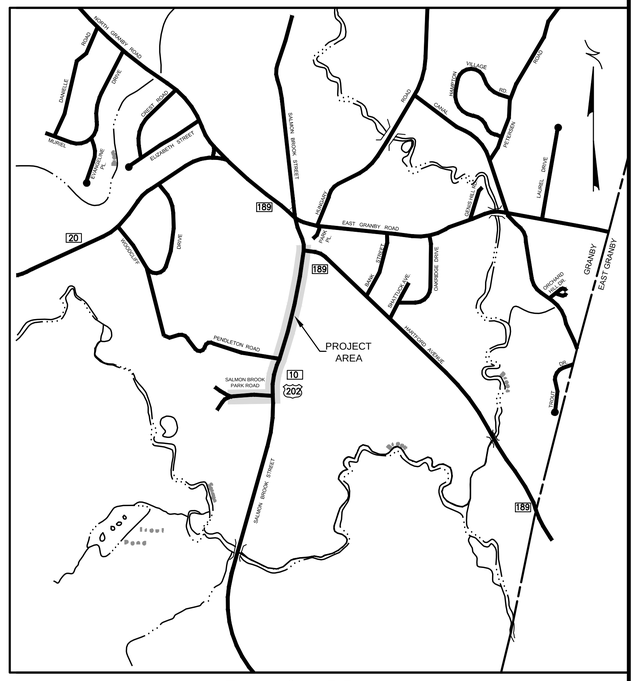


Location Map
Scale: 1"=1000'

TOWN OF GRANBY
PROPOSED SIDEWALKS
PROJ. # L055-001

RTE. 10 Salmon Brook Street & Salmon Brook Park Road
Granby, Connecticut
April 21, 2017
For Bidding

List of Drawings:

-	Cover
CIV-1 - 4	Plan
PRO-1 - 3	Profiles
XSC-1 - 7	Cross Sections
DET-1 - 3	Notes & Details
E-1 - 5	Lighting Plan

William F. Smith, Jr. - Town Manager
B. Scott Kuhnly -First Selectman
Francis G. Armentano - Director of Community Development

Town Engineer:

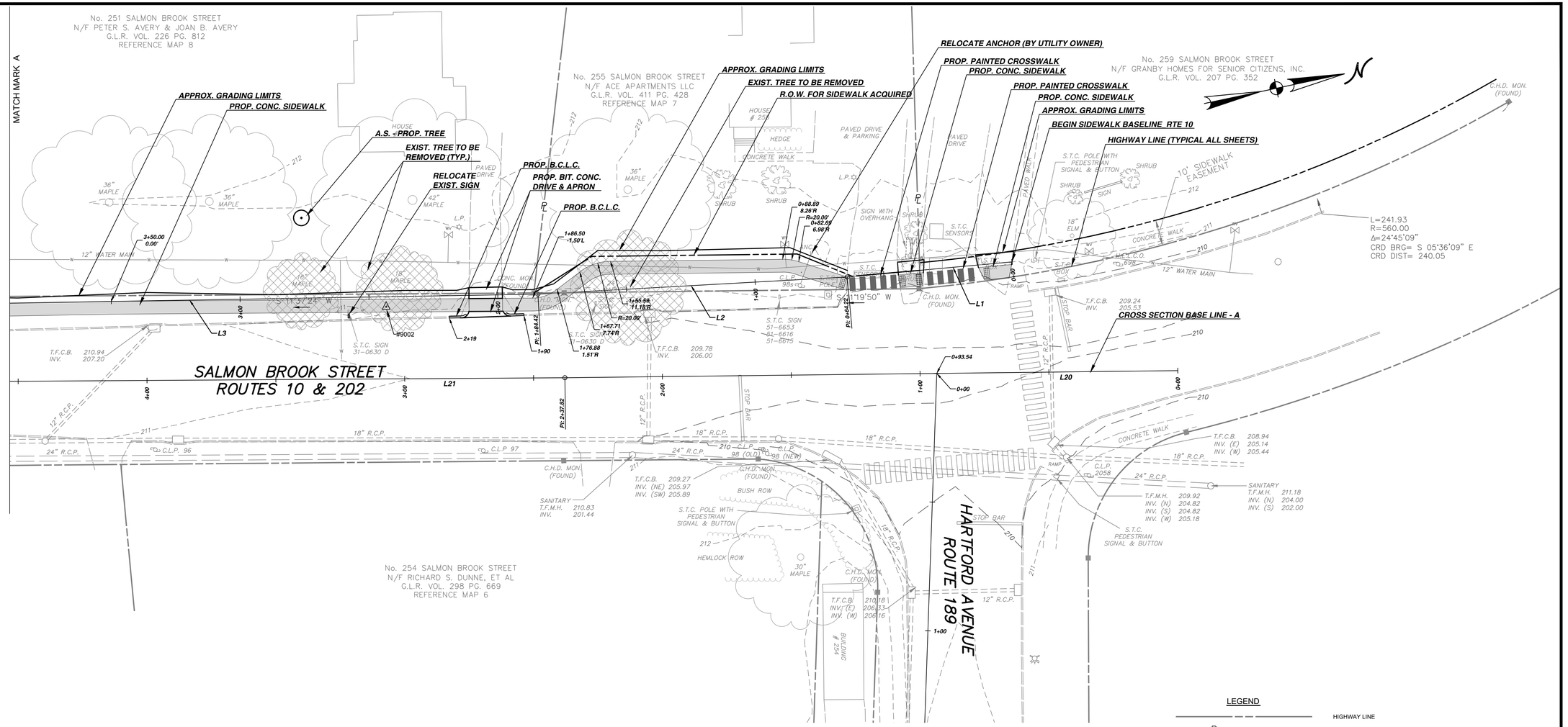
Kevin Clark, PEL
Clark Engineering
P. O. Box 419
Granby, Connecticut 06035
(860) 653-4352
clarkengr@gmail.com

Surveyor:

Henry C. Cotton & Associates
140 North Granby Road
P.O. Box 4
Granby, CT 06035
(860) 653-6601

Electrical Engineer:

RZ Design Associates
750 Old Main Street - Suite 202
Rocky Hill, CT 06067
(860) 436-4336
www.rzdesignassociates.com



SIDEWALK BASELINE-RTE 10						
Number	Length	Line Direction	Start Sta.	End Sta.	N,E Start	N,E End
L1	64.22	S06° 45' 22"W	0+00.00	0+64.22	N 907937.2297, E 989253.8304	N 907873.4565, E 989246.2755
L2	120.20	S08° 49' 30"W	0+64.22	1+84.42	N 907873.4565, E 989246.2755	N 907754.6756, E 989227.8344
L3	387.69	S11° 01' 44"W	1+84.42	5+72.12	N 907754.6756, E 989227.8344	N 907374.1435, E 989153.6670
L4	444.80	S11° 50' 53"W	5+72.12	10+16.91	N 907374.1435, E 989153.6670	N 906938.8212, E 989062.3428
L5	435.75	S12° 10' 41"W	10+16.91	14+52.67	N 906938.8212, E 989062.3428	N 906512.8728, E 988970.4213
L6	297.33	S10° 54' 49"W	14+52.67	17+50.00	N 906512.8728, E 988970.4213	N 906220.9185, E 988914.1273
L7	98.00	S11° 18' 10"W	17+50.00	18+48.00	N 906220.9185, E 988914.1273	N 906124.8196, E 988894.9202
L8	152.00	S03° 36' 40"W	18+48.00	20+00.00	N 906124.8196, E 988894.9202	N 905973.1210, E 988885.3463
L9	148.32	S02° 44' 14"W	20+00.00	21+48.32	N 905973.1210, E 988885.3463	N 905824.9703, E 988878.2636

CROSS SECTION BASELINE - A								
Number	Length	Bearing	Radius	Delta Angle	Start Sta.	End Sta.	N,E Start	N,E End
L20	237.82	S11° 19' 50"W			0+00.00	2+37.82	N 907991.3641 E 989308.4827	N 907758.1803, E 989261.7585
L21	397.92	S11° 37' 24"W			2+37.82	6+35.74	N 907758.1803 E 989261.7585	N 907368.4180, E 989181.5860
L22	445.05	S11° 30' 20"W			6+35.74	10+80.80	N 907368.4180 E 989181.5860	N 906932.3062, E 989092.8142
L23	390.88	S12° 57' 09"W			10+80.80	14+71.67	N 906932.3062 E 989092.8142	N 906551.3728, E 989005.2022
L24	204.35	S12° 01' 15"W			14+71.67	16+76.03	N 906551.3728 E 989005.2022	N 906351.5035, E 988962.6431
C2	385.21		2377.40	009°17'01"	16+76.03	20+61.24	N 906351.5035, E 988962.6431	N905969.9007, E 988913.2243
L25	188.76	S02° 44' 14"W			20+61.24	22+50.00	N 905969.9007 E 988913.2243	N 905781.3520, E 988904.2103

Control Point Table

Point #	Raw Description	Elevation	Northing	Easting
8502	MAG NAIL FOUND	210.64	906582.0455	988978.3691
9006	TRAV	186.54	905831.1509	988858.5901
9002	TRAV	211.26	907696.1250	989220.3926
8501	TRAV	211.98	907947.8408	989228.6078
9005	TRAV	193.39	906028.4147	988936.1224
8500	TRAV	213.17	907835.7590	989462.3245
8545	RRS SET	0.00	905844.9921	988566.4214
9007	TRAV	185.74	905853.2728	988575.4921
9008	MAG NAIL SET	185.52	905825.2463	988259.9016
8504	TRAV	194.68	906072.2001	988862.0422
9004	TRAV	208.48	906359.7345	988994.3994
8503	TRAV	204.46	906198.7881	988867.2000
9003	TRAV	211.62	907172.1612	989166.1785

HORIZONTAL DATUM: NAD 27
VERTICAL DATUM: NGVD 29

LEGEND

	HIGHWAY LINE
	PROPERTY LINE
	BUILDING SETBACK LINE
	EASEMENT
	WETLANDS
	UTILITY POLE
PROPOSED / EXISTING	
236 / 236	CONTOUR
235x4 / 235.4	SPOT GRADE
	CATCH BASIN
	MANHOLE
	LIGHT
	STORM SEWER
	SANITARY SEWER
W / w w	WATER LINE
G / g g	GAS LINE
	CURB
SF SF SF	SILT FENCE
PROP.	PROPOSED
TYP.	TYPICAL
EXIST.	EXISTING
#8005	SURVEY CONTROL POINT

LIST OF ABBREVIATIONS:

A.D.	Area Drain
B.C.	Bottom Curb
BIT. CONC.	Bituminous Concrete
B.S.M.T.	Basement Floor Elevation
C.B.	Catch Basin
C.M.P.	Corrugated Metal Pipe
C.O.	Cleanout
CONC.	Concrete
C.S.	Curb Stop
C.P.E.P.	Corrugated Polyethylene Pipe
C.P.E.P.-S	Corrugated Polyethylene Pipe, w/smooth interior
D.I.	Ductile Iron Pipe
EXIST.	Existing
F.F.	First Floor Elevation
FTG.	Footing
G.F.	Garage Floor Elevation
GV.	Gate Valve
HYD.	Hydrant
INV.	Invert
L.D.	Lawn Drain
L.F.	Linear Feet
M.H.	Manhole
PVMT.	Pavement
P.V.C.	Polyvinyl Chloride
PROP.	Proposed
R.C.P.	Reinforced Concrete Pipe
R.D.	Roof Drain
T.W.	Top of wall
TYP.	Typical

UTILITY WARNING

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GRAPHIC SCALE

20 0 20 40

(IN FEET)
1 inch = 20 ft.

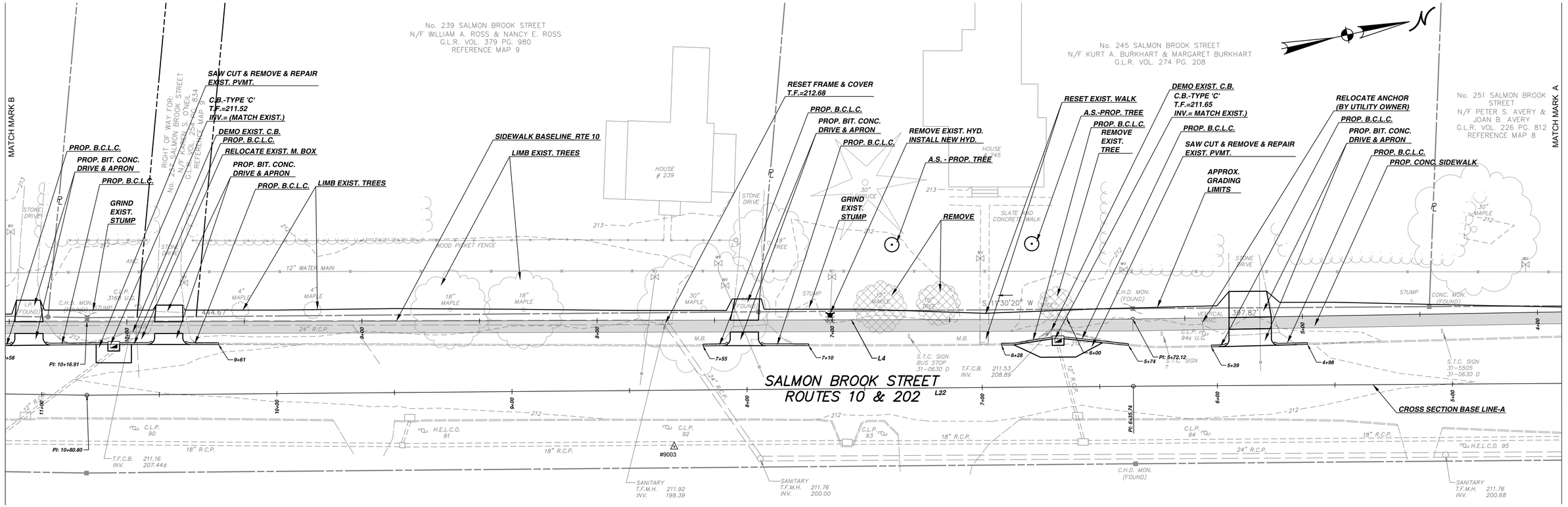
NO.	DATE	REVISIONS
	4/21/17	FOR BIDDING
	1/3/17	MISC. REVISIONS
	10/31/16	90% SUBMISSION

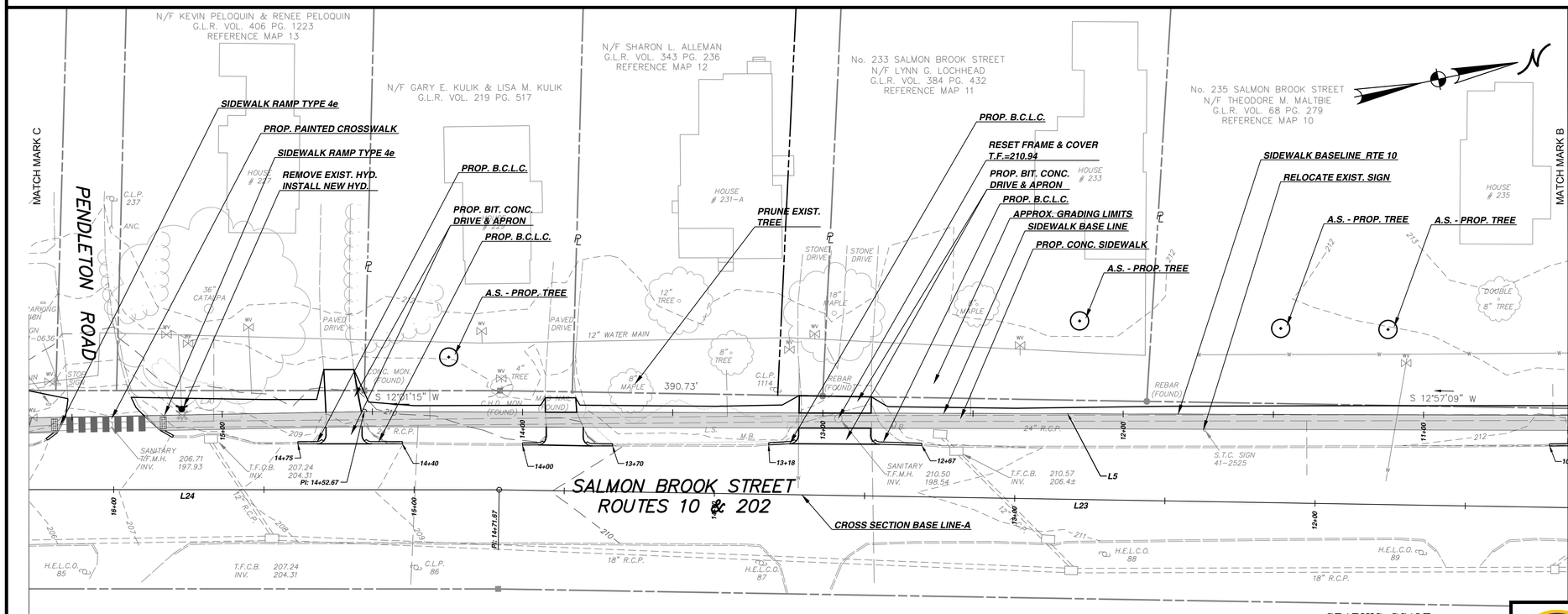
SIDEWALK PLAN

TOWN OF GRANBY
PROPOSED SIDEWALKS - PROJ. # L055-001
RTE. 10 SALMON BROOK STREET & SALMON BROOK PARK ROAD
GRANBY, CONNECTICUT

SCALE: 1" = 20'	DATE: APRIL 21, 2016	JOB#: G2012.02	SHEET: CIV-1

CLARK ENGINEERING
Civil Engineering • Site Plans • Septic Systems • Land Planning
P.O. Box 419, Granby, CT 06035-0419
Phone: (860) 653-4352 Fax: (860) 653-0415
CT. PEL #12318, MA. PE. #38984 NY. PE. #078275





NO.	DATE	DESCRIPTION
	4/21/17	FOR BIDDING
	1/3/17	MISC. REVISIONS
	10/31/16	90% SUBMISSION

REVISIONS

LEGEND

	PROPOSED	EXISTING
HIGHWAY LINE		
PROPERTY LINE	℄	℄
BUILDING SETBACK LINE		
EASEMENT		
WETLANDS		
UTILITY POLE		
CONTOUR	236	236
SPOT GRADE	235x4	235.4
CATCH BASIN		
MANHOLE		
LIGHT		
STORM SEWER		
SANITARY SEWER		
WATER LINE	W	w w
GAS LINE	G	g g
CURB		
SILT FENCE	SF SF SF	
PROPOSED	PROP.	
TYPICAL	TYP.	
EXISTING	EXIST.	
SURVEY CONTROL POINT		⚠ #8005

LIST OF ABBREVIATIONS:

A.D.	Area Drain
B.C.	Bottom Curb
BIT. CONC.	Bituminous Concrete
B.S.M.T.	Basement Floor Elevation
C.B.	Catch Basin
C.M.P.	Corrugated Metal Pipe
C.O.	Cleanout
CONC.	Concrete
C.S.	Curb Stop
C.P.E.P.	Corrugated Polyethylene Pipe
C.P.E.P.-S	Corrugated Polyethylene Pipe, w/smooth interior
D.I.	Ductile Iron Pipe
EXIST.	Existing
F.F.	First Floor Elevation
FTG.	Footing
G.F.	Garage Floor Elevation
GV.	Gate Valve
HYD.	Hydrant
INV.	Invert
L.D.	Lawn Drain
L.F.	Linear Feet
M.H.	Manhole
PVMT.	Pavement
P.V.C.	Polyvinyl Chloride
PROP.	Proposed
R.C.P.	Reinforced Concrete Pipe
R.D.	Roof Drain
T.W.	Top of wall
TYP.	Typical

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GRAPHIC SCALE

20 0 20 40

(IN FEET)
1 inch = 20 ft.

