & HARTFORD TOWN HALL

B R I D G E

S T R E E T

EXISTING UTILITY POLE #5

EXISTING ELECTRICAL FEED

EXIST DRAINAGE

EXIST SEWER

EXIST WATER

EXIST TELEPHONE

EXISTING LIGHT POLE (TYP.)

2" RGS CONDUIT ITEM 678.23 (2-#6, 1-#8 GND)

LUMINAIRE - POLE MOUNTED (14'-0" MTG.HT.)

EXISTING WATER LINE SERVICE (TYP.)

REMOVE EXISTING UTILITY POLE # 2

RELOCATED EXISTING OVERHEAD UTILITY LINES

EXISTING DIAGONAL POLE BRACE TO BE REMOVED

EXISTING UTILITY POLE #3

EXISTING UTILITY POLE #4

RECONSTRUCT EXISTING CATCH BASINS AS NEEDED TO INSTALL NEW FRAMES AND GRATES AT THE NEW CURB LINE AND PAVEMENT ELEVATION ITEM 604.47

LUMINAIRE - POLE MOUNTED (14'-0" MTG.HT.)

UNDER DECK LUMINAIRE (SEE NOTE 3)

2" RGS CONDUIT ITEM 678.23 (2-#6, 1-#8 GND)

PROPOSED RELOCATED UNDERGROUND/ BRIDGE MOUNTED SPRINT FIBER OPTIC LINE (BY OTHERS)

EXISTING SPRINT UNDERGROUND FIBER OPTIC CABLE

TO ST. ALBANS

TO WHITE RIVER JUNCTION

NECR MAINLINE TRACK

NECR YARD TRACK

1+00 11+00 12+00 13+00 14+00 15+00 16+00 20+00 21+00 211+00 212+00 213+00 214+00 215+00 216+00

PULL BOX

2" RGS CONDUIT ITEM 678.23 (2-#6, 1-#8 GND)

EXISTING UTILITY POLE #10

EXISTING UTILITY POLE #7

EXISTING UTILITY POLE #8

APPROXIMATE LOCATION OF LEVEL 3 UNDERGROUND UTILITY (TO BE DETOURED OVERHEAD BY LEVEL 3 PRIOR TO INSTALLING PILES)

EXISTING UTILITY POLE #9

RELOCATED EXISTING UTILITY POLE #1

EXISTING UTILITY POLE #6

LUMINAIRE - POLE MOUNTED (14'-0" MTG.HT.)

EXISTING ABANDONED RAILROAD OVERHEAD LINE FROM LOW HEIGHT POLES #9 & #10 TO BE REMOVED TO PERMIT CRANE FREE ACCESS DURING BRIDGE CONSTRUCTION. PERMANENT LOCATION IS NOT REQUIRED.

2" RGS CONDUIT ITEM 678.23 (2-#6, 1-#8 GND)

LUMINAIRE - POLE MOUNTED (14'-0" MTG.HT.)

RELOCATED EXISTING UTILITY LINES

REMOVE EXISTING UTILITY POLE #1

EXISTING POLE GUY WIRE TO BE REMOVED

EXISTING SHORT TIMBER POLE TO BE REMOVED

NEW DROP INLET, CONNECT TO EXIST.

EXIST WATER

EXIST DRAINAGE

TO DOWNTOWN HARTFORD

PROJECT LIMIT

N. M A I N S T R E E T

EXIST SEWER

SCALE 1" = 20'-0"

20 0 20

NOTES:

1. PROPOSED STREET LIGHTS (4 REQUIRED) SHALL MATCH THE EXISTING STREET LIGHTS ALONG RAILROAD ROW.
2. LOCATIONS OF ALL UTILITIES ARE APPROXIMATE AND MUST BE VERIFIED IN FIELD BY CONTRACTOR.
3. PROPOSED UNDER DECK LUMINAIRE SEE SHEET 11 FOR DETAILS, LUMINAIRE ASSEMBLY TO BE POSITIONED OVER CENTER OF BRIDGE STREET.

PLAN
SCALE: 1" = 20'

TOWN OF HARTFORD

Town Of HARTFORD, VERMONT	Bridge No.
	Log Sta.
Highway No. BRIDGE STREET	Surv. Sta.