SIDEWALK PLAN

TOWN OF GRANBY
PROPOSED SIDEWALKS - PROJ. # L055-001
RTE. 10 SALMON BROOK STREET & SALMON BROOK PARK ROAD
GRANBY, CONNECTICUT

SCALE: 1" = 20'	DATE: APRIL 21, 2016	JOB#: G2012.02	SHEET: CIV-2

CLARK ENGINEERING
Civil Engineering • Site Plans • Septic Systems • Land Planning
P.O. Box 419, Granby, CT 06035-0419
Phone: (860) 653-4352 Fax: (860) 653-0415
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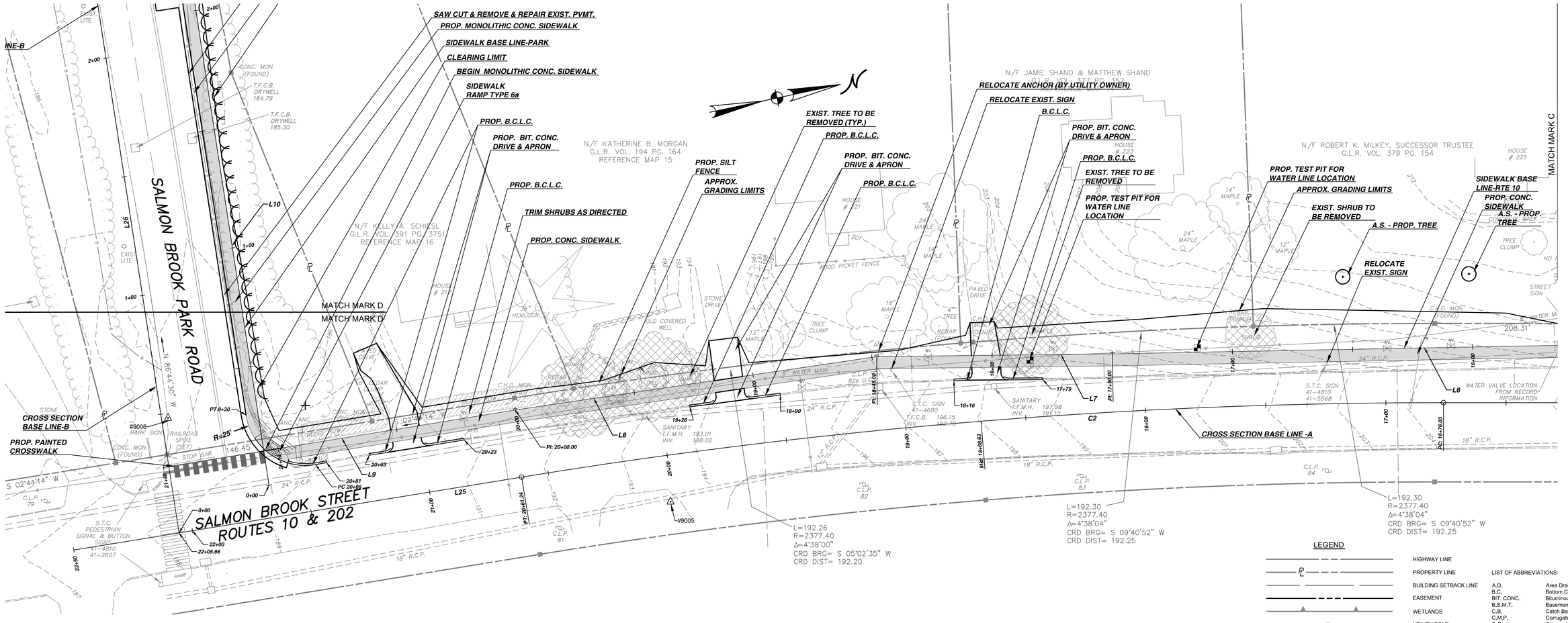

LEGEND

	HIGHWAY LINE
PL	PROPERTY LINE
	BUILDING SETBACK LINE
	EASEMENT
	WETLANDS
	UTILITY POLE
PROPOSED / EXISTING	
236 / 236	CONTOUR
235x4 / 235.4	SPOT GRADE
	CATCH BASIN
	MANHOLE
	LIGHT
	STORM SEWER
	SANITARY SEWER
W / w w	WATER LINE
G / g g	GAS LINE
	CURB
SF SF SF	SILT FENCE
PROP.	PROPOSED
TYP.	TYPICAL
EXIST.	EXISTING
⚠ #8005	SURVEY CONTROL POINT

LIST OF ABBREVIATIONS:

A.D.	Area Drain
B.C.	Bottom Curb
BIT. CONC.	Bituminous Concrete
B.S.M.T.	Basement Floor Elevation
C.B.	Catch Basin
C.M.P.	Corrugated Metal Pipe
C.O.	Cleanout
CONC.	Concrete
C.S.	Curb Stop
C.P.E.P.	Corrugated Polyethylene Pipe
C.P.E.P.-S	Corrugated Polyethylene Pipe, w/smooth interior
D.I.	Ductile Iron Pipe
EXIST.	Existing
F.F.	First Floor Elevation
FTG.	Footing
G.F.	Garage Floor Elevation
GV.	Gate Valve
HYD.	Hydrant
INV.	Invert
L.D.	Lawn Drain
L.F.	Linear Feet
M.H.	Manhole
PVMT.	Pavement
P.V.C.	Polyvinyl Chloride
PROP.	Proposed
R.C.P.	Reinforced Concrete Pipe
R.D.	Roof Drain
T.W.	Top of wall
TYP.	Typical

UTILITY WARNING

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GRAPHIC SCALE

20 0 20 40

(IN FEET)
1 inch = 20 ft.

NO.	DATE	DESCRIPTION
	4/21/17	FOR BIDDING
	1/3/17	MISC. REVISIONS
	10/31/16	90% SUBMISSION

REVISIONS

SIDEWALK PLAN

TOWN OF GRANBY
PROPOSED SIDEWALKS - PROJ. # L055-001
RTE. 10 SALMON BROOK STREET & SALMON BROOK PARK ROAD
GRANBY, CONNECTICUT

SCALE: 1" = 20'	DATE: APRIL 21, 2016	JOB#: G2012.02	SHEET: CIV-3

CLARK ENGINEERING
Civil Engineering • Site Plans • Septic Systems • Land Planning
P.O. Box 419, Granby, CT 06035-0419
Phone: (860) 653-4352 Fax: (860) 653-0415
CT. PEL #12318, MA. PE. #38984 NY. PE. #078275

SIDEWALK BASELINE-PARK								
Number	Length	Bearing	Radius	Delta Angle	Start Sta.	End Sta.	N,E Start	N,E End
L10	304.15	N86° 44' 30"W			0+00.00	3+04.15	N 905866.3675 E 988894.7016	N 905883.6550, E 988591.0449
L11	298.97	S86° 18' 51"W			3+04.15	6+03.12	N 905883.6550 E 988591.0449	N 905864.4355, E 988292.6944
C1	18.62		50.00	021°20'11"	6+03.12	6+21.74	N 905864.4355, E 988292.6944	N905866.6859, E 988274.3195
L14	58.32	N72° 20' 58"W			6+21.74	6+80.06	N 905866.6859 E 988274.3195	N 905884.3702, E 988218.7417
L12	58.32	N72° 20' 58"W			6+21.74	6+80.06	N 905866.6859 E 988274.3195	N 905884.3702, E 988218.7417

CROSS SECTION BASELINE - B						
Number	Length	Line Direction	Start Sta.	End Sta.	N,E Start	N,E End
L26	340.46	N86° 44' 30"W	0+00.00	3+40.46	N 905825.6408, E 988906.3276	N 905844.9921, E 988566.4214
L27	359.54	S86° 18' 51"W	3+40.46	7+00.00	N 905844.9921, E 988566.4214	N 905821.8788, E 988207.6261

CONCRETE POST AND WOOD RAIL FENCE (TYP.)
EP: 7+00.00
EP: 6+81.44
STOP BAR
MONUMENT
PARKING AREA
MAG NAIL (SET)
#9008
307.16'
PT: 6+23.12
PT: 6+21.74
C1
PC: 6+03.12
PC: 6+02.45
6+80
PROP. PAINTED CROSSWALK
DETECTABLE WARNING (TYP.)
L12
DETECTABLE WARNING (TYP.)
SAW CUT & REMOVE EXIST. PVMT.
BIT. CONC. ROAD REPAIR
DETECTABLE WARNING (TYP.)
APPROX. GRADING LIMITS
RELOCATE EXIST. SIGN
PROP. CONC. SIDEWALK
L11
REMOVE SEDTION OF EXIST. FENCE
PARK RULES SIGN
CONC. MON. (FOUND)
L27
L26
6+00
5+00
4+00
12" HEMLOCK
12" SPRUCE
TRIPLE 10" HEMLOCK
WATER FOUNTAIN
LOCATION UTILITIES
CHAIN LINK FENCE
TENNIS COURTS
GATE
PARKING AREA
No. 215 SALMON BROOK STREET N/F TOWN OF GRANBY G.L.R. VOL. 74 PG. 176 REFERENCE MAP 17
NO. 9 PENDLE N/F STEVEN G.L.R. VOL. 14
N BROOK STREET A. KRYSTOWSKI J. KRYSTOWSKI 256 PG. 444
No. 217 SALMON BROOK STREET N/F JEFFREY J. SHARP & KELLY A. SHARP G.L.R. VOL. 1001 PG. 1001 REFERENCE MAP 16
CONC. MON. (FOUND)
LOT 1 PROPOSED SUBDIVISION
REBAR (FOUND)
B.C.L.C.
S 86°18'51" W
MATCH MARK - F
RAILROAD SPIKE (SET)
HOUSE # 213
185
186
187
188

MATCH MARK - F
PI: 3+42.35
#9007
T.F.C.B. DRYWELL 184.73
CONC. MON. (FOUND)
EXIST. LITE
PI: 3+04.15
PI: 3+03.81
3+00
UNDERGROUND UTILITIES RUN ALONG VICINITY OF NORTH EDGE ROAD
3+00: END MONOLITHIC CONC. WALK & CURB. BEGIN CONC. WALK
2-4'x4'x4" CONC. GALLEYS INV.= 182.30
NOTE: TEST PIT REQUIRED TO DETERMINE LOCATION OF EXIST. SAN. FORCE MAIN
32 L.F.-10" CPEP-S @1.25%
C.B.-TYPE 'CL' T.F.=185.50 INV.= 182.70
PROP. TEST PIT FOR ELECTRICAL LINE LOCATION
LIMIT OF TRIMMING
SAW CUT & REMOVE & REPAIR EXIST. PVMT.
BIT. CONC. ROAD REPAIR
APPROX. GRADING LIMITS
307.46'
SANITARY SEWER FORCE MAIN RUNS ALONG VICINITY OF SOUTH EDGE ROAD
CROSS SECTION BASE LINE-B
2+00
1+00
L27
L10
T.F.C.B. DRYWELL 184.79
T.F.C.B. DRYWELL 185.30
T.F.C.B. DRYWELL 185.01
SALMON BROOK PARK ROAD
MATCH MARK D
MATCH MARK D
N 86°44'30" W
CROSS SECTION BASE LINE-B
PROP. PAINTED CROSSWALK
#9006 PARK SIGN
RAILROAD SPIKE (SET)
STONE
PT 0+30
R=25'
146.45'
STOP BAR
CONC. MON. (FOUND)
ANC.
ANC.
CONC. MON. (FOUND)
S 02°44'14" W
C.L.P. 79
WATER MAIN
S.T.C. PEDESTRIAN SIGNAL & BUTTON SIGNS 41-4810 41-2607
RAMP
0+00
22+00
22+05.66
22+50
20+63
L9
20+81
PC 20+88
24" R.C.P.
18" R.C.P.
SALMON BROOK STREET
ROUTES 10 & 202
SANITARY T.F.M.H. 185.85 INV. 181.60
N/F KELLY A. SCH G.L.R. VOL. 391 PG. REFERENCE MAP
RAISED CRIVE
CEDAR HOUSE
185
186
187
188
189
190

	4/21/17	FOR BIDDING
	1/3/17	MISC. REVISIONS
	10/31/16	90% SUBMISSION
NO.	DATE	DESCRIPTION
REVISIONS		

LEGEND

		HIGHWAY LINE
℄		PROPERTY LINE
		BUILDING SETBACK LINE
		EASEMENT
		WETLANDS
		UTILITY POLE
PROPOSED	EXISTING	
236	236	CONTOUR
235x4	235.4	SPOT GRADE
		CATCH BASIN
		MANHOLE
		LIGHT
		STORM SEWER
		SANITARY SEWER
W	W W	WATER LINE
G	G G	GAS LINE
		CURB
SF	SF SF	SILT FENCE
PROP.		PROPOSED
TYP.		TYPICAL
EXIST.		EXISTING
	#8005	SURVEY CONTROL POINT

LIST OF ABBREVIATIONS:

A.D.	Area Drain
B.C.	Bottom Curb
BIT. CONC.	Bituminous Concrete
B.S.M.T.	Basement Floor Elevation
C.B.	Catch Basin
C.M.P.	Corrugated Metal Pipe
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C.P.E.P.-S	Corrugated Polyethylene Pipe, w/smooth interior
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GRAPHIC SCALE

20 0 20 40

(IN FEET)
1 inch = 20 ft.

SIDEWALK PLAN

TOWN OF GRANBY
PROPOSED SIDEWALKS - PROJ. # L055-001
RTE. 10 SALMON BROOK STREET & SALMON BROOK PARK ROAD
GRANBY, CONNECTICUT

SCALE: 1" = 20'	DATE: APRIL 21, 2016	JOB#: G2012.02	SHEET: CIV-4

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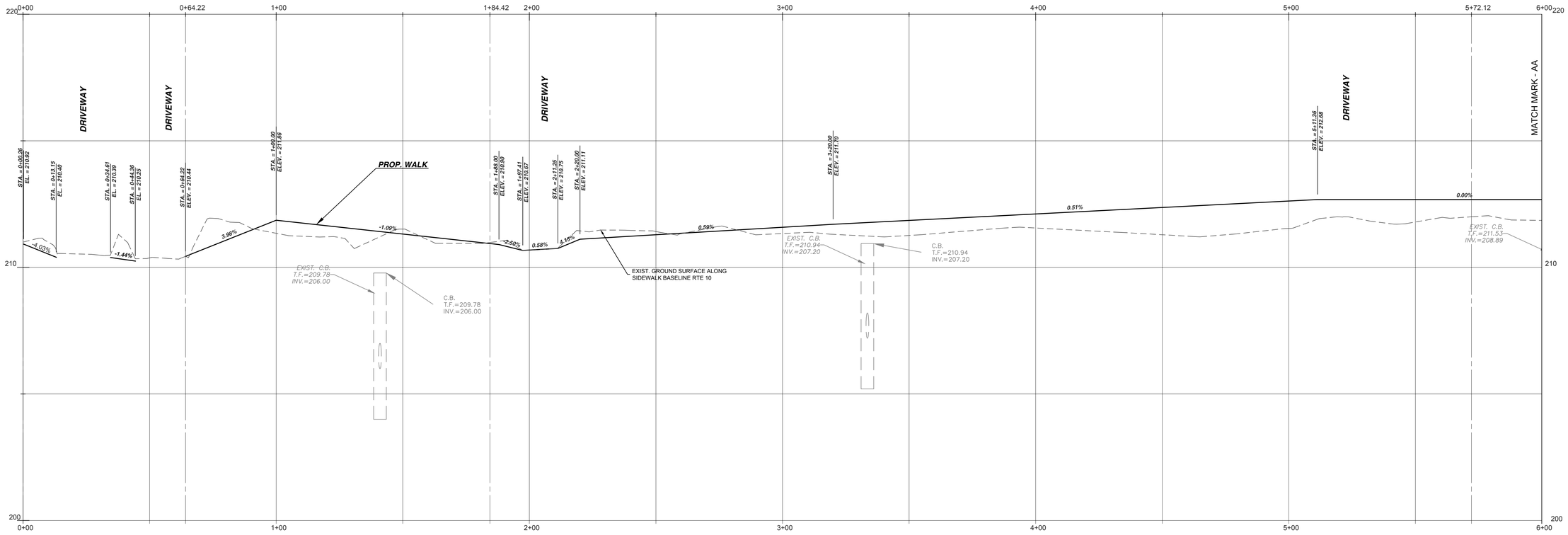
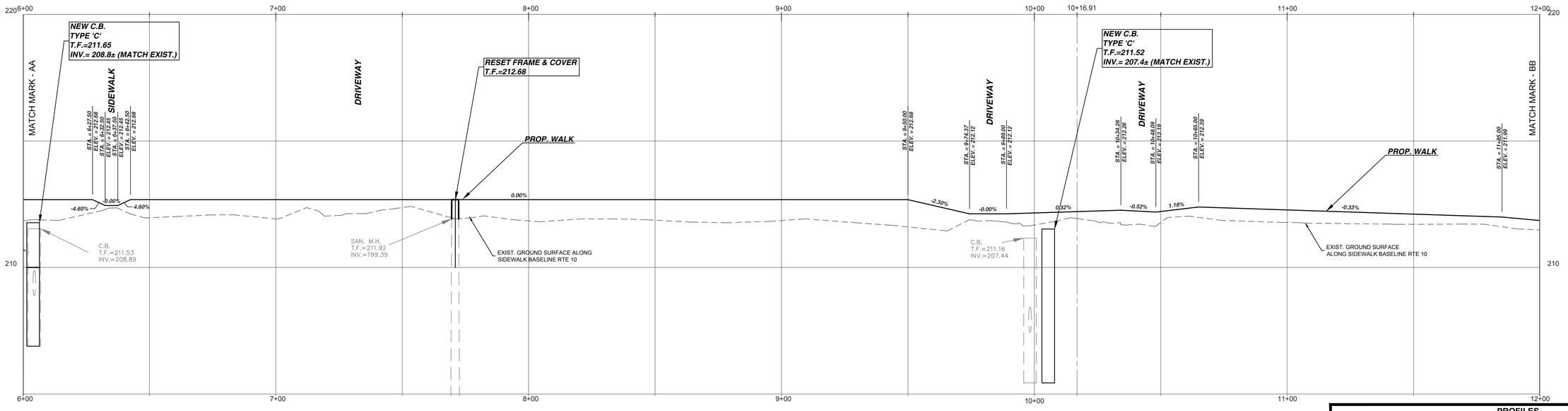


RT. 10 SALMON BROOK STREET



RT. 10 SALMON BROOK STREET

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NO.	DATE	DESCRIPTION
	4/21/17	FOR BIDDING
	10/31/16	90% SUBMISSION

REVISIONS

PROFILES
RT. 10 SALMON BROOK STREET
TOWN OF GRANBY
PROPOSED SIDEWALKS - PROJ. # L055-001
RTE. 10 SALMON BROOK STREET & SALMON BROOK PARK ROAD
GRANBY, CONNECTICUT

SCALE:	DATE:	JOB#:	SHEET:
1" = 2' V. 1" = 20' H.	APRIL 21, 2016	G2012.02	PRO-1

CLARK ENGINEERING
Civil Engineering • Site Plans • Septic Systems • Land Planning
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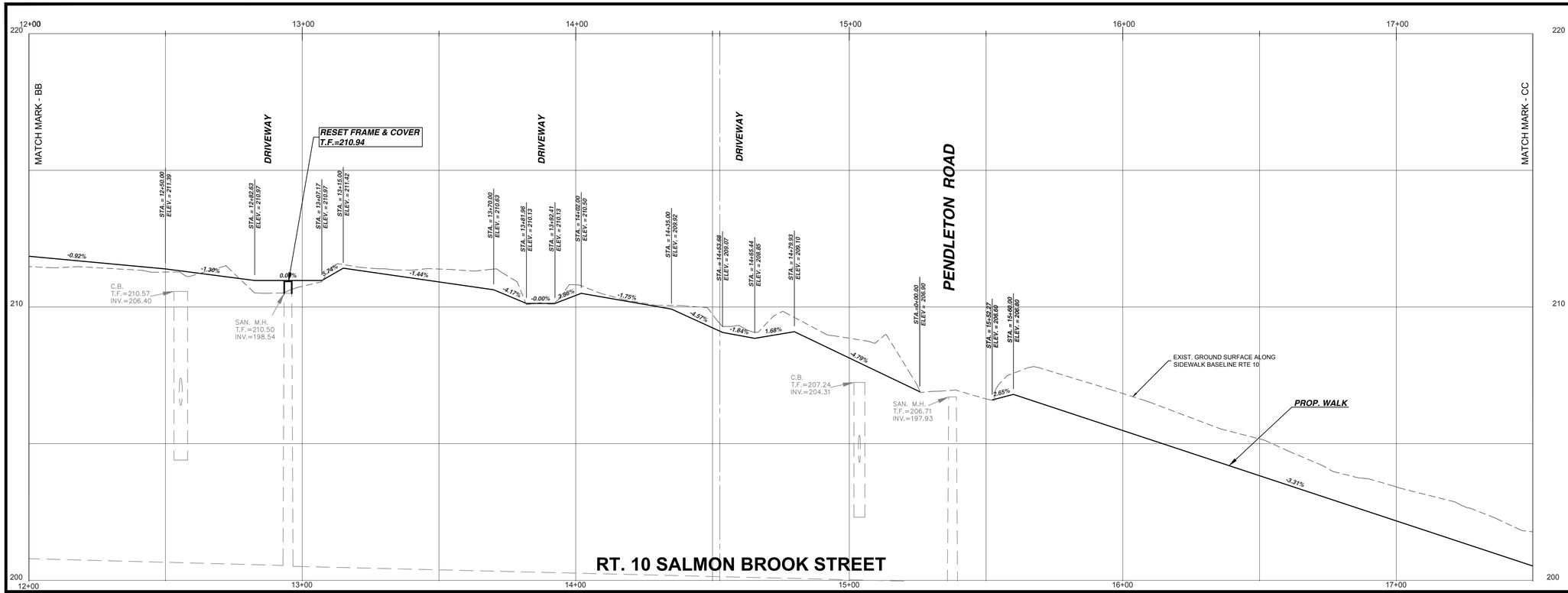
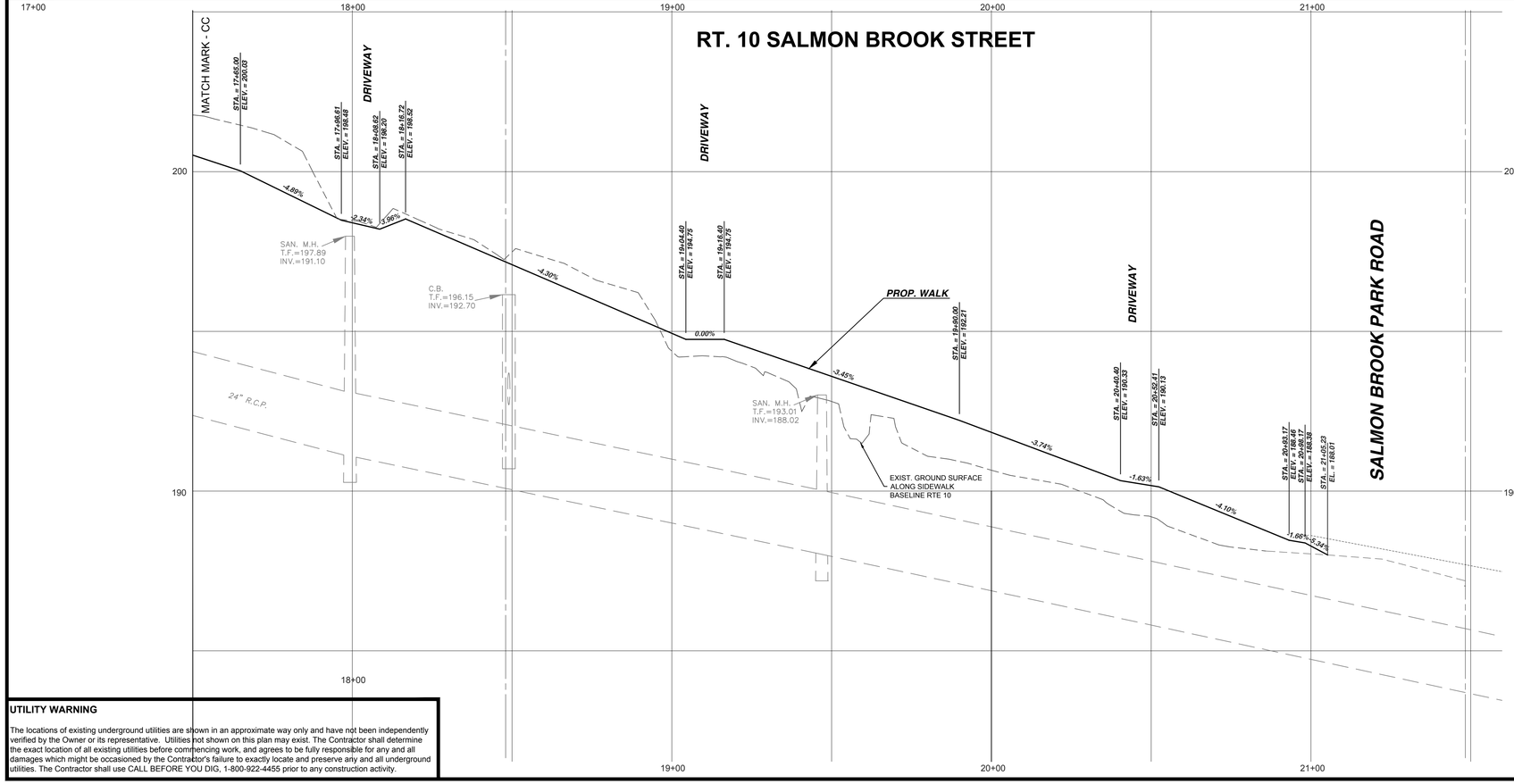
Phone: (860) 653-4352 Fax: (860) 653-0415
CT. PEL #12318, MA. PE. #38984 NY. PE. #078275





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REVISIONS

PROFILES
RT. 10 SALMON BROOK STREET
TOWN OF GRANBY
PROPOSED SIDEWALKS - PROJ. # L055-001
RTE. 10 SALMON BROOK STREET & SALMON BROOK PARK ROAD
GRANBY, CONNECTICUT

SCALE:	DATE:	JOB#:	SHEET:
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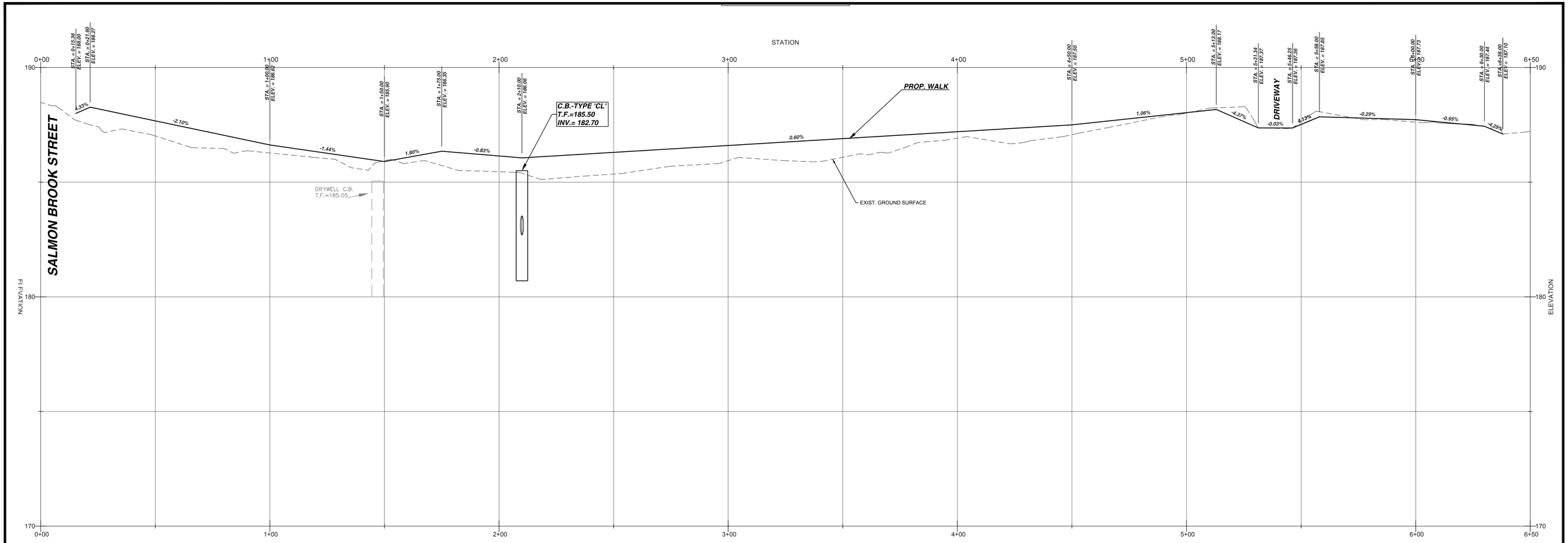

SALMON BROOK PARK ROAD

NO.	DATE	DESCRIPTION
	4/21/17	FOR BIDDING
	10/31/16	90% SUBMISSION

REVISIONS

PROFILES
RT. 189 HARTFORD AVENUE & SALMON BROOK PARK ROAD
TOWN OF GRANBY
PROPOSED SIDEWALKS - PROJ. # L055-001
RTE. 10 SALMON BROOK STREET & SALMON BROOK PARK ROAD
GRANBY, CONNECTICUT

SCALE: 1" = 2' V. 1" = 20' H.	DATE: APRIL 21, 2016	JOB#: G2012.02	SHEET: PRO-3

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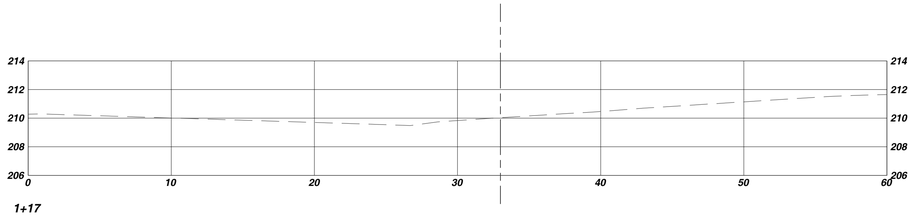

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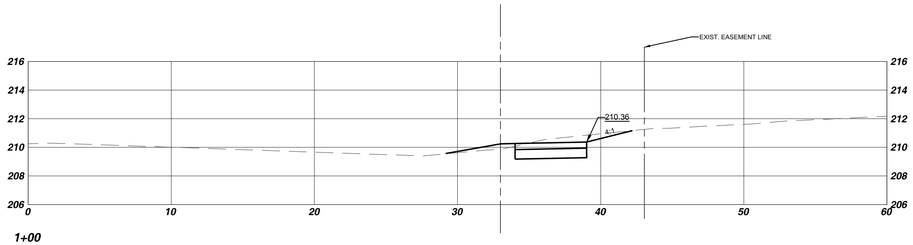

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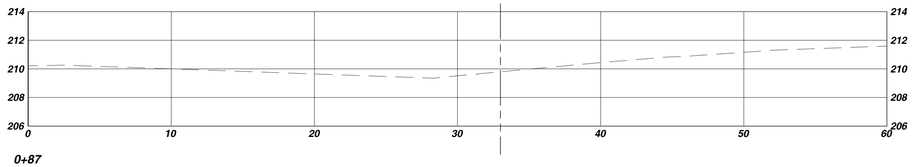

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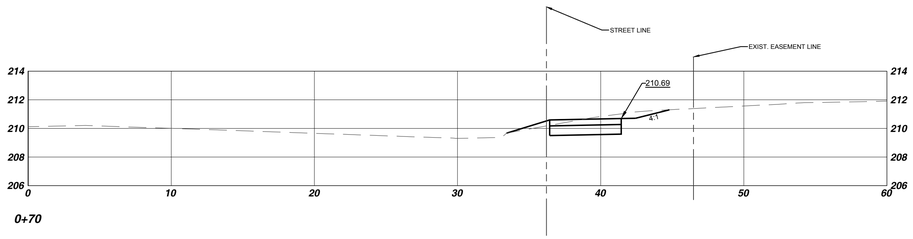

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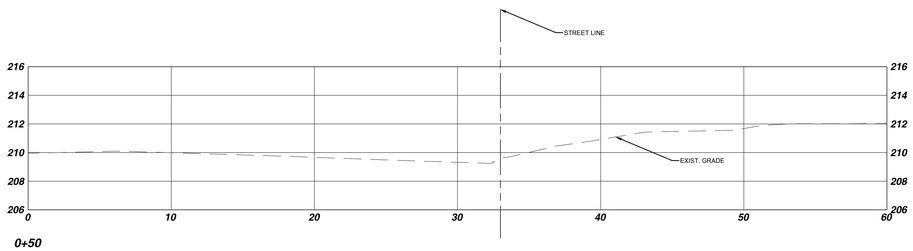

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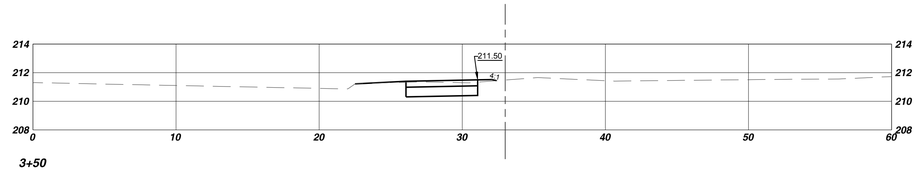

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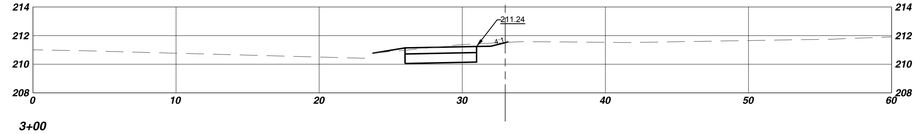

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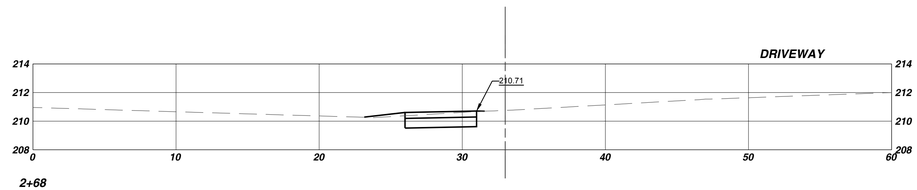

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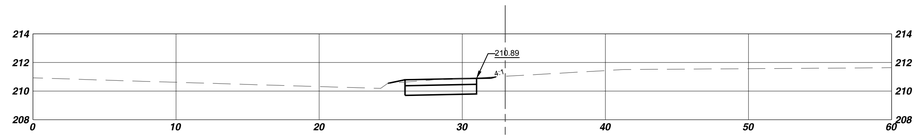

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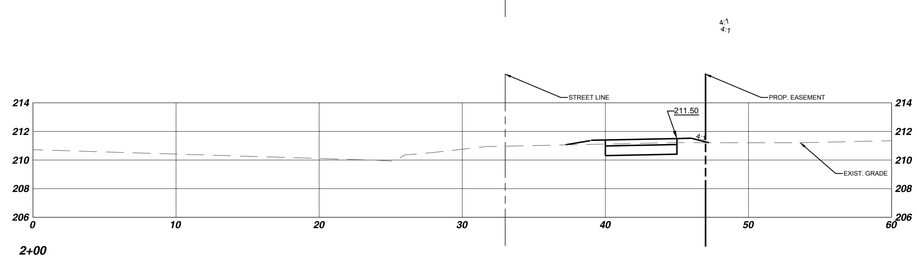

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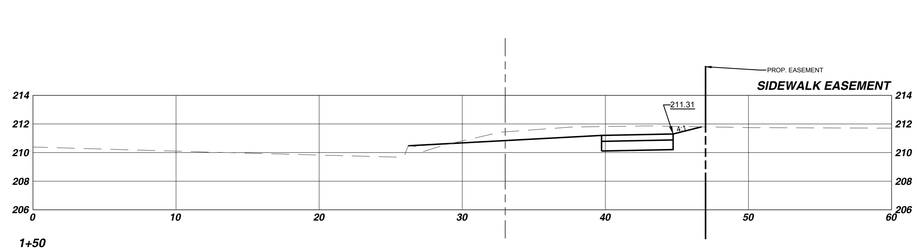

1+50

STA. 0+50 TO 3+50

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ROUTE 10 SALMON BROOK STREET

TOWN OF GRANBY
PROPOSED SIDEWALKS - PROJ. # L055-001
RTE. 10 SALMON BROOK STREET & SALMON BROOK PARK ROAD
GRANBY, CONNECTICUT

SCALE: 1" = 5' V. 1" = 5' H.	DATE: APRIL 21, 2016	JOB#: G2012.02	SHEET: XSC-1

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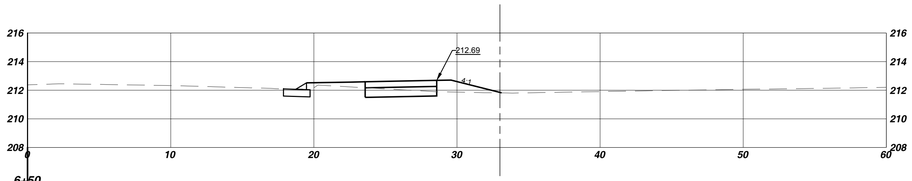

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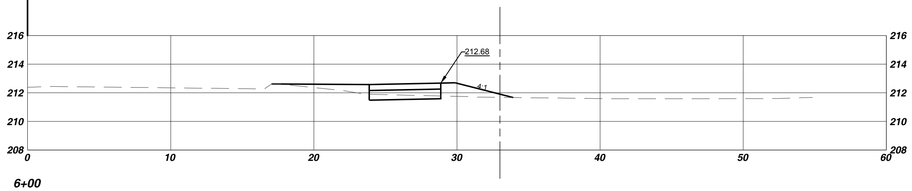

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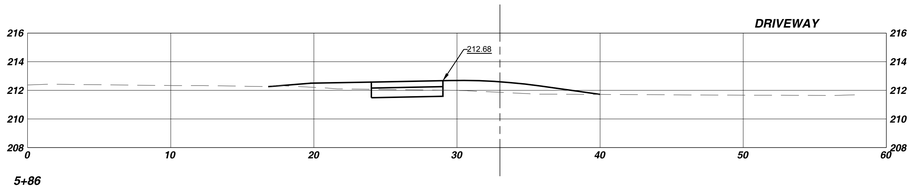

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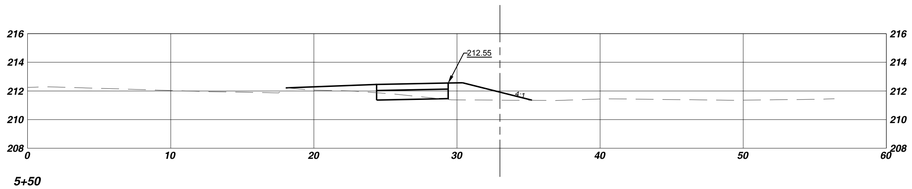

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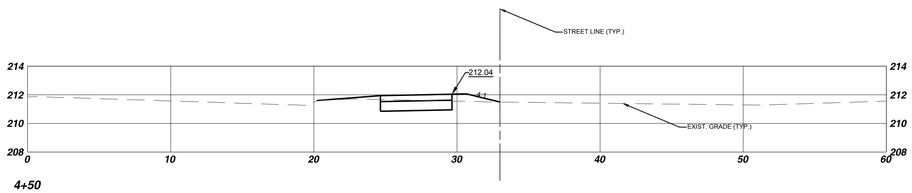

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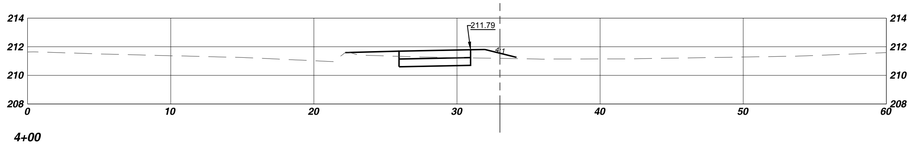

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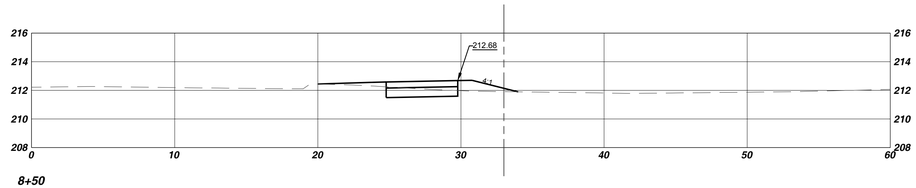

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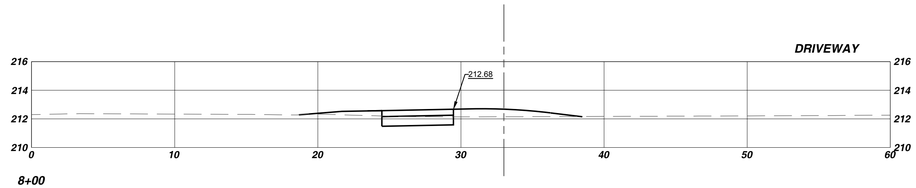

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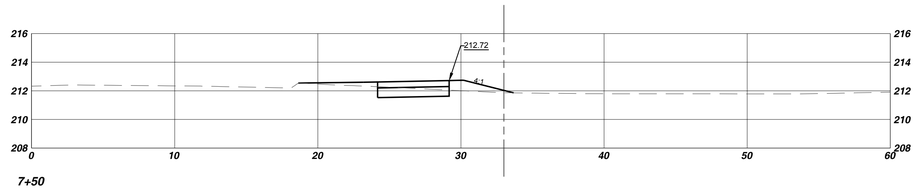

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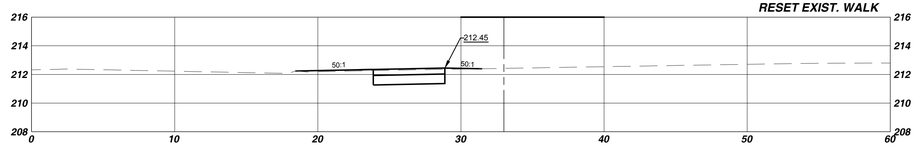