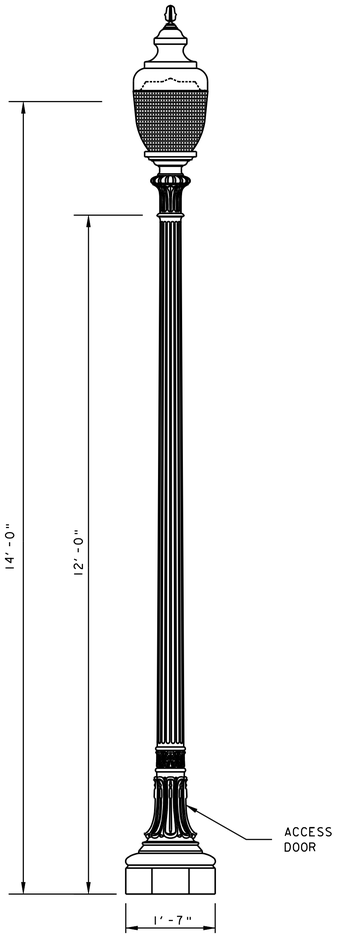
N.E.C.R. BRIDGE OVER BRIDGE STREET

UTILITY LOCATION PLAN

Designed By R. ANGJELI	Drawn By W. GERHOLD
Checked By Date G.K. DONINGTON 10/8/10	Bridge Design Supervisor G.K. DONINGTON Date 10/8/10
PROJECT HARTFORD	PROJECT NO. STP HTFD(1)
I.G.C. Info.	

PARSONS BRINCKERHOFF
650 ELM STREET
MANCHESTER, NH 03101

ROADWAY ILLUMINATION ASSEMBLY SPECIFICATIONS



ELEVATION - POST MOUNTED
ROADWAY ILLUMINATION ASSEMBLY

NOT TO SCALE

LUMINAIRE

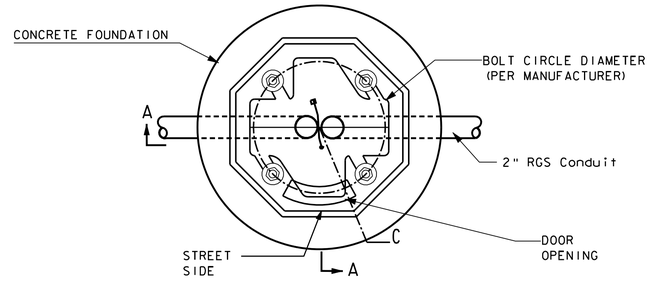
THE LUMINAIRE TO BE SPRING CITY ELECTRICAL MFG.CO. WASHINGTON 118 REFRACTIVE GLOBE WITH FINIAL.THE LUMINAIRE SHALL BE MANUFACTURERED TO PROVIDE A HEAVY WALL, CAST IRON HOUSING AND LENSFRAME ASSEMBLY. GLOBE SHALL BE CLEAR POLYCARBONATE. INTERNAL REFLECTOR(S) SHALL BE POLISHED HYDRAFOAMED ALUMINUM. ALL HARDWARE SHALL BE STAINLESS STEEL. THE LIGHT SOURCE SHALL BE CLEAR 100W HIGH PRESSURE SODIUM. THE BALLAST SHALL BE CORE AND COIL, HIGH POWER FACTOR,CWA TYPE, DESIGNED TO OPERATE AT 120/208/240/277V, AND SHALL BE MOUNTED ON A REMOVABLE BALLAST TRAY BY MEANS OF THUMB SCREWS AND A QUICK DISCONNECT PLUG. THE OPTICAL CONFIGURATION OF THE LUMINAIRE SHALL PROVIDE A MEDIUM TYPE III DISTRIBUTION AND MEET THE IESNA CLASSIFICATION OF A CUTOFF FIXTURE. THE LUMINAIRE SHALL BE UL LISTED AND LABELED FOR WET LOCATIONS. THE LUMINAIRE TWO PART EPOXY PRIMER (SHERWIN WILLIAMS B67H5-PART G AND B67V5-PART H). A FINAL SHERWIN WILLIAMS ACROLON FINISH IS TO BE APPLIED ON TOP OF THE PRIMER. COLOR TO BE BLACK.