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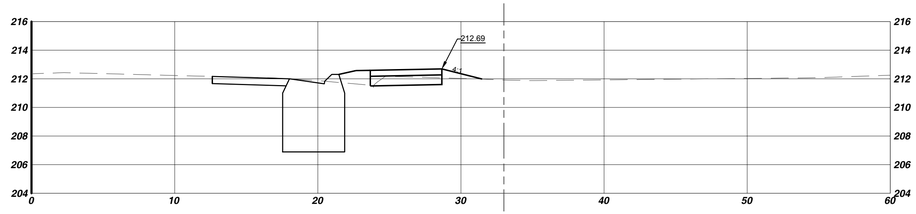

6+68

STA. 4+00 TO 8+50

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REVISIONS

CROSS SECTIONS
ROUTE 10 SALMON BROOK STREET
TOWN OF GRANBY
PROPOSED SIDEWALKS - PROJ. # L055-001
RTE. 10 SALMON BROOK STREET & SALMON BROOK PARK ROAD
GRANBY, CONNECTICUT

SCALE:	DATE:	JOB#:	SHEET:
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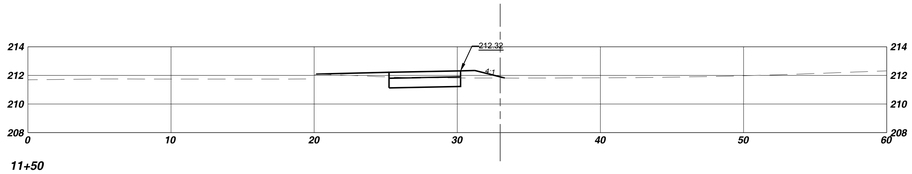
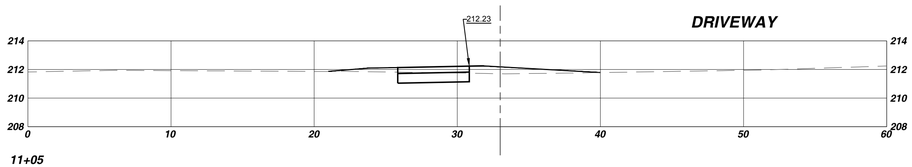


11+50



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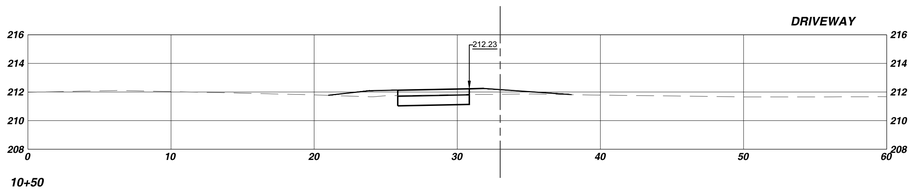

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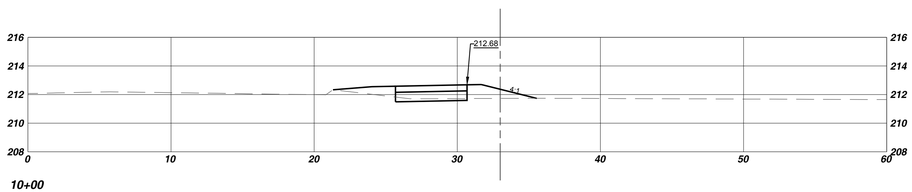
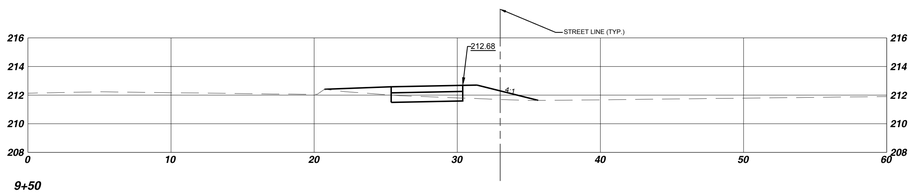


10+00



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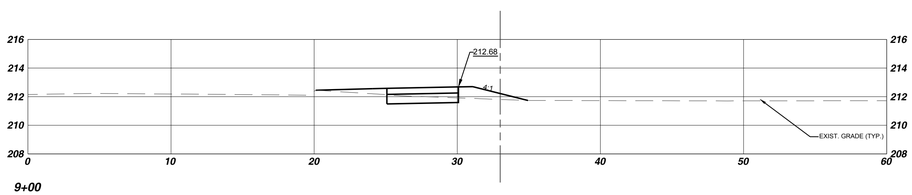

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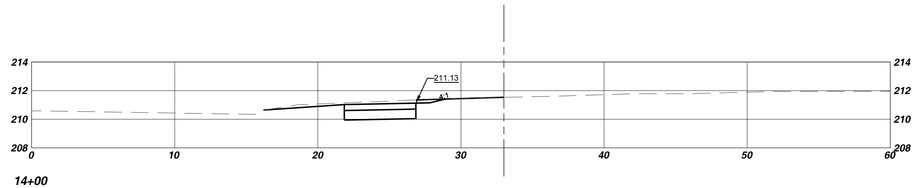

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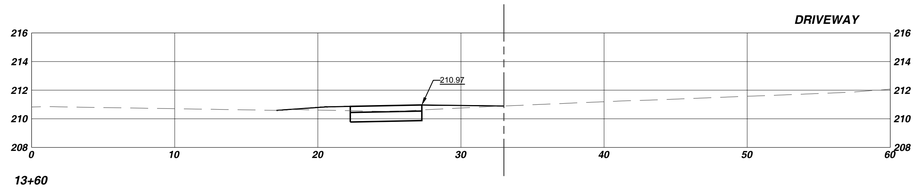

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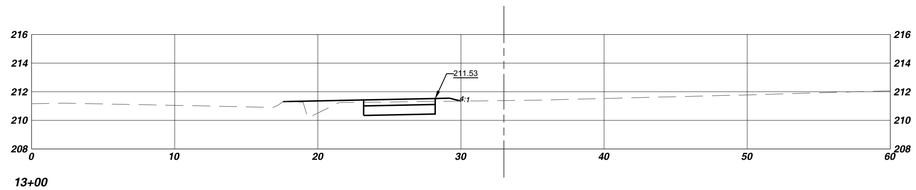

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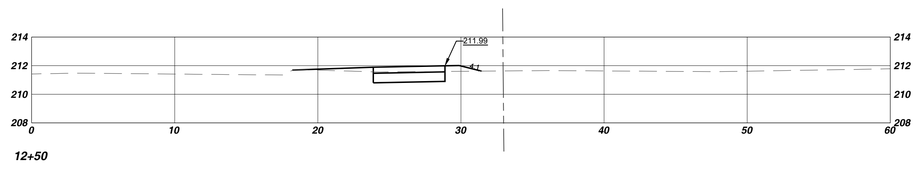

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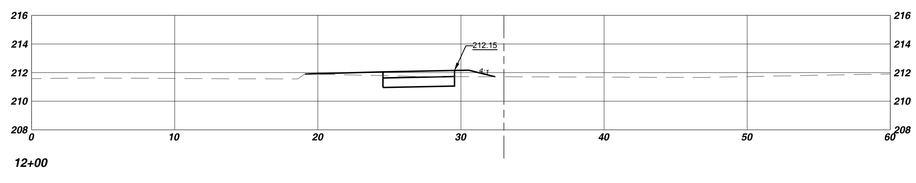

12+00

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REVISIONS

STA. 9+00 TO 14+00

CROSS SECTIONS
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TOWN OF GRANBY
PROPOSED SIDEWALKS - PROJ. # L055-001
RTE. 10 SALMON BROOK STREET & SALMON BROOK PARK ROAD
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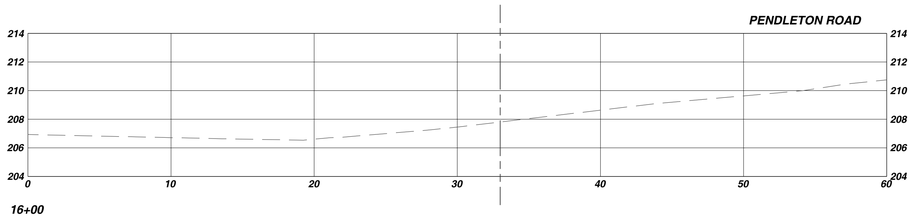

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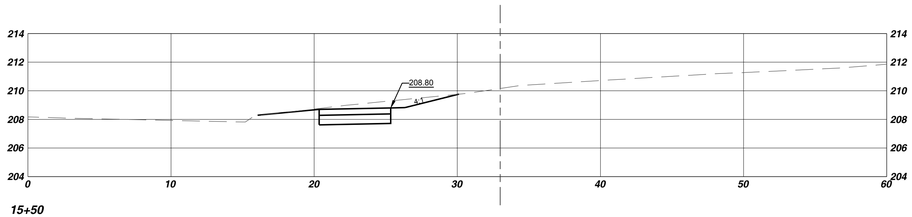

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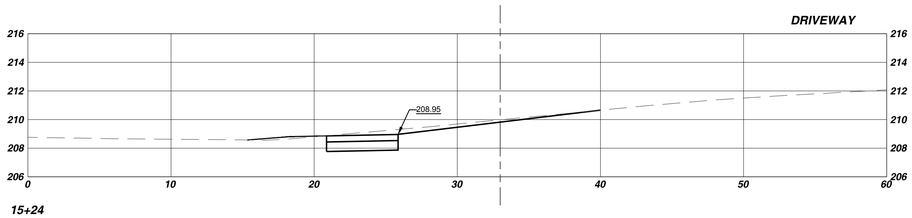

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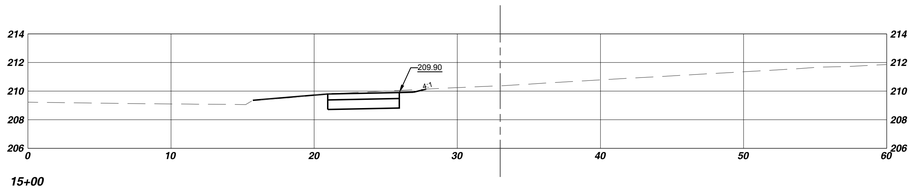
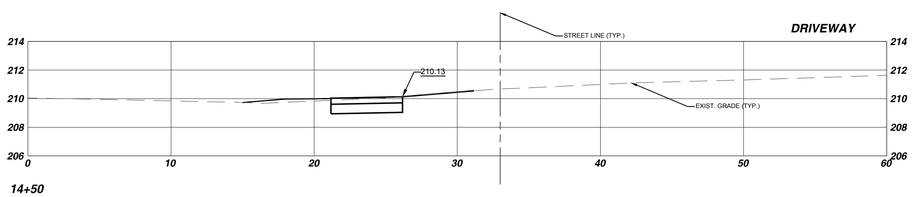
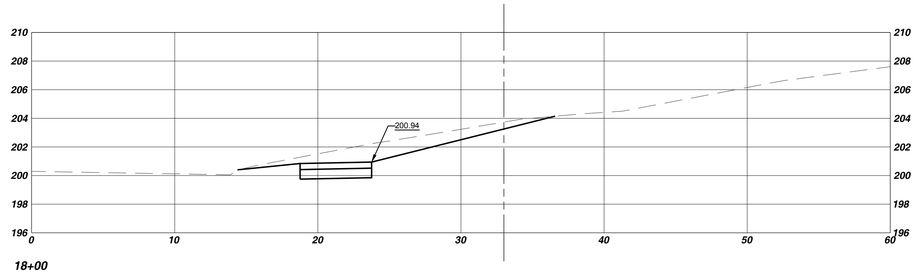


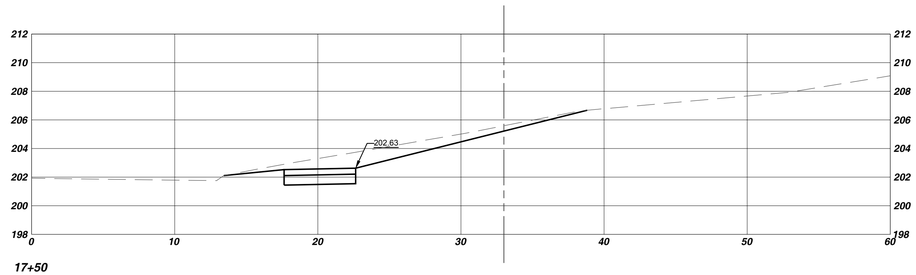
15+00



14+50



18+00



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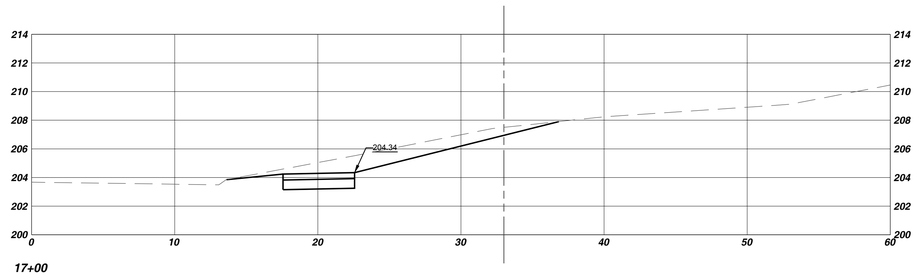

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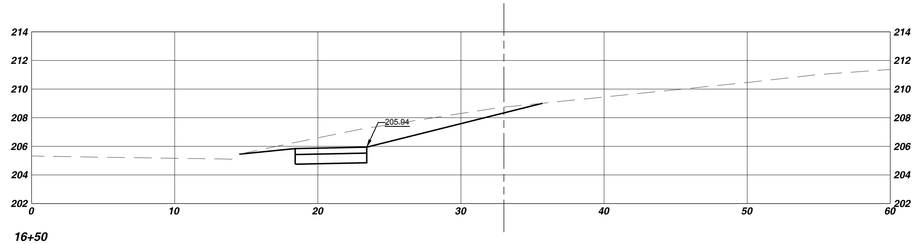

16+50

STA. 14+50 TO 18+00

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NO.	DATE	DESCRIPTION
	4/21/17	FOR BIDDING
	10/31/16	90% SUBMISSION

REVISIONS

CROSS SECTIONS
ROUTE 10 SALMON BROOK STREET

TOWN OF GRANBY
PROPOSED SIDEWALKS - PROJ. # L055-001
RTE. 10 SALMON BROOK STREET & SALMON BROOK PARK ROAD
GRANBY, CONNECTICUT

SCALE:	DATE:	JOB#:	SHEET:
1" = 5' V. 1" = 5' H.	APRIL 21, 2016	G2012.02	XSC-4

CLARK ENGINEERING

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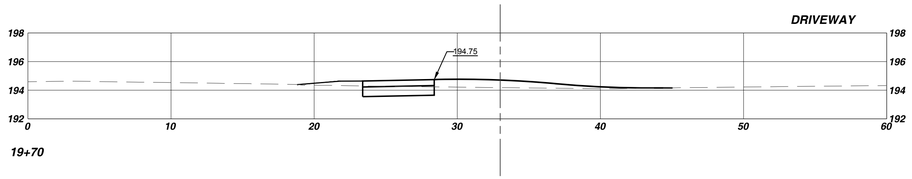
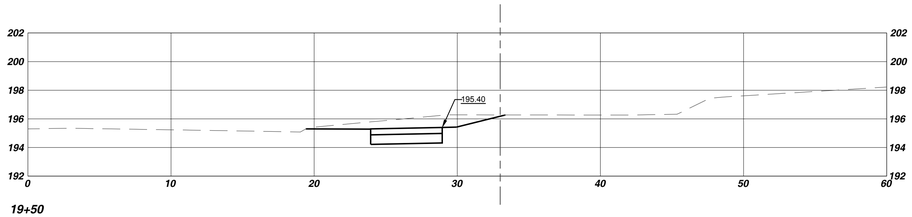
Phone: (860) 653-4352 Fax: (860) 653-0415
CT. PEL #12318, MA. PE. #38984 NY. PE. #078275



19+70



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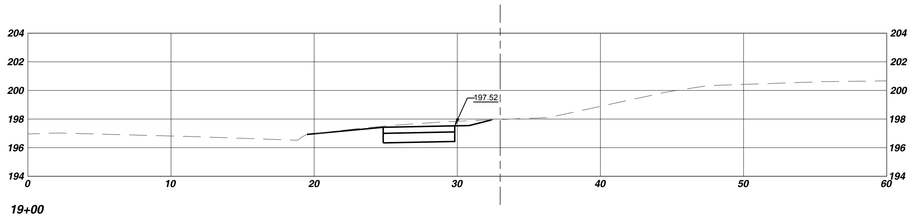

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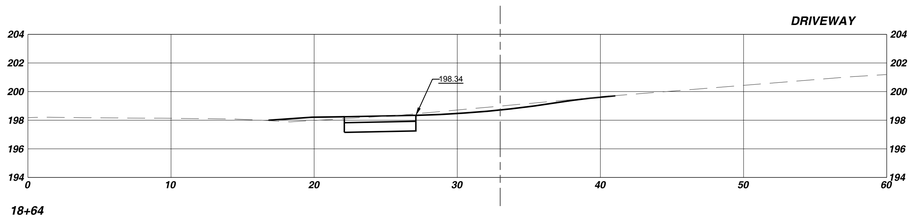

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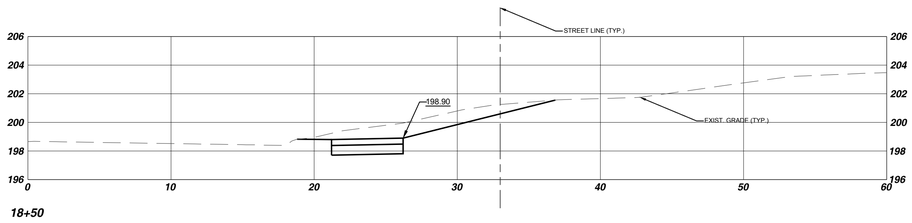

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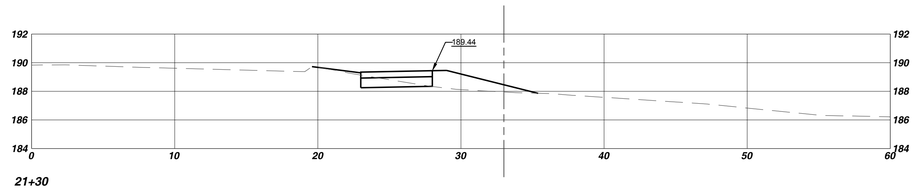

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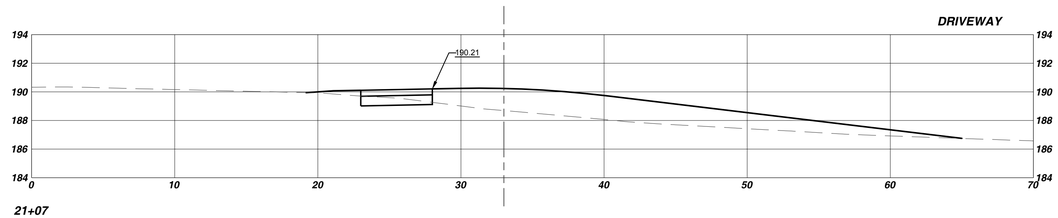

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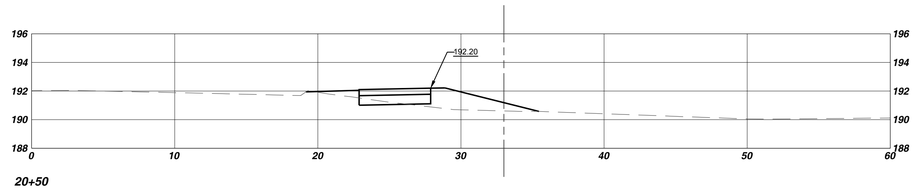
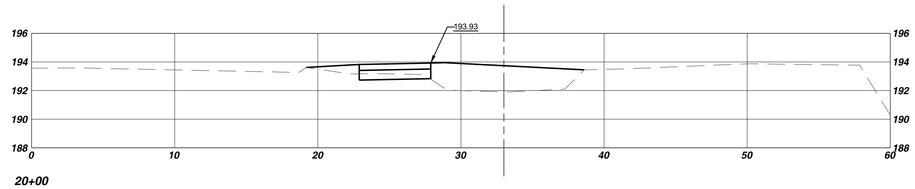


20+50



20+00

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	10/31/16	90% SUBMISSION

REVISIONS

STA. 18+50 TO 21+30

CROSS SECTIONS
ROUTE 10 SALMON BROOK STREET

TOWN OF GRANBY
PROPOSED SIDEWALKS - PROJ. # L055-001
RTE. 10 SALMON BROOK STREET & SALMON BROOK PARK ROAD
GRANBY, CONNECTICUT