POLE

POLE SHALL BE SPRING CITY ELECTRICAL MFG.CO. PARKWOOD 12 FOOT POST. IT SHALL BE CONSTRUCTED AS A ONE PIECE, CAST IRON MATERIAL PER ASTM A48-83 CLASS 30. THE SHAFT SHALL BE FLUTED OVER THE ENTIRE LENGTH ON TOP OF A BELL HOUSING BASE. THE OVERALL HEIGHT OF THE POLE SHALL BE 12'-0" POSITIONING THE LUMINAIRE AT APPROXIMATELY 14'-0" ABOVE THE CREST OF THE ROADWAY SURFACE. THE SHAFT SHALL BE DOUBLE WELDED TO THE BASE PLATE AND SHIPPED AS ONE PIECE. ALL EXPOSED WELDS SHALL BE GROUND SMOOTH. GROUNDING SCREW/LUG SHALL BE PROVIDED IN THE POLE OPPOSITE THE ACCESS DOOR AND SHALL CONSIST Of a 1/2-13 NC FEMALE THREADS (MIN 3 FULL THREADS). PROVIDE POLE BONDING CONNECTOR (BLACKBURN TTC3, WEAVER TGC3 OR EQUAL). ALL HARDWARE USED TO INSTALL THE POLE, MOUNTING ARM AND BASE COVER/SHROUD IS TO BE STAINLESS STEEL. THE POLE ASSEMBLY SHALL BE PREWIRED WITH #10 INSULATED CONDUCTORS WITH A LENGTH SUFFICIENT TO EXTEND THROUGH POLE DOWN THROUGH THE ACCESS DOOR WITH ENOUGH SLACK TO MAKE CONNECTION TO FIELD CONNECTORS. THE POLE SHALL HAVE A 2 PART EPOXY PRIMER (SHERWIN WILLIAMS B67H5-PART G AND B67V5-PART H). A FINAL SHERWIN WILLIAMS ACROLON FINISH IS TO BE APPLIED ON TOP OF THE PRIMER. COLOR TO BE BLACK.
PROVIDE 110V OUTLET FOR CHRISTMAS LIGHTING.

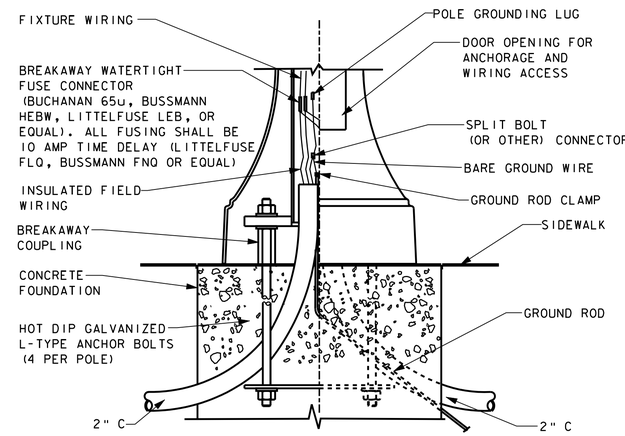
FOUNDATION

FOUNDATIONS FOR ROADWAY ILLUMINATION ASSEMBLIES SHALL BE 30 INCH DIAMETER BY 8 FEET DEEP WITH 8 NO. 4, VERTICAL BARS AND NO. 2 SPIRAL WITH 6 INCH PITCH (2 FLAT TURNS TOP AND BOTTOM). ANCHOR BOLTS SHALL BE A MIN OF 1 INCH DIAMETER AND GALVANIZED. FOUNDATIONS SHALL MEET THE CONSTRUCTION AND MATERIAL REQUIREMENTS OF AASHTO. DURING THE ASSEMBLY OF THE BASE, A 1/4 INCH DIA. COPPER CLAD STEEL GROUND ROD SHALL BE INCLUDED. AT THE TOP OF THE GROUND ROD, PROVIDE A GROUNDING CLAMP (BLACKBURN GG58H, BURNDY GKP635 OR EQUAL). THE ROD SHALL EXTEND BEYOND THE BASE (8 ft. MINIMUM). FOUNDATIONS WILL NOT BE PAID FOR DIRECTLY BUT SHALL BE SUBSIDIARY TO THE VARIOUS BID ITEMS OF THE CONTRACT.