SCALE: 1" = 5' V. 1" = 5' H.	DATE: APRIL 21, 2016	JOB#: G2012.02	SHEET: XSC-5

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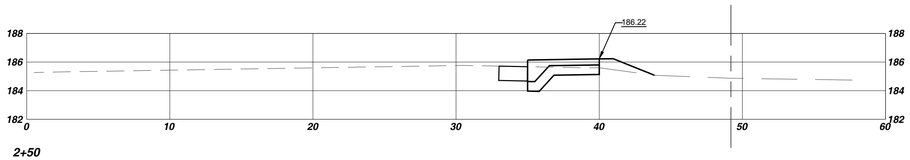

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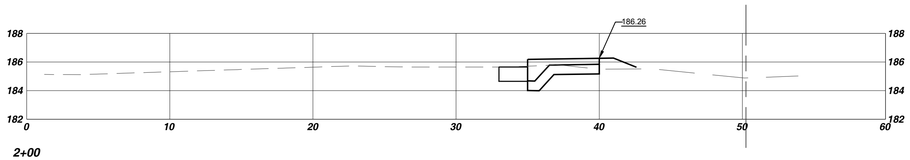

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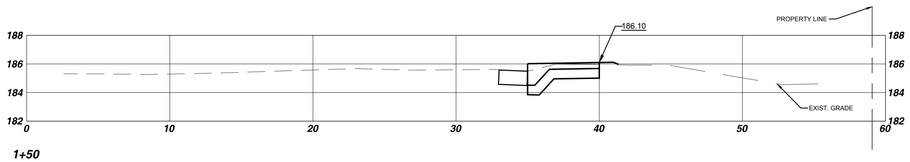

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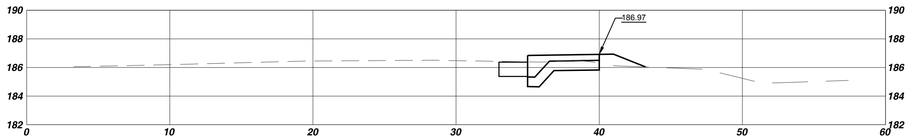
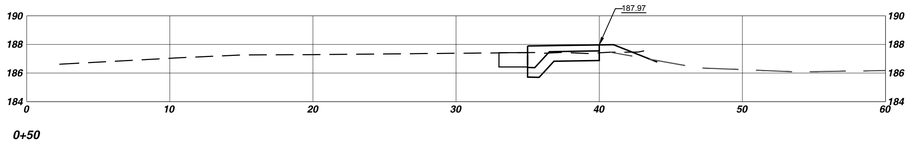


1+00



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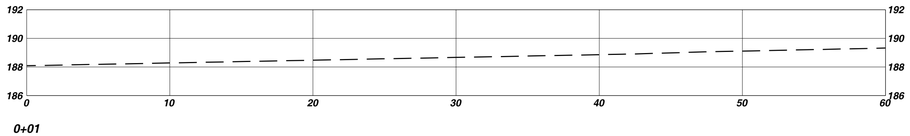

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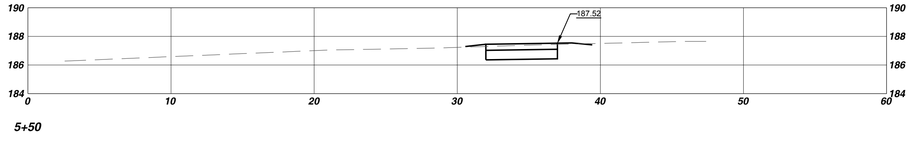

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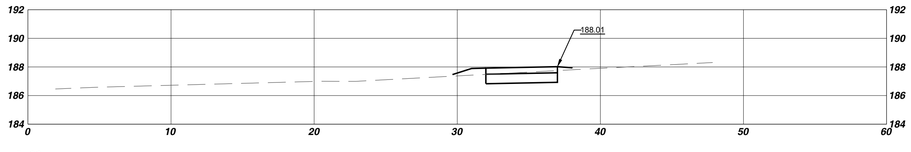

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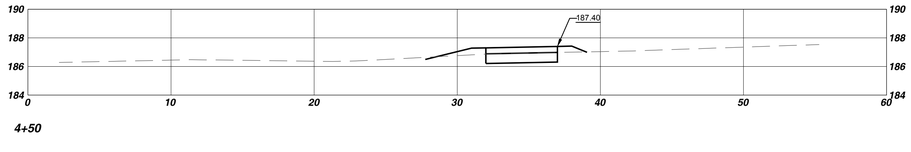

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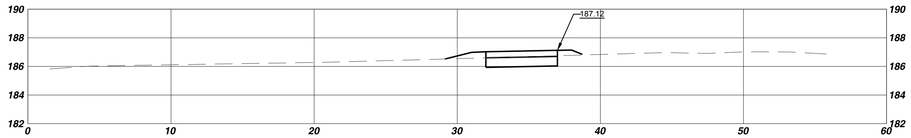

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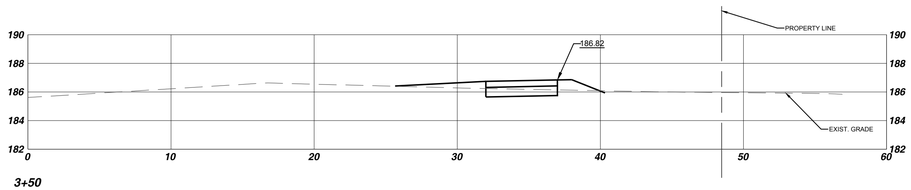

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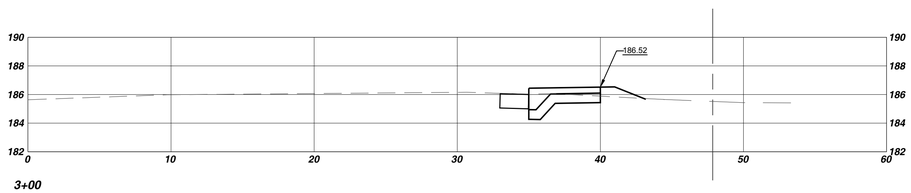

3+00

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REVISIONS

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STA. 0+01 TO 5+50

CROSS SECTIONS
SALMON BROOK PARK ROAD
TOWN OF GRANBY
PROPOSED SIDEWALKS - PROJ. # L055-001
RTE. 10 SALMON BROOK STREET & SALMON BROOK PARK ROAD
GRANBY, CONNECTICUT

SCALE: 1" = 5' V. 1" = 5' H.	DATE: APRIL 21, 2016	JOB#: G2012.02	SHEET: XSC-6

CLARK ENGINEERING
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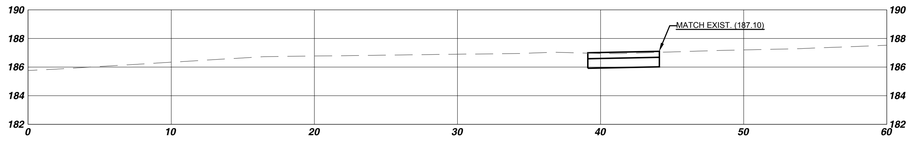
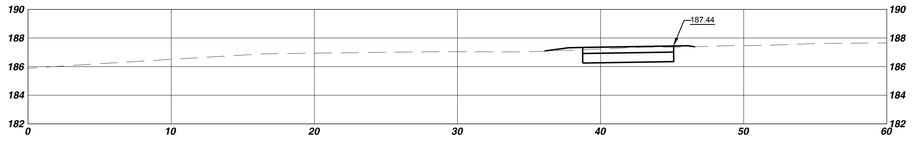
Phone: (860) 653-4352 Fax: (860) 653-0415
CT. PEL #12318, MA. PE. #38984 NY. PE. #078275



6+46



6+38

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STA. 6+00 TO 6+46

CROSS SECTIONS
SALMON BROOK PARK ROAD
TOWN OF GRANBY
PROPOSED SIDEWALKS - PROJ. # L055-001
RTE. 10 SALMON BROOK STREET & SALMON BROOK PARK ROAD
GRANBY, CONNECTICUT

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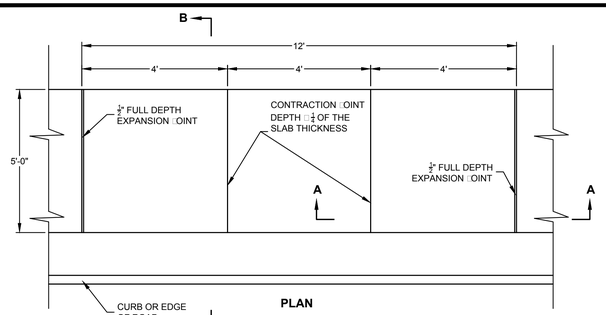
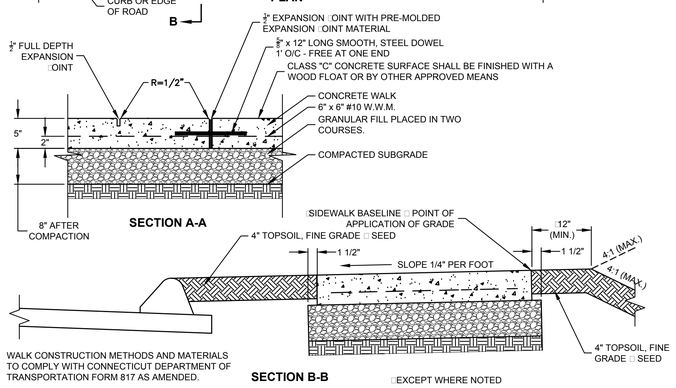


PLAN



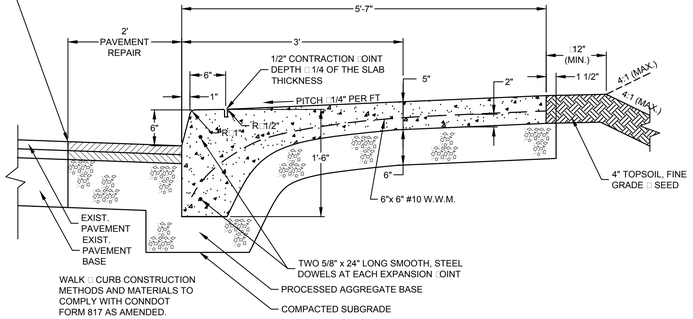
WALK CONSTRUCTION METHODS AND MATERIALS TO COMPLY WITH CONNECTICUT DEPARTMENT OF TRANSPORTATION FORM 817 AS AMENDED.

SECTION B-B

EXCEPT WHERE NOTED

CONCRETE WALK DETAIL

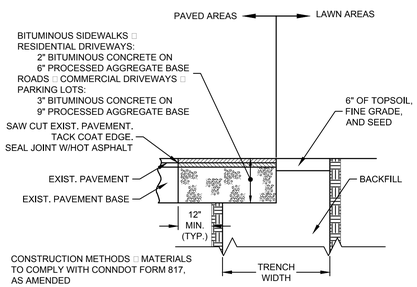
(NOT TO SCALE)



WALK = CURB CONSTRUCTION METHODS AND MATERIALS TO COMPLY WITH CONNDOT FORM 817 AS AMENDED.

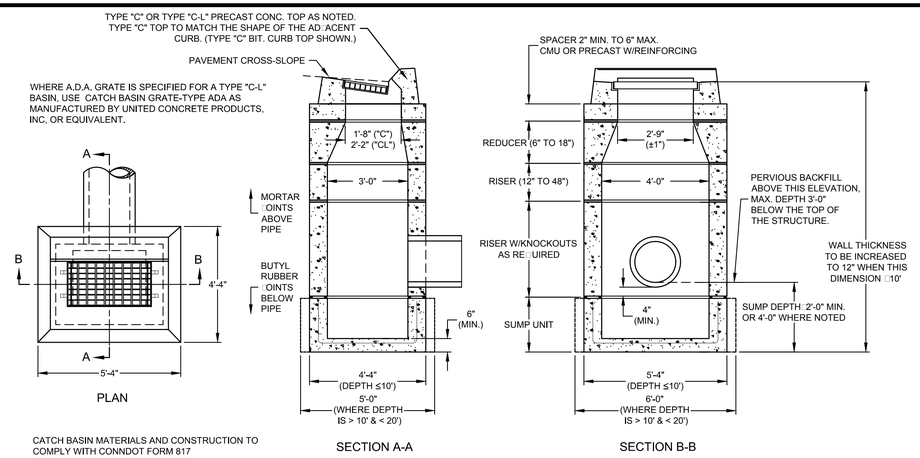
MONOLITHIC CONCRETE CURB DETAIL

(NOT TO SCALE)



PAVEMENT = TRENCH REPAIR DETAIL

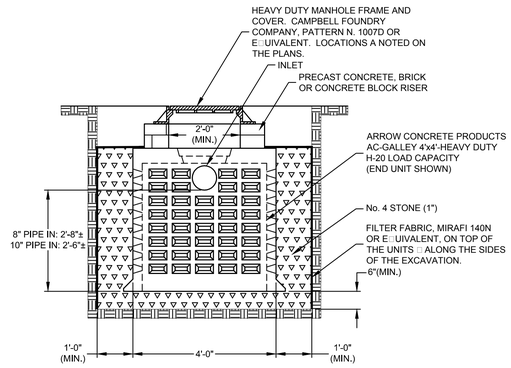
(NOT TO SCALE)



CATCH BASIN MATERIALS AND CONSTRUCTION TO COMPLY WITH CONNDOT FORM 817

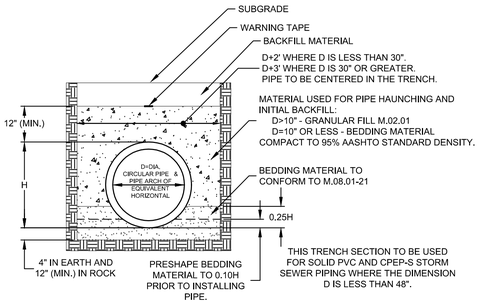
TYPE "C" & "C-L" CATCH BASIN - PRECAST CONCRETE DETAIL

(NOT TO SCALE)



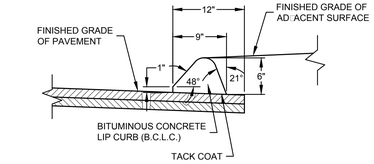
LEACHING GALLEY (STORM DRAINAGE) DETAIL

(NOT TO SCALE)



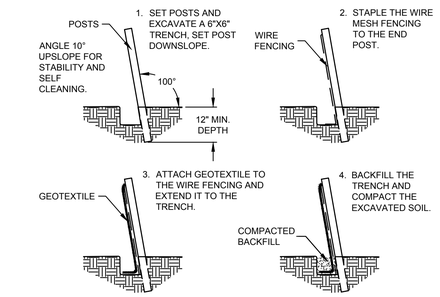
STORM SEWER TRENCH DETAIL

(NOT TO SCALE)



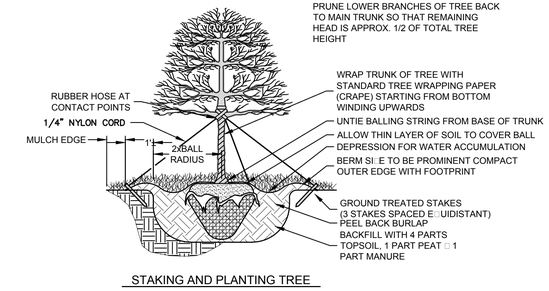
BITUMINOUS CONCRETE LIP CURB (B.C.L.C.) DETAIL

(NOT TO SCALE)



SILT FENCE DETAIL (GSF)

(NOT TO SCALE)



STAKING AND PLANTING TREE

PLANTING DETAIL

(NOT TO SCALE)

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	10/31/16	90% SUBMISSION

REVISIONS

NOTES & DETAILS

TOWN OF GRANBY
PROPOSED SIDEWALKS - PROJ. # L055-001
RTE. 10 SALMON BROOK STREET & SALMON BROOK PARK ROAD
GRANBY, CONNECTICUT

SCALE: NONE	DATE: APRIL 21, 2016	JOB#: G2012.02	SHEET: DET-1

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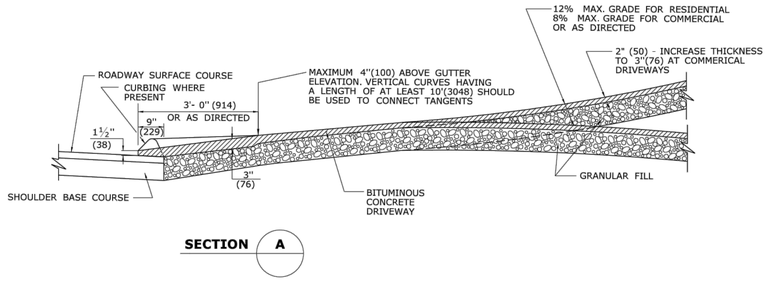
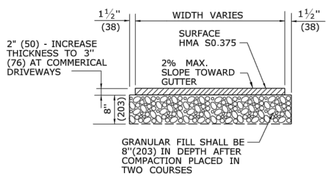
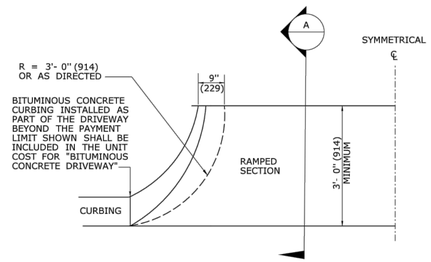


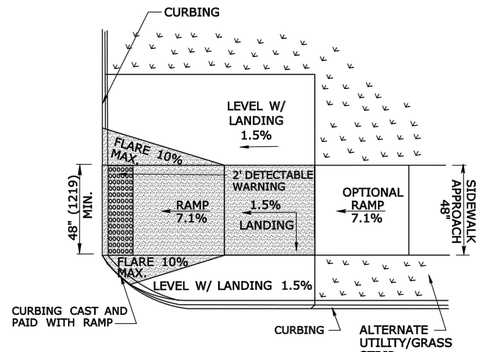
SECTION A



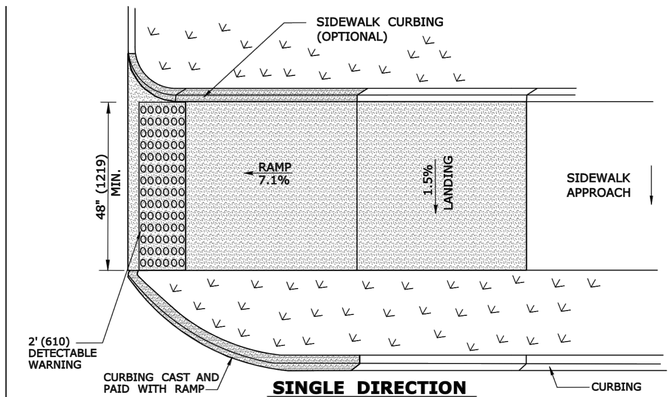
TYPICAL SECTION
BITUMINOUS CONCRETE
SIDEWALK AND DRIVE



HALF BITUMINOUS CONCRETE
DRIVEWAY PLAN

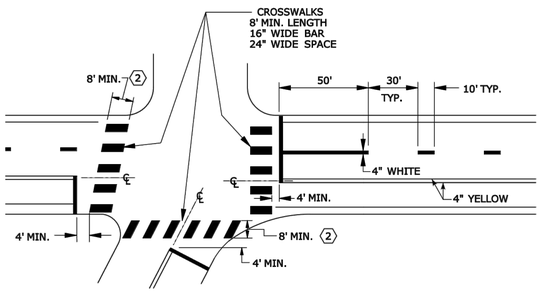


PERPENDICULAR SIDEWALK RAMP
ONE DIRECTION ON CORNER
(TYPE 6a)



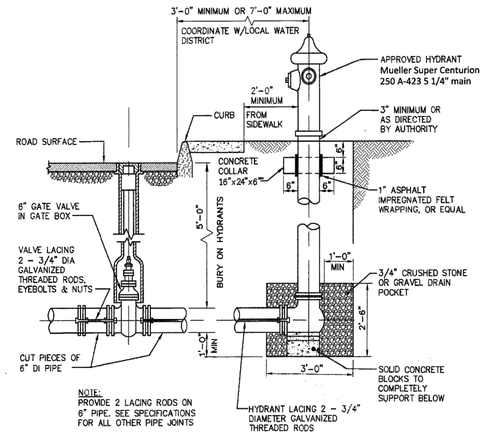
SINGLE DIRECTION
PERPENDICULAR SIDEWALK RAMP
W/ UTILITY GRASS STRIP (TYPE 4e)

REFER TO DETECTABLE WARNING PLACEMENT ON SHEET 4

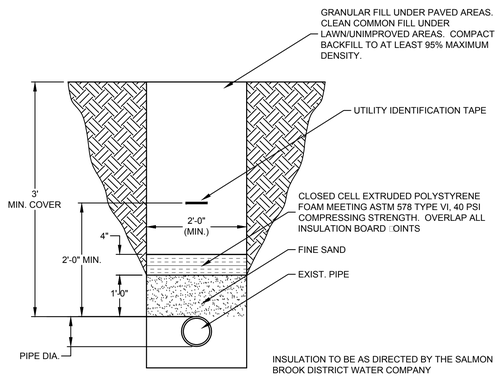


PAVEMENT MARKINGS FOR
STOP BARS, YIELD LINES, AND CROSSWALKS

Salmon Brook District Water Company
15R Hartford Ave. PO Box 595
Granby, CT 06035
860-653-3327



7 C7.05 **TYPICAL HYDRANT DETAIL**
NOT TO SCALE



EXISTING WATER PIPE INSULATION DETAIL (4" □ LARGER)
(NOT TO SCALE)

CROSSWALKS

1. CROSSWALK MARKINGS SHALL BE WHITE.
2. AT LOCATIONS WHERE THE CROSSWALK IS SKEWED, BARS TO BE PARALLEL TO ℄ AND ENDS OF BARS TO BE PARALLEL. THE LENGTH OF THE BARS WILL VARY DEPENDING ON THE ANGLE OF SKEW.
3. BARS SHOULD BE NO CLOSER THAN 1' FROM CURB LINE/EDGE OF ROAD.
4. ONLY FULL LENGTH BARS ARE TO BE INSTALLED.
5. DECORATIVE CROSSWALKS SHALL BE BANDED FROM CURB TO CURB WITH A MINIMUM 12" WIDE WHITE TRANSVERSE LINE ALONG EACH EDGE.
6. 24" WIDE SPACE TO BE CENTERED ON YELLOW CENTERLINE.