PLAN

NOT TO SCALE



SECTION A-A
POLE BASE DETAIL

NOT TO SCALE

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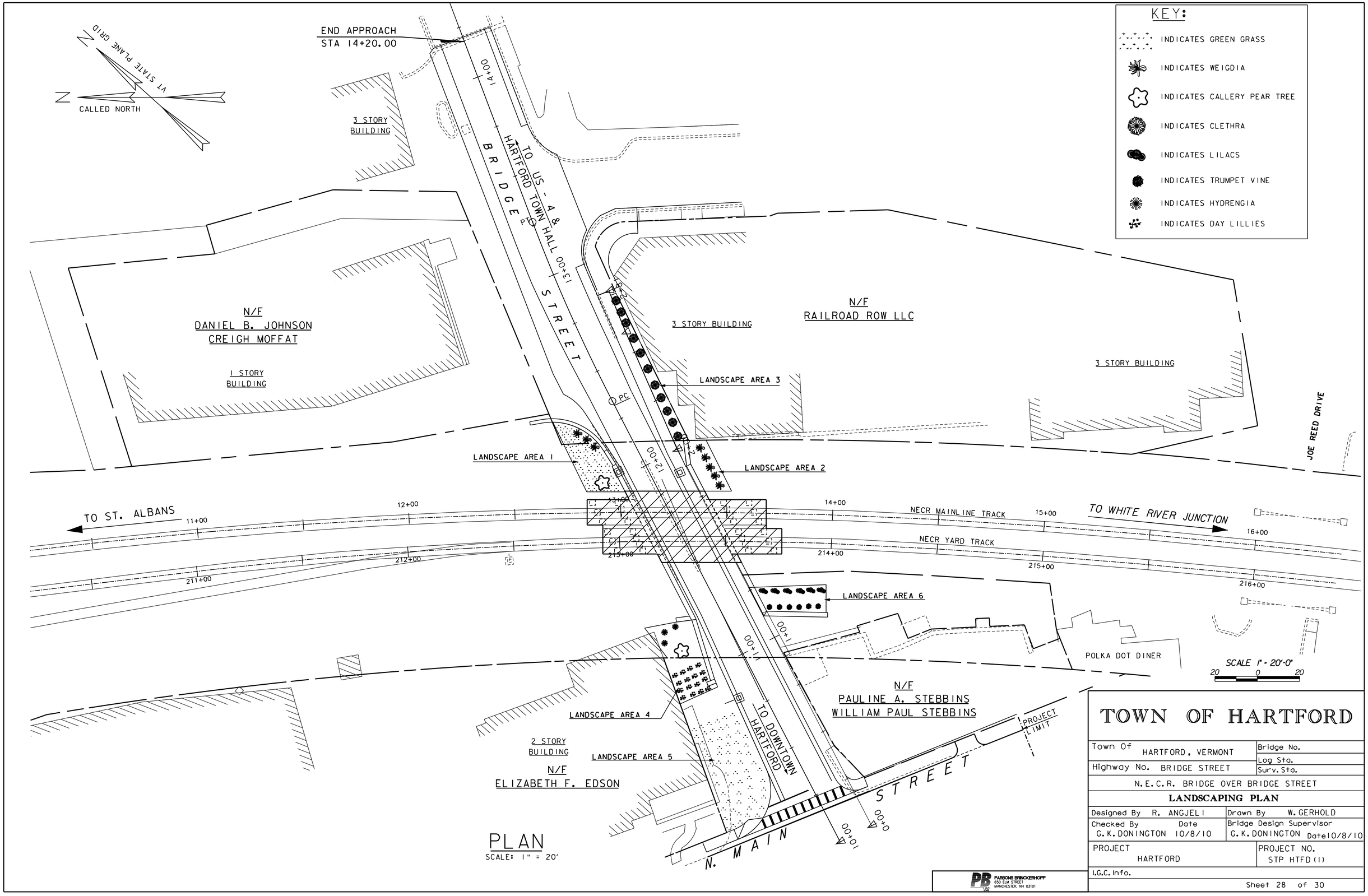
MANCHESTER, NH 03101

TOWN OF HARTFORD

Town Of HARTFORD, VERMONT	Bridge No. 8
	Log Sta.
Highway No. BRIDGE STREET	Surv. Sta.
N.E.C.R. BRIDGE OVER BRIDGE STREET	
BRIDGE STREET LIGHTING DETAILS	
Designed By J. KROLL	Drawn By D. LOCKS
Checked By A. PIZZANO Date 10/8/10	Bridge Design Supervisor G.K. DONINGTON Date 10/8/10
PROJECT HARTFORD	PROJECT NO. STP HTFD(11)
I.G.C. Info.	
	Sheet 27 of 30



TOWN OF HARTFORD

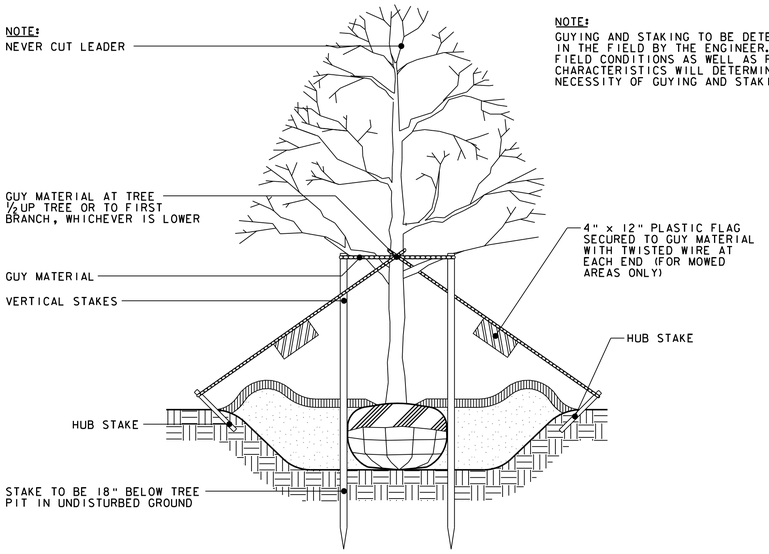
Town Of HARTFORD, VERMONT	Bridge No.
	Log Sta.
Highway No. BRIDGE STREET	Surv. Sta.

N.E.C.R. BRIDGE OVER BRIDGE STREET

LANDSCAPING PLAN

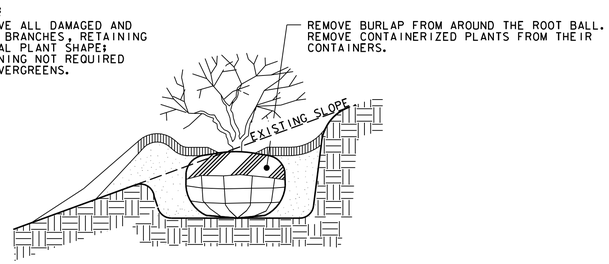
Designed By R. ANGJELI	Drawn By W. GERHOLD
Checked By Date G.K. DONINGTON 10/8/10	Bridge Design Supervisor G.K. DONINGTON Date10/8/10
PROJECT HARTFORD	PROJECT NO. STP HTFD(1)
I.G.C. Info.	

PARSONS BRINCKERHOFF
650 ELM STREET
MANCHESTER, NH 03101



DECIDUOUS TREE PLANTING

N.T.S.

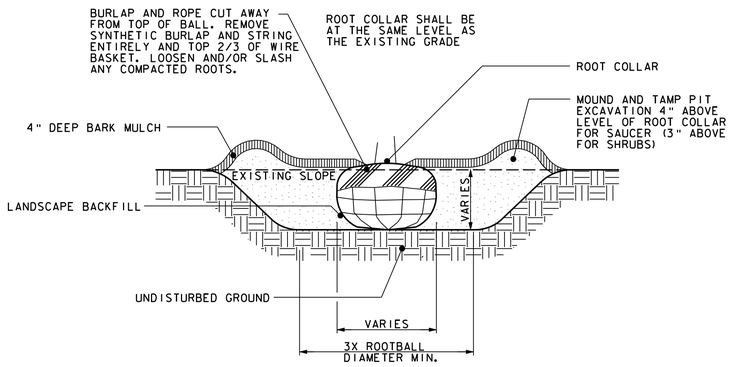


SHRUB PLANTING

N.T.S.