UTILITY WARNING

The locations of existing underground utilities are shown in an approximate way only and have not been independently verified by the Owner or its representative. Utilities not shown on this plan may exist. The Contractor shall determine the exact location of all existing utilities before commencing work, and agrees to be fully responsible for any and all damages which might be occasioned by the Contractor's failure to exactly locate and preserve any and all underground utilities.

The Contractor shall use CALL BEFORE YOU DIG, 1-800-922-4455 prior to any construction activity.

NO.	DATE	DESCRIPTION
	4/21/17	FOR BIDDING

REVISIONS

NOTES & DETAILS

TOWN OF GRANBY
PROPOSED SIDEWALKS - PROJ. # L055-001
ROUTE 10 - SALMON BROOK STREET & ROUTE 189 HARTFORD AVENUE
GRANBY, CONNECTICUT

SCALE: NONE	DATE: APRIL 21, 2016	JOB#: G2012.02	SHEET: DET-2

CLARK ENGINEERING
Civil Engineering • Site Plans • Septic Systems • Land Planning
P.O. Box 419, Granby, CT 06035-0419
Phone: (860) 653-4352 Fax: (860) 653-0415
CT. PEL #12318, MA. PE. #38984 NY. PE. #078275

GENERAL NOTES:

1. THE CONTRACTOR SHALL USE "CALL BEFORE YOU DIG, 1-800-922-4455" PRIOR TO ANY CONSTRUCTION ACTIVITY.
2. CONSTRUCTION METHODS AND MATERIALS, SHALL CONFORM TO THE REGULATIONS OF CONNDOT FORM 817.
3. THE CONTRACTOR SHALL VERIFY ALL LINES AND GRADES PRIOR TO ANY CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND INCURRING THE COST OF ALL RE□UIRED PERMITS, INSPECTIONS, CERTIFICATES, ETC.
5. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR □OBSITE SAFETY AND SHALL COMPLY WITH ALL FEDERAL AND STATE OCCUPATIONAL SAFETY AND HEALTH AUTHORITY (O.S.H.A.) REGULATIONS.
6. THE CONTRACTOR SHALL PROVIDE, INSTALL, MAINTAIN AND REMOVE ALL SHORING, BRACING AND OTHER ITEMS NECESSARY TO RETAIN BANKS OR EXCAVATIONS AND PREVENT CAVE-INS AND DISPLACEMENT OF AD□OINING GROUND. SHORING AND BRACING SHALL BE ENTIRELY INDEPENDENT OF FOOTINGS.
7. THE CONTRACTOR SHALL KEEP TRENCHES FREE FROM STANDING WATER AT ALL TIMES UNTIL PERMANENT WORK IS IN PLACE. ALL NECESSARY WELL-POINTING AND/OR PUMPING SHALL BE PERFORMED AND MAINTAINED AT THE CONTRACTOR'S EXPENSE.
6. ALL EXPOSED CURB ENDS ARE TO BE TAPERED.
7. SAW CUT EXISTING CURBS AND PAVEMENT WHERE THEY MEET PROPOSED CURBS OR PAVEMENT.

GENERAL EROSION AND SEDIMENT CONTROL NOTES:

1. EROSION AND SEDIMENT CONTROL MEASURES SHALL CONFORM TO, "2002, CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL, THE CONNECTICUT COUNCIL ON SOIL AND WATER CONSERVATION," AS AMENDED.
2. THE SEDIMENT AND EROSION CONTROL NOTES AND DETAILS INCLUDED IN THE CONSTRUCTION DOCUMENTS MAY REFER TO INFORMATION LOCATED IN THE GUIDELINES. THE CONTRACTOR SHALL HAVE A COPY OF THE GUIDELINES AVAILABLE FOR REFERENCE DURING CONSTRUCTION.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION, MAINTENANCE, AND REMOVAL OF ALL SEDIMENTATION AND EROSION CONTROL MEASURES.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING THE NEARBY STREETS OF ANY SEDIMENT OR CONSTRUCTION DEBRIS ORIGINATING FROM THIS PRO□ECT.
5. IF EXCESS MATERIAL FROM THE PROPOSED CONSTRUCTION IS TO BE REMOVED FROM THE SITE, THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS FOR ITS DEPOSITION.
6. THE CONSTRUCTION ENTRANCE, IF NOTED, AND THE SEDIMENT CONTROLS LOCATED AT THE PERIMETER OF THE PROPOSED EDGE OF DISTURBANCE(S), SHALL BE INSTALLED PRIOR TO ANY CONSTRUCTION ACTIVITY. INSTALLATION SHALL BE AS PER THE MANUFACTURERS' INSTRUCTIONS AND AS DETAILED ON THESE PLANS.
7. ALL STORM DRAINAGE INLETS ARE TO BE PROTECTED FROM SEDIMENT INTRUSION. SEDIMENT SHALL BE REMOVED FROM ALL DRAINAGE STRUCTURES, PIPE SYSTEMS, OUTLET STRUCTURES, RIP RAP, AND CHANNELS.
8. ALL STOCKPILES OF SOIL ARE TO BE ENCIRCLED WITH SILT FENCE.
9. THE CONTRACTOR SHALL EMPLOY TEMPORARY EROSION CONTROL MEASURES SUCH AS, SILT FENCE, HAY BALES, STONE BARRIERS, EROSION CONTROL MATTING, SEDIMENT TRAPS, DEWATERING BASINS, AND TEMPORARY STORMWATER DIVERSIONS, AS NECESSARY DURING CONSTRUCTION, TO PROTECT THE SITE AND AD□ACENT PROPERTIES FROM EROSION.
10. ALL LOCATIONS, INCLUDING SWALES, LAWN AREAS, AND STORM SEWER DISCHARGE POINTS, THAT ARE TO RECEIVE A CONCENTRATED FLOW OF STORMWATER, ORIGINATING FROM SURFACE FLOW OR STORM SEWER SYSTEMS, SHALL BE STABILI□ED AND PROTECTED FROM EROSION PRIOR TO RECEIVING THE WATER.
11. DAMAGED SECTIONS OF SILT FENCE AND/OR HAY BALES SHALL BE REPLACED BY THE CONTRACTOR. SEDIMENT DEPOSITS SHALL BE REMOVED BY THE CONTRACTOR WHEN THEY REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER. SEDIMENT SHALL BE REMOVED IN A MANNER THAT DOES NOT CAUSE ADDITIONAL EROSION OR POLLUTION.
12. AT A MINIMUM, ALL SEDIMENT CONTROL MEASURES SHALL BE INSPECTED BY THE CONTRACTOR AT LEAST ONCE A WEEK AND WITHIN 24 HOURS OF THE END OF A STORM WITH A RAINFALL AMOUNT OF 0.5 INCHES OR GREATER. REPAIR SEDIMENT CONTROL MEASURE AS NECESSARY.
13. DISTURBED AREAS ARE TO BE STABILI□ED AS SOON AS POSSIBLE AFTER DISTURBANCE. WHEN GRADING OF THE DISTURBED AREA WILL BE SUSPENDED FOR A PERIOD OF 30 OR MORE CONSECUTIVE DAYS, BUT LESS THAN 5 MONTHS, STABILI□E THE SITE WITHIN 7 DAYS OF THE SUSPENSION OF GRADING THROUGH THE USE OF MULCH OR OTHER MATERIALS APPROPRIATE FOR USE AS A TEMPORARY SOIL PROTECTOR. FOR SURFACES THAT ARE NOT TO BE REWORKED WITHIN 5 MONTHS BUT WILL BE REWORKED WITHIN 1 YEAR, USE TEMPORARY SEEDING, MULCH FOR SEED OR WHEN SLOPES ARE LESS THAN 3:1, WOOD CHIPS, BARK CHIPS OR SHREDDED BARK. FOR SURFACES THAT ARE TO BE REWORKED AFTER 1 YEAR, USE PERMANENT SEEDING AND MULCH FOR SEED.
14. EXCAVATED STUMPS AND CUT TREES ARE TO BE CHIPPED AND STOCKPILED FOR FUTURE USE, OR REMOVED TO AN OFF-SITE DISPOSAL AREA. BRUSH AND SLASH ARE TO BE CHIPPED AND STOCKPILE FOR FUTURE USE OR REMOVED FROM THE SITE. EXCAVATED STUMPS,CUT TREES, BRUSH, AND SLASH, ARE NOT TO BE BURIED ON-SITE.

PRO□ECT NARRATIVE:

THE PROPOSED PRO□ECT CONSISTS OF THE CONSTRUCTION OF APPROXIMATELY 2600 LF OF SIDEWALK WITH OTHER ASSOCIATED IMPROVEMENTS. THE PRO□ECT IS LOCATED ON THE WESTERLY SIDE OF SALMON BROOK STREET AND THE NORTHERLY SIDE OF SALMON BROOK PARK ROAD. IT WILL BE CONSTRUCTED WITHIN THE STATE R.O.W., ON LAND OF THE TOWN OF GRANBY, AND WITHIN A ROW OBTAINED BY THE TOWN. THE AREA MODIFIED DURING CONSTRUCTION WILL BE A TOTAL OF 0.89 ACRES. THERE ARE NO WETLANDS OR WATERCOURSES IN THE VICINITY OF THE PRO□ECT. EXISTING DRAINAGE PATTERNS WILL NOT BE MODIFIED AND TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES WILL BE IMPLEMENTED DURING CONSTRUCTION.

GENERAL UTILITY CONSTRUCTION NOTES:

1. THE CONTRACTOR SHALL USE "CALL BEFORE YOU DIG, 1-800-922-4455" PRIOR TO ANY CONSTRUCTION ACTIVITY.
2. CONSTRUCTION METHODS AND MATERIALS, SHALL CONFORM TO THE REGULATIONS OF CONNDOT FORM 817,
3. THE CONTRACTOR SHALL VERIFY ALL LINES AND GRADES PRIOR TO ANY CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND INCURRING THE COST OF ALL RE□UIRED PERMITS, INSPECTIONS, CERTIFICATES, ETC.
5. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR □OBSITE SAFETY AND SHALL COMPLY WITH ALL FEDERAL AND STATE OCCUPATIONAL SAFETY AND HEALTH AUTHORITY (O.S.H.A.) REGULATIONS.
6. TRENCHES TO BE EXCAVATED TO SUCH DEPTHS AS WILL PERMIT THE PIPE TO BE LAID AT THE ELEVATIONS, SLOPES, OR DEPTHS OF COVER INDICATED ON THE PLANS. CARE SHALL BE TAKEN NOT TO EXCAVATE BELOW THE DEPTHS INDICATED.
7. WHEN SOFT OR OTHERWISE UNSUITABLE MATERIAL IS ENCOUNTERED AT LOW EXCAVATION LIMITS, THE DEPTH OF EXCAVATION BELOW THE PIPE AND STRUCTURES SHALL BE INCREASED TO A DEPTH AS SPECIFIED BY THE ENGINEER. THE MATERIAL REMOVED SHALL BE REPLACED WITH A LAYER OF GRANULAR FILL OF SUCH DEPTH AS THE ENGINEER MAY DIRECT□OR SPECIAL CONSTRUCTION AS DIRECTED BY THE ENGINEER.
8. DURING EXCAVATION, ENCASEMENT MATERIAL AND GRANULAR MATERIAL SUITABLE FOR BACKFILLING SHALL BE PILED IN AN ORDERLY MANNER A SUFFICIENT DISTANCE FROM THE BANKS OF THE TRENCH TO AVOID OVERLOADING AND TO PREVENT SLIDES OR CAVE-INS.
9. UNLESS OTHERWISE SPECIFIED OR APPROVED BY THE OWNER'S REPRESENTATIVE, EXCAVATION SHALL BE BY OPEN CUT.
10. PIPE TRENCHES SHALL BE MADE AS NARROW AS PRACTICABLE AND SHALL NOT BE WIDENED BY SCRAPING OR LOOSENING OF MATERIAL FROM THE SIDES. EVERY EFFORT SHALL BE MADE TO KEEP THE SIDES OF THE TRENCHES FIRM AND UNDISTURBED UNTIL BACKFILLING HAS BEEN COMPLETED AND CONSOLIDATED.
11. THE CONTRACTOR SHALL FURNISH, PUT IN PLACE, AND MAINTAIN SUCH SHEETING, BRACING, SHORING, PUMPS, AND OTHER RELATED E□UIPMENT AS MAY BE NECESSARY TO SUPPORT THE SIDES OF THE EXCAVATION, OR PREVENT ANY MOVEMENT OF EARTH OTHER THAN THAT INTENDED TO BE ACCOMPLISHED AS A PART OF THE WORK AND FOR THE PROTECTION OF PROPERTY, THE WORK AND THE SAFETY OF THE PUBLIC AND EMPLOYEES OF THE CONTRACTOR AND THE OWNER. SUCH SHEETING, SHORING, BRACING, PUMPS AND OTHER RELATED E□UIPMENT SHALL COMPLY WITH THE SAFETY PRECAUTIONS OUTLINED IN THE ASSOCIATED GENERAL CONTRACTORS OF AMERICAN, "MANUAL OF ACCIDENT PREVENTION IN CONSTRUCTION", AND THE "OCCUPATIONAL SAFETY AND HEALTH ACT" OF 1970 (OSHA). ALL BRACING, SHEETING, ETC., SHALL BE REMOVED WHEN NO LONGER RE□UIRED FOR THE CONSTRUCTION OR SAFETY OF THE WORK.
12. CARE SHALL BE TAKEN TO PREVENT VOIDS OUTSIDE OF SHEETING□BUT IF VOIDS ARE FORMED, THEY SHALL BE IMMEDIATELY FILLED AND WELL RAMMED.
13. TO ENSURE PROPER CONDITIONS AT ALL TIMES DURING CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE AND MAINTAIN AMPLE MEANS AND DEVICES WITH WHICH TO INTERCEPT AND/OR REMOVE AND PROPERLY DISPOSE OF ALL WATER ENTERING TRENCHES AND OTHER EXCAVATIONS. EXCAVATIONS SHALL BE KEPT DRY UNTIL THE STRUCTURES, PIPES AND APPURTENANCES TO BE BUILT THEREIN HAVE BEEN COMPLETED TO SUCH EXTENT THAT THEY WILL NOT BE FLOATED OR OTHERWISE DAMAGED.
14. SAW CUT EXISTING CURBS AND PAVEMENT WHERE THEY MEET PROPOSED CURBS OR PAVEMENT.

UTILITY WARNING

The locations of existing underground utilities are shown in an approximate way only and have not been independently verified by the Owner or its representative. Utilities not shown on this plan may exist. The Contractor shall determine the exact location of all existing utilities before commencing work, and agrees to be fully responsible for any and all damages which might be occasioned by the Contractor's failure to exactly locate and preserve any and all underground utilities.

The Contractor shall use CALL BEFORE YOU DIG, 1-800-922-4455 prior to any construction activity.

LAND GRADING (LG)

DESIGN CRITERIA

SLOPE DEFINED

SLOPE IS THE RELATIONSHIP OF HORI□ONTAL DISTANCE TO VERTICAL DISTANCE AND IS REFERENCED AS EITHER HORI□ONTAL TO VERTICAL, A RATIO OF HORI□ONTAL:VERTICAL OR A PERCENTAGE OF THE VERTICAL DIVIDED BY THE HORI□ONTAL.

SLOPE GRADIENT LIMITATIONS

VEGETATED MOWED SLOPES: WHERE A SLOPE IS TO BE VEGETATED AND MOWED, THE SLOPE SHALL NOT BE STEEPER THAN 3:1□FLATTER SLOPES ARE PREFERRED BECAUSE OF SAFETY FACTORS RELATED TO THE OPERATION OF E□UIPMENT.

VEGETATED UNMOWED SLOPES: WHERE A SLOPE IS TO BE VEGETATED BUT NOT MOWED, THE SLOPE SHALL NOT BE STEEPER THAN 2:1.

STRUCTURALLY STABILIZED SLOPES: FOR SLOPES STEEPER THAN 2: 1OR WHEN SLOPES ARE STEEPER THAN 3: 1 AND THE CHANGE IN ELEVATION EXCEEDS 15 FEET WITHOUT A CROSS SLOPE BENCH, ENGINEERED STRUCTURAL DESIGN FEATURES SHALL BE INCORPORATED. APPLICABLE ENGINEERED MEASURES MAY INCLUDE THOSE FOUND IN THE STABILI□ATION STRUCTURES FUNCTIONAL GROUP (SEE FIGURE 3-4, SELECTION MATRIX) OR OTHER STRUCTURAL MEASURES DESIGNED BY THE ENGINEER,

EXCEPTIONS: SLOPE LIMITATIONS MAY BE INCREASED PROVIDING DETAILED SOIL MECHANICS ANALYSIS CALCULATIONS ARE PERFORMED WHICH CONFIRM AN ACCEPTABLE SAFETY FACTOR FOR THE FINISHED SLOPE.

SLOPE LENGTH LIMITATIONS AND REVERSE SLOPE BENCHES

REVERSE SLOPE BENCHES ARE RE□UIRED WHENEVER THE VERTICAL HEIGHT OF ANY SLOPE STEEPER THAN 3:1 EXCEEDS 15 FEET, EXCEPT WHEN ENGINEERED SLOPE STABILI□ATION STRUCTURES MEASURES ARE INCLUDED IN THE SLOPE AND/OR A DETAILED SOIL MECHANICS ANALYSIS CALCULATION HAS CONFIRMED AN ACCEPTABLE FACTOR OF SAFETY EXISTS FOR THE FINISHED SLOPE.

CONTROLLING WATER MOVEMENT

MAKE PROVISIONS TO SAFELY CONDUCT SURFACE RUNOFF TO STORM DRAINS, PROTECTED OUTLETS OR TO STABLE WATERCOURSES TO ENSURE THAT RUNOFF WILL NOT DAMAGE SLOPES OR OTHER GRADED AREAS.

SURFACE WATER:

MAXIMUM ALLOWABLE OVERLAND FLOW DISTANCE IN FEET TO THE TOP OF THE DESIGNED SLOPE WITH NO DIVERSION OF SURFACE WATER IS DETERMINED BY USE OF THE FORMULA:

A □X (15-Y)
A □MAXIMUM OVERLAND FLOW DISTANCE IN FEET ABOVE THE CREST OF THE DESIGNED SLOPE
B □MAXIMUM HORI□ONTAL DISTANCE IN FEET SHALL NOT EXCEED 15X.
X □SIDE SLOPE□HORI□ONTAL DISTANCE IN FEET TO ONE FOOT VERTICAL (E.G., □2 FOR DESIGNED SLOPE 2:1)
Y □HEIGHT OF DESIGNED SLOPE IN FEET MEASURED VERTICALLY FROM TOE ELEVATION OF THE DESIGNED SLOPE TO TOP OF CUT OR FILL FOR THE DESIGNED SLOPE.

EITHER DIVERT SURFACE WATER FROM THE FACE OF ALL CUT AND FILL SLOPES BY THE USE OF DIVERSIONS, DITCHES AND DRAINAGE WAYS OR OTHERWISE CONVEY IT DOWN THE SLOPE BY THE USE OF OTHER APPROPRIATE MEASURES. SURFACE WATER MAY BE ALLOWED TO FLOW DOWN CUT AND FILL SLOPES WHEN ALL OF THE FOLLOWING CONDITIONS EXIST:

- THE LENGTH OF OVERLAND FLOW (IN FEET) TO THE CREST OF THE DESIGNED SLOPE DOES NOT EXCEED THE DISTANCE "A".
- THE FACE OF THE SLOPE IS ALREADY STABLE OR THE FACE OF THE SLOPE IS PROTECTED FROM SURFACE RUNOFF UNTIL IT IS STABILI□ED□
- THE FACE OF THE SLOPE IS NOT SUB□ECTED TO ANY CONCENTRATED FLOWS OF SURFACE WATER FROM NATURAL DRAINAGE WAYS AND STRUCTURES SUCH AS GRADED DRAINAGE WAYS AND DOWNSPOUTS□AND
- THE MAXIMUM TOTAL HORI□ONTAL OVERLAND FLOW (A) PLUS SLOPE DISTANCE (B) DOES NOT EXCEED 15 TIMES THE SIDE SLOPE (X) OF THE CUT OR FILL SLOPES.

SUBSURFACE WATER:

SUBSURFACE DRAINAGE SHALL BE PROVIDED WHERE NECESSARY TO INTERCEPT GROUNDWATER SEEPAGE THAT WOULD OTHERWISE ADVERSELY AFFECT SLOPE STABILITY OR CREATE EXCESSIVELY WET SITE CONDITIONS THAT WOULD HINDER OR PROHIBIT DESIRED VEGETATIVE GROWTH.

OTHER DESIGN LIMITATIONS

SLOPES SHALL NOT BE CREATED CLOSE TO PROPERTY LINES SO AS TO ENDANGER AD□OINING PROPERTIES WITHOUT ADE□UATELY PROTECTING SUCH PROPERTIES AGAINST EROSION, SEDIMENTATION, SLIPPAGE, SETTLEMENT, SUBSIDENCE OR OTHER RELATED DAMAGE.

SOIL MATERIAL USED FOR EARTH FILL SHALL BE OBTAINED FROM AN APPROVED BORROW PIT OR OTHER DESIGNATED AREA. THE FILL MATERIAL SHALL BE FREE OF BRUSH, RUBBISH, LARGE ROCKS, LOGS, STUMPS, BUILDING DEBRIS, AND OTHER OB□ECTIONABLE MATERIAL THAT WOULD INTERFERE WITH, OR PREVENT CONSTRUCTION OF, SATISFACTORY FILLS. IT SHOULD BE FREE OF STONES OVER 2 INCHES IN DIAMETER WHERE COMPACTED BY HAND OR MECHANICAL TAMPERS OR OVER 6 INCHES IN DIAMETER WHERE COMPACTED BY ROLLERS OR OTHER E□UIPMENT. FRO□EN MATERIAL SHALL NOT BE PLACED IN THE FILL NOR SHALL THE FILL MATERIAL BE PLACED ON A FRO□EN FOUNDATION.

STOCKPILES, BORROW AREAS AND SPOIL AREAS SHALL BE LOCATED AWAY FROM STEEP SLOPES AND SURFACE WATERS AND SHALL BE SHOWN ON THE PLANS. SOIL STOCKPILES SHALL BE SUB□ECT TO THE PROVISIONS OF THIS MEASURE.

ALL DISTURBED AREAS SHALL BE STABILI□ED IN ACCORDANCE WITH THE E□S MEASURES CONTAINED IN THESE GUIDELINES.

INSTALLATION REQUIREMENTS

1. PROTECT ALL GRADED OR DISTURBED AREAS INCLUDING SLOPES DURING CLEARING AND CONSTRUCTION IN ACCORDANCE WITH THE APPROVED EROSION AND. SEDIMENT CONTROL PLAN UNTIL THEY ARE PERMANENTLY STABILI□ED.
2. CONSTRUCT AND MAINTAIN ALL EROSION AND SEDIMENT CONTROLS IN ACCORDANCE WITH THE APPROVED EROSION AND SEDIMENT CONTROL PLAN.
3. CLEAR AND GRUB AREA TO BE GRADED. IN FILLED AREAS WHERE FILL EXCEEDS 5 FEET IN DEPTH, GRUBBING MAY NOT BE RE□UIRED.
4. STRIP AND STOCKPILE TOPSOIL RE□UIRED FOR THE ESTABLISHMENT OF VEGETATION IN AMOUNTS NECESSARY TO COMPLETE FINISHED GRADING OF ALL EXPOSED AREAS.
5. USE ONLY FILL MATERIALS THAT ARE FREE OF BRUSH, RUBBISH, ROCKS, LOGS, STUMPS, BUILDING DEBRIS AND OTHER OB□ECTIONABLE MATERIALS THAT WOULD INTERFERE WITH OR PREVENT CONSTRUCTION OF SATISFACTORY FILLS. FRO□EN MATERIAL OR SOFT, SATURATED OR HIGHLY COMPRESSIBLE MATERIALS SHALL NOT BE INCORPORATED INTO FILLS. ROCK FILL AND OTHER CLEAN FILL□MAY BE USED PROVIDING IT DOES NOT INTERFERE WITH THE CONSTRUCTION OF STRUCTURES.
6. PLACE AND COMPACT ALL FILL IN LAYERS NOT EXCEEDING 1 FOOT IN THICKNESS. NO EMBANKMENT LAYER SHALL BE DEPOSITED ON SURFACES OF SNOW OR ICE NOR SHALL IT BE PLACED ON FRO□EN OR UNSTABLE SURFACES. WHERE EMBANKMENTS ARE TO BE CONSTRUCTED ON SLOPES STEEPER THAN 3:1, DEEPLY SCARIFY THE EXISTING SLOPE OR CUT INTO STEPS BEFORE FILLING IS BEGUN. IF FILL PLACEMENT IS NOT COMPLETED WITHIN 1 DAY, THEN INSTALL TEMPORARY EROSION AND SEDIMENT CONTROLS, SUCH AS TEMPORARY FILL BERM, AS NECESSARY TO REDIRECT RUNOFF WATER AWAY FROM THE UNSTABLE SLOPE UNTIL FILL PLACEMENT RESUMES.
7 COMPACT ALL FILLS AS RE□UIRED TO REDUCE EROSION, SLIPPAGE, SETTLEMENT, SUBSIDENCE OR OTHER RELATED PROBLEMS. FILL THAT IS INTENDED TO SUPPORT BUILDINGS, STRUCTURES, CONDUITS AND OTHER FACILITIES SHALL BE COMPACTED IN ACCORDANCE WITH THE DESIGN SPECIFICATIONS.
8. PRIOR TO FINAL SEEDING, ROUGHEN SLOPES 2:1 THROUGH 5:1 TO REDUCE RUNOFF VELOCITIES UNLESS THE ENGINEER DIRECTS OTHERWISE.
9. IF AREAS ARE TO BE TOPSOILED, REFER TO THE TOPSOILING MEASURE (TO).
10. DURING ALL PHASES OF CONSTRUCTION KEEP REVERSE SLOPE BENCHES FREE OF SEDIMENT.
11. THE TREATMENT OF SEEPS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHALL BE REVIEWED AND ADDRESSED BY THE ENGINEER IN ACCORDANCE WITH GENERALLY ACCEPTED ENGINEERING STANDARDS.
12. APPLY PERMANENT SOIL STABILI□ATION MEASURES TO ALL GRADED AREAS WITHIN 7 DAYS OF ESTABLISHING FINAL GRADE. IF FINAL GRADING IS TO BE DELAYED FOR MORE THAN 30 DAYS AFTER LAND DISTURBANCE ACTIVITIES CEASE, TEMPORARY SOIL STABILI□ATION MEASURES (TSP) SHALL BE APPLIED IN ACCORDANCE WITH THE TEMPORARY SEEDING (TS) MEASURE.

MAINTENANCE:

INSPECT AND MAINTAIN ALL EROSION AND SEDIMENT MEASURES IMPLEMENTED DURING LAND GRADING OPERATIONS ACCORDING TO THEIR RESPECTIVE RE□UIREMENTS.

TOPSOILING (TO), TEMPORARY (TS) AND PERMANENT SEEDING (PS):

1. TOPSOILING, TEMPORARY AND PERMANENT SEEDING, AND MULCHING MEASURES SHALL CONFORM TO, "2002, CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL, THE CONNECTICUT COUNCIL ON SOIL AND WATER CONSERVATION," AS AMENDED.
2. PROVISIONS SHALL BE MADE FOR SURFACE AND SUBSURFACE DRAINAGE, AS NEEDED, AND FOR THE DISPOSAL OF RUNOFF WITHOUT CAUSING EROSION.
3. TOPSOIL SHALL INCLUSIVELY MEAN A SOIL:
   - MEETING ONE OF THE FOLLOWING SOIL TEXTURAL CLASSES ESTABLISHED BY THE UNITED STATES DEPARTMENT OF AGRICULTURE CLASSIFICATION SYSTEM BASED UPON THE PROPORTION SAND, SILT, AND CLAY SI□E PARTICLES AFTER PASSING A 2 MILLIMETER (MM) SIEVE AND SUB□ECTED TO A PARTICLE SI□E ANALYSIS:
     LOAMY SAND, INCLUDING COARSE, LOAMY FINE, AND LOAMY VERY FINE SAND,
     LOAMY SAND, INCLUDING COARSE, LOAMY FINE, AND LOAMY VERY FINE SAND,
     SANDY LOAM, INCLUDING COARSE, FINE AND VERY FINE SANDY LOAM,
     LOAM, OR SILT LOAM WITH NOT MORE THAN 60% SILT□
   - CONTAINING NOT LESS THAN 6% AND NOT MORE THAN 20% ORGANIC MATTER AS DETERMINED BY LOSS-ON-IGNITION OF OVEN DRIED SAMPLES DRIED AT 105 DEGREES CENTIGRADE□
   - POSSESSING A PH RANGE 6.0-7.5, EXCEPT IF THE VEGETATIVE PRACTICE BEING USED SPECIFICALLY RE□UIRES A LOWER PH, THEN PH MAY BE AD□USTED ACCORDING□
   - HAVING SOLUBLE SALTS NOT EXCEEDING 500 PPM□AND
   - THAT IS LOOSE AND FRIABLE AND FREE FROM REFUSE, STUMPS, ROOTS, BRUSH, WEEDS, FRO□EN PARTICLES, ROCKS, AND STONES OVER 1.25 INCHES IN DIAMETER□AND ANY MATERIAL THAT WILL PREVENT THE FORMATION OF A SUITABLE SEEDBED OR PREVENT SEED GERMINATION AND PLANT GROWTH.

   TOPSOIL MAY BE OF NATURAL ORIGIN OR MANUFACTURED BY BLENDING COMPOSTED ORGANIC MATERIALS WITH ORGANIC DEFICIENT SOILS. MINERAL SOILS, SAND AND LIME SUCH THAT THE RESULTING SOIL MEETS THE MATERIAL SPECIFICATIONS LISTED ABOVE. ALL TOPSOIL SHALL BE ANALY□ED BY A RECOGNI□ED SOIL TESTING LABORATORY FOR ORGANIC CONTENT, PH AND SOLUBLE SALTS RE□UIREMENTS GIVEN ABOVE.
4. PRIOR TO PLACING THE TOPSOIL, LOOSEN THE SUBGRADE BY DISCING OR SCARIFYING THE SURFACE TO A DEPTH OF TWO (2) INCHES. TOPSOIL SHALL BE APPLIED TO AT LEAST A MINIMUM COMPACTED DEPTH OF FOUR INCHES. COMPACTING IS TO INSURE A GOOD BOND WITH THE SUBGRADE AND TO OBTAIN A UNIFORM SEED BED. DO NOT OVER COMPACT. DO NOT APPLY TOPSOIL WHEN IN A FRO□EN OR MUDDY CONDITION, OR WHEN THE SUBGRADE IS EXCESSIVELY WET.
5. SEEDBED PREPARATION:
   a. APPLY LIMESTONE AND FERTILI□ER ACCORDING TO SOIL TESTS. IF SOIL TESTING IS NOT FEASIBLE, OR WHERE TIMING IS CRITICAL, FERTILI□ER MAY BE APPLIED AT THE RATE OF 300 POUNDS PER ACRE USING 10-10-10 OR E□UIVALENT. IN ADDITION, 300 POUNDS OF 38-0-0 OR E□UIVALENT OF SLOW RELEASE NITROGEN MAY BE USED FOR TOP DRESSING. APPLY GROUND LIMESTONE AT THE RATE OF THREE (3) TONS PER ACRE.
   b. WORK LIME AND FERTILI□ER INTO THE SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF FOUR (4) INCHES WITH A DISK, SPRING TOOTH HARROW OR OTHER SUITABLE E□UIPMENT. THE FINAL HARROWING OR DISCING OPERATION SHOULD BE ON THE GENERAL CONTOUR. CONTINUE TILLAGE UNTIL A REASONABLY UNIFORM, FINE SEEDBED IS PREPARED. ALL BUT CLAY OR SILTY SOILS AND COARSE SANDS SHOULD BE ROLLED TO FIRM THE SEEDBED WHERE FEASIBLE.
   c. REMOVE FROM THE SURFACE ALL STONES TWO (2) INCHES OR LARGER IN ANY DIMENSION. REMOVE ALL OTHER DEBRIS SUCH AS WIRE, CABLE, TREE ROOTS, PIECES OF CONCRETE, CLODS, LUMPS, OR OTHER UNSUITABLE MATERIAL.
7. RECOMMENDED SEEDING DATES:

PERMANENT:	APRIL 15 THROUGH □UNE 15 AUGUST 15 THROUGH SEPTEMBER 15
TEMPORARY:	MARCH 1 TO □UNE 15 AUGUST 1 TO OCTOBER 1

8. RECOMMENDED SEED MIXTURES:

THE SEED MIXTURE SHALL BE ONE RECOMMENDED BY THE NATIONAL RESOURCES CONSERVATION SERVICE OR THE FOLLOWING:

APPLICATION	SEED MIXTURE	LBS./1000 S□□ FT.
LAWNS	KENTUCKY BLUEGRASS	1.8
	CREEPING RED FESCUE	1.8
	PERENNIAL RYE GRASS	0.4
ROADSIDES OR SLOPES	CREEPING RED FESCUE	1.9
	REDTOP	0.2
	TALL FESCUE OR SMOOTH BROMEGRASS	1.9
SLOPES (NO MOWING)	CREEPING RED FESCUE	2.1
	REDTOP	0.2
	CROWN VETCH WITH INOCULANT	1.7
	OR FLAT PEA WITH INOCULANT	(3.5)
TEMPORARY	WINTER RYE	3.0
	OR ANNUAL RYEGRASS	3.0

9. SEEDING:
   a. APPLY SEED UNIFORMLY BY HAND, CYCLONE SEEDER, DRILL, CULTIPACKER TYPE SEEDER OR HYDROSEEDER (SLURRY INCLUDING SEED AND FERTILI□ER). NORMAL SEEDING DEPTH IS FROM 1/4 TO 1/2 INCH. HYDROSEEDINGS WHICH ARE MULCHED MAY BE LEFT ON SOIL SURFACE.
   b. WHERE FEASIBLE, EXCEPT WHERE EITHER A CULTIPACKER TYPE SEEDER OR HYDROSEEDER IS USED, THE SEEDBED SHOULD BE FIRMED FOLLOWING SEEDING OPERATIONS WITH A ROLLER, OR LIGHT DRAG. SEEDING OPERATIONS SHOULD BE ON THE CONTOUR.
   c. IF SEEDING CANNOT BE DONE WITHIN THE SEEDING DATES, USE TEMPORARY MULCHING WITH AN APPLICATION RATE OF 2.5 TO 3 TONS/ACRE TO PROTECT THE SITE AND DELAY SEEDING UNTIL THE NEXT RECOMMENDED SEEDING PERIOD.
10. STABILI□ING APPLIED TOPSOIL: IMMEDIATELY FOLLOWING TOPSOIL APPLICATIONS, PROTECT THE TOPSOIL FROM EROSION BY EITHER SODDING, SEEDING AND/OR MULCHING. ADDITIONAL STABILI□ATION MEASURES MAY BE RE□UIRED.

STORM DRAINAGE NOTES:

1. STORM SEWER PIPE TO BE AS NOTED:

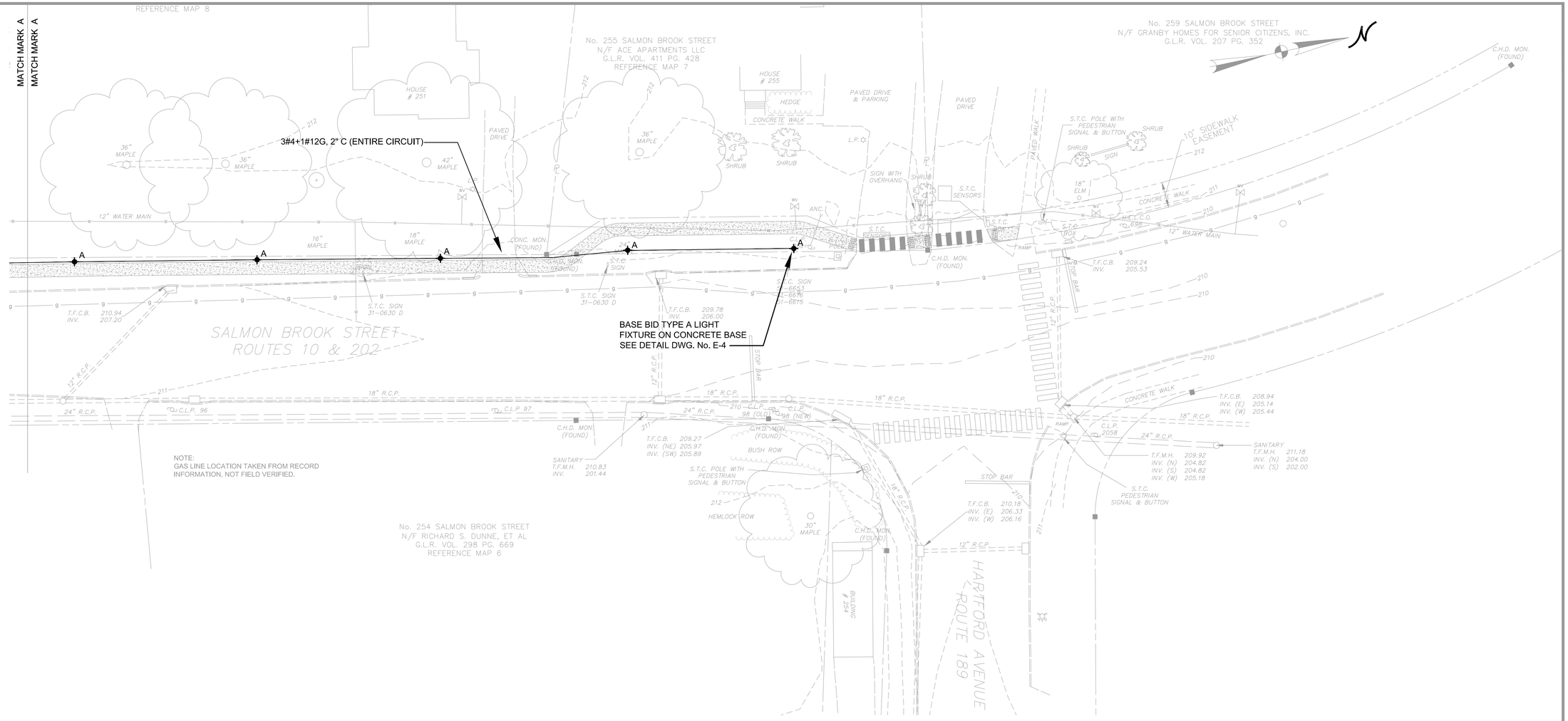
C.P.E.P	CORRUGATED POLYETHYLENE PIPE
C.P.E.P.-P	CORRUGATED POLYETHYLENE PIPE PERFORATED
C.P.E.P.-S	CORRUGATED POLYETHYLENE PIPE WITH A SMOOTH INTERIOR
C.P.E.P.-SP	CORRUGATED POLYETHYLENE PIPE WITH A SMOOTH INTERIOR, PERFORATED
PVC	POLY VINYL CHLORIDE
RCP	REINFORCED CONCRETE PIPE

2. C.P.E.P.-S PIPE TO HAVE BELL-AND-SPIGOT CONNECTIONS WITH A RUBBER GASKET MEETING ASTM F477. WHERE PIPE IS NOTED AS "WATER-TIGHT, IT SHALL MEET THE RE□UIREMENTS OF ASTM D3212 AND ASTM F1417.
3. REINFORCED CONCRETE PIPE (RCP) FOR STORM SEWERS SHALL CONFORM TO AASHTO-M-170, CLASS IV WITH FLEXIBLE, WATERTIGHT RUBBER-TYPE GASKETS CONFORMING TO AASHTO M.
4. PVC GRAVITY SEWER PIPE 4" TO 15" IN DIAMETER, SHALL BE ASTM 3034 TYPE PSM POLY (VINYL CHLORIDE)(PVC) SEWER PIPE AND FITTINGS, DESIGNATION SDR 35. PVC GRAVITY SEWER PIPE 18" TO 24" IN DIAMETER, SHALL BE ASTM F679 TYPE PSM POLY (VINYL CHLORIDE)(PVC) SEWER PIPE AND FITTINGS, DESIGNATION SDR 35. PIPE □OINTS TO BELL-AND-SPIGOT TYPE AND SHALL COMPLY WITH ASTM D-3212 SPECIFICATION FOR □OINTS FOR DRAIN AND SEWER PLASTIC PIPES USING FLEXIBLE ELASTOMERIC SEALS.
5. CONSTRUCTION OF STORM DRAINAGE SYSTEMS SHALL NORMALLY BEGIN AT THE DOWNSTREAM END AND PROCEED UPSTREAM.
6. ALL LOCATIONS, INCLUDING SWALES, LAWN/LANDSCAPED AREAS, DETENTION BASINS, AND OTHER STORM SEWER DISCHARGE POINTS, THAT ARE TO RECEIVE A CONCENTRATED FLOW OF STORMWATER, ORIGINATING FROM SURFACE FLOW OR STORM SEWER SYSTEMS, SHALL BE STABILI□ED AND PROTECTED FROM EROSION PRIOR TO RECEIVING THE WATER.