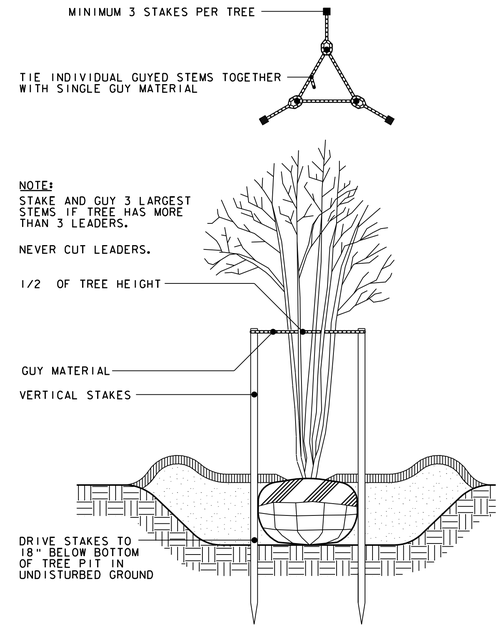
NOTES:

1. ALL MATERIALS REQUIRED FOR PLANTINGS, NOT LISTED IN THE SUMMARY OF QUANTITIES, ARE SUBSIDIARY TO THE 656 ITEM NUMBERS.
2. SEE PLANTING DETAILS - 2 FOR AGRICULTURAL LIMESTONE, FERTILIZER AND SEED APPLICATION RATES.



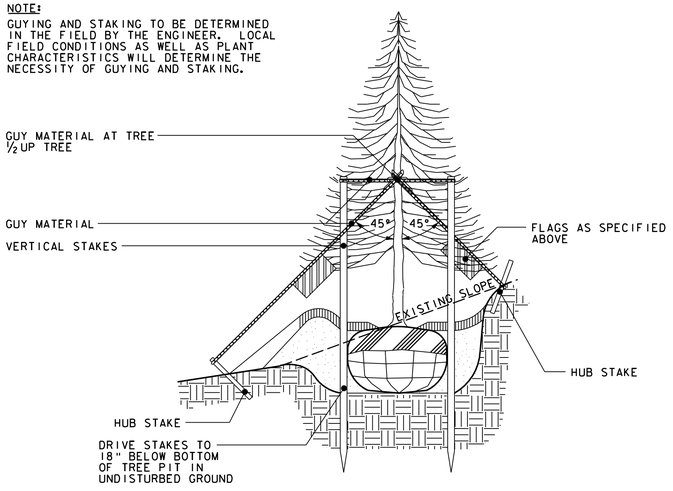
TYPICAL PLANTING PIT ON LEVEL

N.T.S.



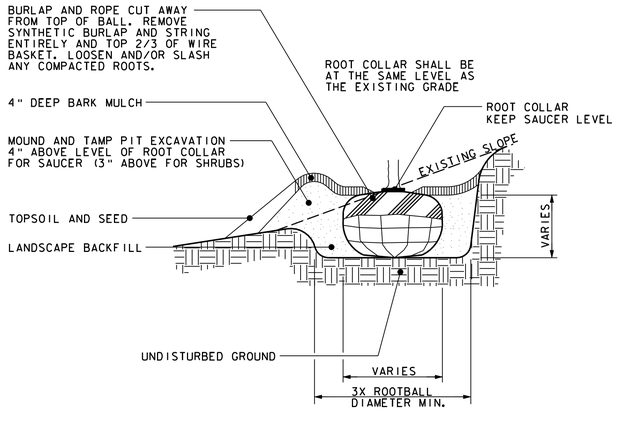
MULTI-STEM TREE PLANTING

N.T.S.



EVERGREEN TREE PLANTING

N.T.S.



TYPICAL PLANTING PIT ON SLOPE
4:1 OR GREATER

N.T.S.

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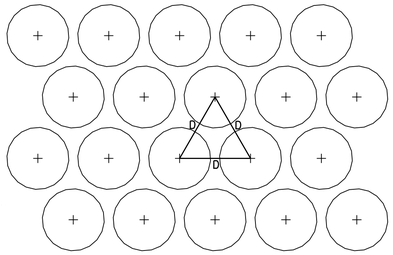
TOWN OF HARTFORD

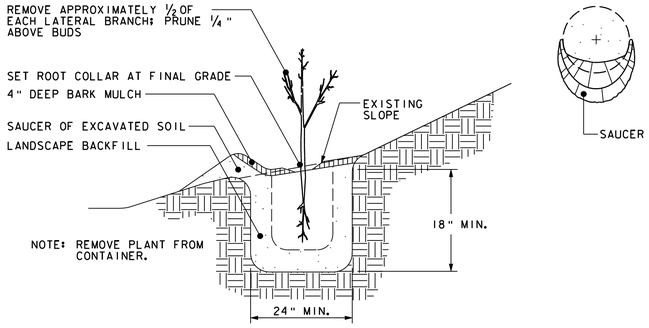
Town Of HARTFORD, VERMONT	Bridge No. 8
Highway No. BRIDGE STREET	Log Sta. / Surv. Sta.
N.E.C.R. BRIDGE OVER BRIDGE STREET	
PLANTING DETAILS - 1	
Designed By C. CARNEY	Drawn By C. CARNEY
Checked By R. BENJAMIN Date	Bridge Design Supervisor G.K. DONINGTON Date
PROJECT HARTFORD	PROJECT NO. STP HTFD(1)
I.G.C. Info.	



NOTE:
D=DIMENSION OF PLANT SPACING (SHRUB OR GROUND COVER AS INDICATED ON PLANS)

TYPICAL BED PLANT SPACING

N. T. S.



LINER PLANTING (DECIDUOUS)

N. T. S.

NOTES:

1. ALL MATERIALS REQUIRED FOR PLANTINGS, NOT LISTED IN THE SUMMARY OF QUANTITIES, ARE SUBSIDIARY TO THE 656 ITEM NUMBERS.
2. TYPICAL APPLICATION RATES FOR AGRICULTURAL LIMESTONE, FERTILIZER AND SEED ARE AS FOLLOWS:

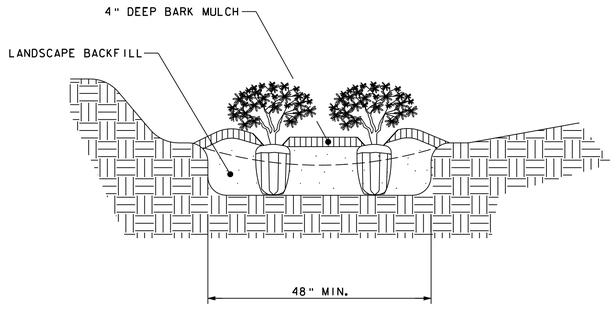
   AGRICULTURAL LIMESTONE: 130 POUNDS PER 1000 FT^2

FERTILIZER:

FERTILIZER INFORMATION	
PERCENT OF NUTRIENTS (INITIAL FERTILIZATION)	MINIMUM APPLICATION RATE (POUNDS PER 1,000 FT^2)
10-10-10	20.0
15-15-15	13.4
19-19-19	10.5

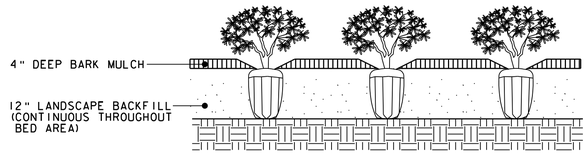
SEED:

PARK SEED TYPE 15			
KIND OF SEED	MINIMUM PURITY (%)	MINIMUM GERMINATION (%)	APPLICATION RATE (POUNDS/ACRE)
CREEPING FED RESCUE	96	85	40
PERENNIAL RYEGRASS	98	90	50
KENTUCKY BLUEGRASS	97	85	25
REDTOP	95	80	5
TOTAL			120



TRENCH NARROW MEDIAN PLANTING

N. T. S.



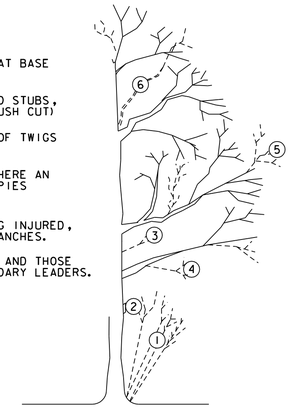
GROUNDCOVER BED PLANTING

N. T. S.

NOTES:

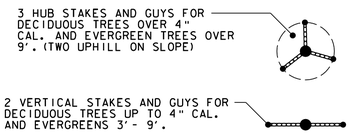
1. REMOVE SUCKER SHOOTS AT BASE OF TREE.
2. MAKE CLEAN CUTS ON OLD STUBS, IF PRESENT (DO NOT FLUSH CUT)
3. REMOVE ENTIRE SUPPLY OF TWIGS AND BUDS ON TRUNK.
4. REMOVE LOWER BRANCH WHERE AN OVERLYING BRANCH OCCUPIES ABOUT THE SAME AREA.
5. SHAPE TREE BY REMOVING INJURED, DEAD AND MISSHAPED BRANCHES.
6. REMOVE CROSS BRANCHES AND THOSE DEVELOPING INTO SECONDARY LEADERS.

NOTE:
BRANCHES IN DOTTED LINES INDICATE THOSE TO BE REMOVED.

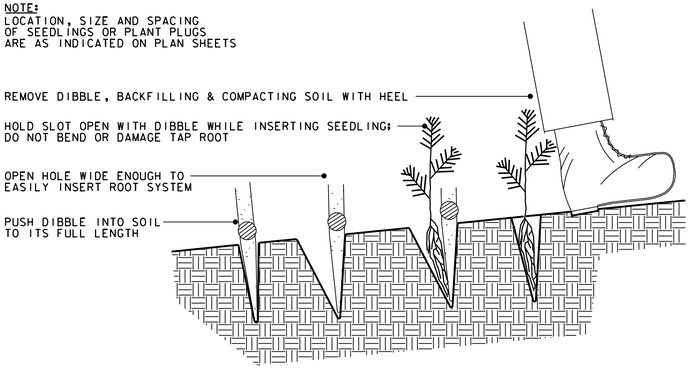


TREE PRUNING

N. T. S.

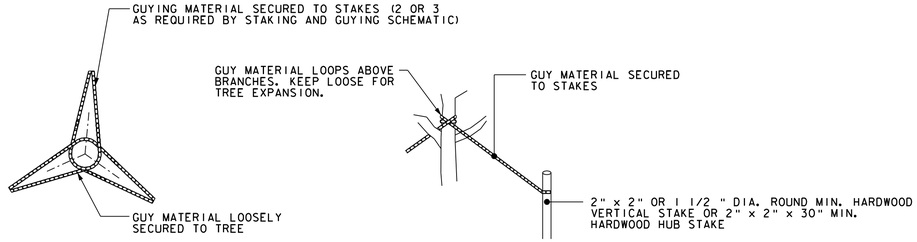


STAKING AND GUYING PLAN SCHEMATIC



SEEDLINGS (EVERGREEN) OR WETLAND PLUG PLACEMENT

N. T. S.



GUYING DETAILS

NOTE:
MINIMUM 1/2" DIA. RUBBER OR SOFT PLASTIC HOSE (LANDSCAPE QUALITY AND SUITABLE STRENGTH FOR GUYING TREES) OR EQUIVALENT GUYING MATERIAL

TREE STAKING AND GUYING

N. T. S.

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PLANTING DETAILS - 2	
Designed By C. CARNEY	Drawn By C. CARNEY
Checked By R. BENJAMIN Date	Bridge Design Supervisor G. K. DONINGTON Date
PROJECT HARTFORD	PROJECT NO. STP HTFD (1)
I. G. C. Info.	
	Sheet 30 of 30