GEOTEXTILES AND EROSION CONTROL MATTING (ECM)

1. UNLESS OTHERWISE INDICATED, GEOTEXTILES AND EROSION CONTROL MATTING SHALL BE APPROVED FOR USE BY CONNDOT FOR THE INTENDED USE. REFER TO THE FOLLOWING DOCUMENT: "□UALIFIED PRODUCTS LIST FOR CONNECTICUT DEPARTMENT OF TRANSPORTATION PRO□ECTS, □UNE 2015," AS AMENDED.

**MULCH FOR SEED (MS)



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GRAPHIC SCALE

20 0 20 40

(IN FEET)
1 inch = 20 ft.

NO.	DATE	DESCRIPTION
	1/3/17	MISC. REVISIONS
	10/31/16	90% SUBMISSION

REVISIONS

RZ Design Associates, Inc.
MECHANICAL AND ELECTRICAL ENGINEERING
750 OLD MAIN STREET
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ROCKY HILL, CT 06067
P: (860) 436-4336
F: (860) 436-4450
www.rzdesignassociates.com

PARTIAL LIGHTING PLAN

TOWN OF GRANBY
PROPOSED SIDEWALKS - PROJ. # L055-001
ROUTE 10 - SALMON BROOK STREET & ROUTE 189 HARTFORD AVENUE
GRANBY, CONNECTICUT

THIS PLAN IS NOT VALID WITHOUT A LIVE SEAL & SIGNATURE
Kevin W. Clark

SCALE: 1" = 20'	DATE: April 21, 2017	JOB#: G2012.02	SHEET: E-1

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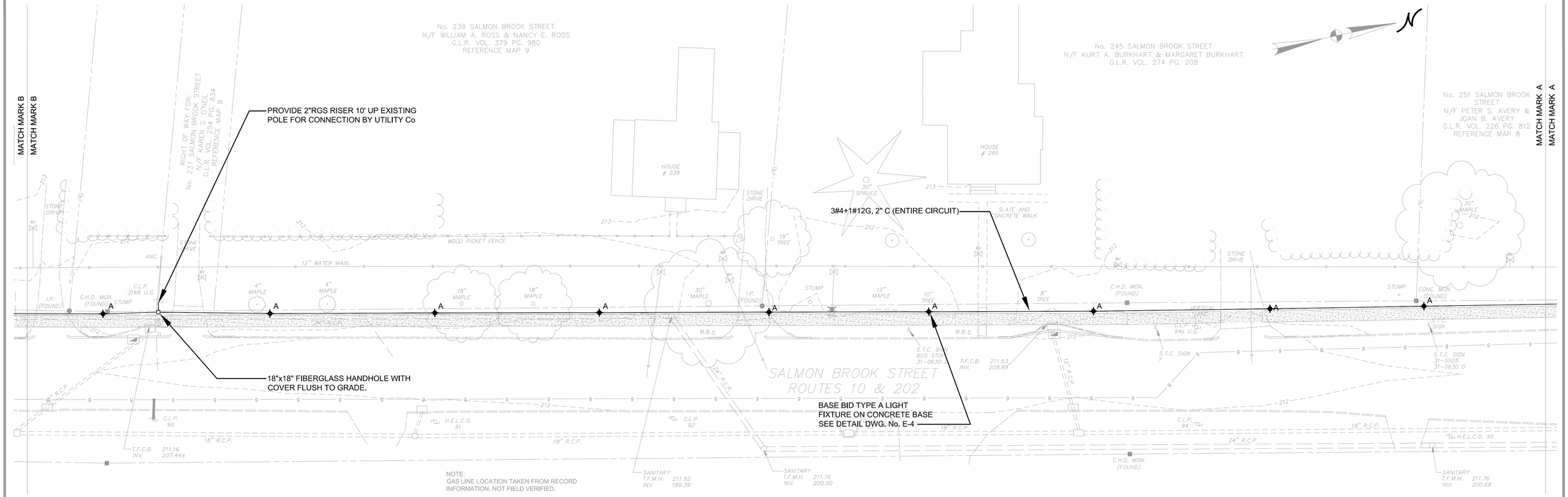

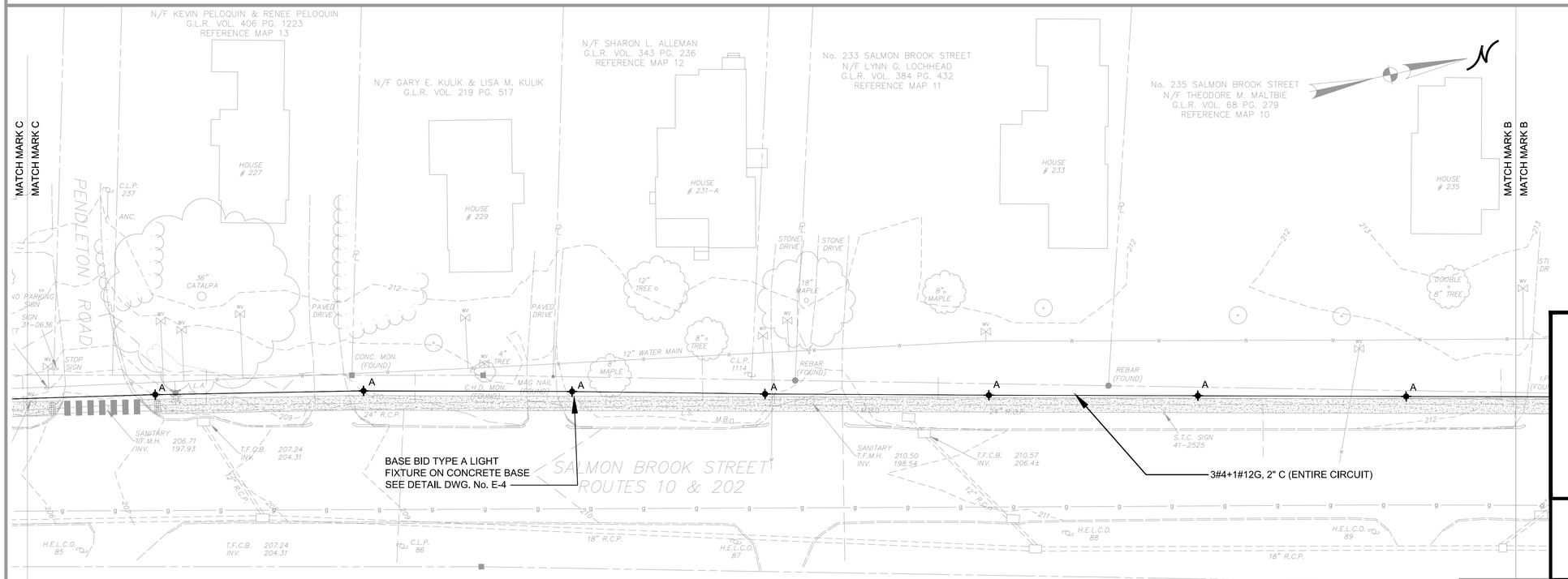

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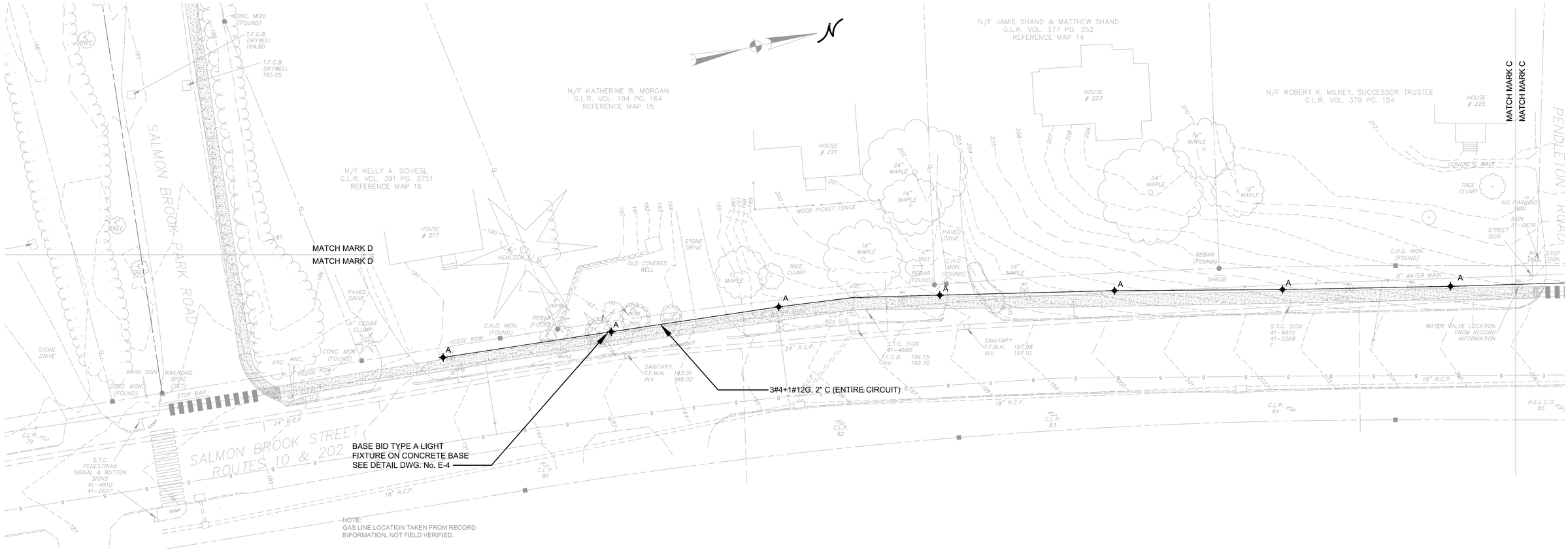

NOTE:
GAS LINE LOCATION TAKEN FROM RECORD INFORMATION, NOT FIELD VERIFIED.

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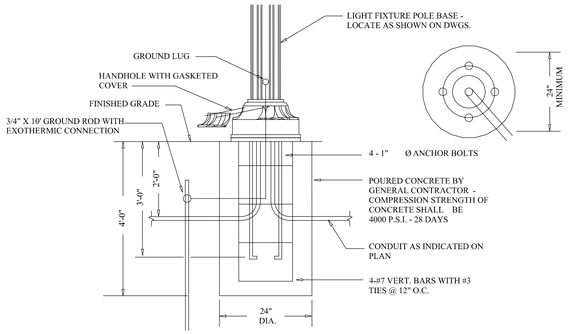
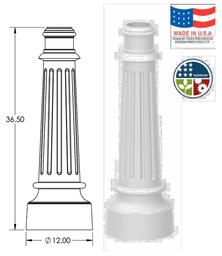


LIGHT FIXTURE BASE DETAIL
NOT TO SCALE

DPB-200

DPB Category: Pathway, Residential or Commercial projects.
Base Material: Two-piece decorative cast aluminum. Marine grade copper-free aluminum. Base plate 10.75" OD. Measures 36.5" tall x 12" OD wide.
Finish: 5 Millimeters rich textured powder coat finish. Custom color match, including Patina Verde and Weathered Brown.
Compatible Poles: Round Straight Steel (**RSSP**) or Round Straight Aluminum (**RSAP**) poles in 4", or 5" OD in 7 or 11 gauge. Consult factory for fluted options.

Project Name:		Type:
Cat #	**Pole Dim.**	**Color**
Decorative Pole Base 200 **(DPB-200)**	4" Round **(4R)** 5" Round **(5R)**	Bronze **(BRZ)** White **(WHT)** Silver **(SVR)** Black **(BLK)** Hunter Green **(HGN)** Graphite **(GPH)** Grey **(GRY)** Custom **(CS)**



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BELLA VISTA

ARCHITECTURAL LIGHTING

The Bella Vista LED luminaire, which means beautiful view, is a combination of aesthetics, function, performance, and energy efficiency. Bella Vista is the perfect luminaire for communities and projects which require beauty as well as a dark sky optical system that is neighborhood friendly.

Bella Vista features the patent pending Star Power optical system which has its LEDs and optics recessed and hidden two to three inches within the fixture top. Bella Vista is available from 18 to 104 watts and its optical system is available in types two and five distributions. The Star Power reflector casts light at a distance of up to five mounting heights with perfect uniformity.

The Bella Vista LED luminaire is available in two different sizes fit for post top or wall mount with Kelvin temperature options of (warm) 3000, (neutral) 4000 and (cool) 5500. Standard lens is clear textured glass, which adds class to any project. Consult factory for custom lens options.

STAR POWER™ OPTICAL SYSTEM
The Star Power™ reflector is an excellent system which provides great value and performance.

LED WATTAGE CHART

	16L	32L	48L
350 milliamps	18w	33w	51w
530 milliamps	28w	54w	80w
700 milliamps	36w	71w	104w
1050 milliamps	56w	-	-

Project Name:	Type:

Cat #	**Light Dist.**	**# of LED**	**Milliamps**	**Kelvin**	**Volts**	**Color**	**Tenon**	**Options**
Bella Vista Mini **(BV-M)** **16L Only* Bella Vista 1 **(BV-1)**	Type 3 **(T3)** Type 5 **(T5)**	16 **(16L)** 32 **(32L)** 48 **(48L)**	350 **(35)** 530 **(53)** 700 **(7)** 1050 **(1)** **16L Only*	3000K **(30K)** 4000K **(40K)** 5500K **(55K)**	120-277 **(UNV)**	Bronze **(BRZ)** White **(WHT)** Silver **(SVR)** Hunter Green **(HGN)** Black **(BLK)** Graphite **(GPH)** Grey **(GRY)** Custom **(CS)**	Over 2-3/8 O.D. **(T2R)** Over 3 O.D. **(T3R)**	Bird Spikes **(BS)** Marine Grade Finish **(MGF)** Photocell **(PC)** **Universal Voltage 120-277* Surge Protector **(10K)** House Side Shield **(HSS)**

ROUND STRAIGHT ALUMINUM POLE

POLES + BASES

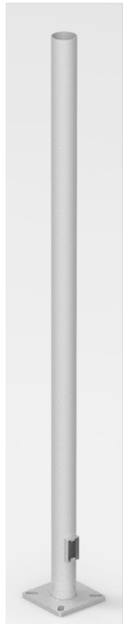
POLE
Shall be Straight Aluminum 6063 alloy Extrusion. Poles have ground bolt welded inside hand hole opposite side of the pole extrusion. Pole Extrusion is conjoined to Anchor Base by welding internal to pole shaft and external to pole shaft. Hand Hole reinforcement is constructed of 3"x 5" rectangular aluminum tubing, which is welded to pole shaft for added strength

ANCHOR BASE
Manufactured from Aluminum. The Base Plate vary in size from 1" thick for poles 22 feet and over, 3/4" thick for poles 10 to 20 feet.

COATING
All poles have minimum 3mm powder coat finish. All poles are sandblasted prior to powder coat application.

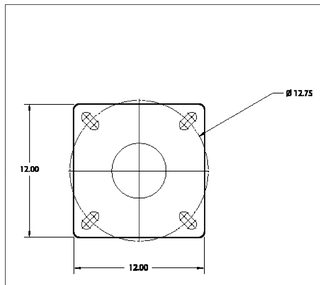
ANCHORAGE
All anchor bolts are fully hot dipped galvanized and come with two galvanized nuts and washers per bolt.

BASE COVER, HAND HOLE COVER AND POLE CAP
All poles come with removable polymer pole cap installed. All poles caps are black finish. All base covers are made of Aluminum and powder coated to match the pole. Hand Hole covers are provided with internal bridge support and also powder coated to match pole finish.



Project Name:	Type:

Cat #	**Height**	**Pole Dim.**	**Size**	**Base Pattern**	**Orient**	**Color**	**Bolts**	**Enhancements**
Round Straight Aluminum Pole **(RSAP)**	10' **(10)** 12' **(12)** 14' **(14)** 15' **(15)** 16' **(16)** 17.5' **(17)** 18' **(18)** 20' **(20)** 22' **(22)** 25' **(25)**	4" Round **(4R)** 5" Round **(5R)**	.125 in **(125)** .188 in **(188)** .250 in **(250)**	*(20' + Below)* 8 3/4 - 10 3/4" Bolt Circle **(9BC)** *(22' + Over)* 11½ - 14" Bolt Circle **(12BC)**	Single **(SGL)** Double **(D-90)** **(D-180)** Triple **(T-90)** Quad **(QD)**	Bronze **(BRZ)** White **(WHT)** Silver **(SVR)** Green **(GRN)** Hunter Green **(HGN)** Black **(BLK)** Graphite **(GPH)** Grey **(GRY)** Custom **(CS)**	3/4" x 30" **(3430)** 1" x 36" **(1360)**	GFI Kit **(GFI)** GFI Powdercoat Only **(PWGV)** Round Base Cover **(RBC)** **Tenon** 2 ⅜" Round **(T2R)** 3" Round **(T3R)** 3 ½" Round **(T312R)** 4 ½" Round **(T412R)** 3 ½" Square **(T312S)** 4 ½" Square **(T412S)** 5 ½" Square **(T512S)**



12" Base Bolt Circle **9" Base Bolt Circle**

POLE EPA DATA
Maximum EPA (ft) Allowable

POLE HEIGHT	POLE DIA.	SIZE	BASE PLATE	BOLT CIRCLE BOLTS	BOLTS	80 Mph	90 Mph	100 Mph
10'	4" O.D.	.125	9" Sq. x 3/4"	9 3/16"	3/4" x 30"	10.4	7.9	6.1
12'	4" O.D.	.125	9" Sq. x 3/4"	9 3/16"	3/4" x 30"	8.2	6.1	4.6
12'	4" O.D.	.188	9" Sq. x 3/4"	9 3/16"	3/4" x 30"	11.7	8.8	6.6
14'	4" O.D.	.125	9" Sq. x 3/4"	9 3/16"	3/4" x 30"	7.2	4.9	2.9
14'	5" O.D.	.188	9" Sq. x 3/4"	9 3/16"	3/4" x 30"	10.1	7.6	5.6
15'	4" O.D.	.188	9" Sq. x 3/4"	9 3/16"	3/4" x 30"	9.7	7.5	5.7
15'	5" O.D.	.188	9" Sq. x 3/4"	9 3/16"	3/4" x 30"	14.9	11.7	8.9
16'	4" O.D	.125	9" Sq. x 3/4"	9 3/16"	3/4" x 30"	8.4	6.1	4.5
16'	5" O.D.	.188	9" Sq. x 3/4"	9 3/16"	3/4" x 30"	13.8	10.5	7.7
18'	4" O.D	.188	9" Sq. x 3/4"	9 3/16"	3/4" x 30"	6.3	3.7	1.8
18'	5" O.D.	.188	9" Sq. x 3/4"	9 3/16"	3/4" x 30"	11.8	8.6	6.5
20'	4" O.D	.188	9" Sq. x 3/4"	9 3/16"	3/4" x 30"	12.5	8.3	5.4
20'	5" O.D	.188	9" Sq. x 3/4"	9 3/16"	3/4" x 30"	9.9	7.1	5.1
22'	5" O.D	.188	12" Sq. x 1"	12 ¾"	1" x 36"	12.8	11.5	9.8
25'	5" O.D	.188	12" Sq. x 1"	12 ¾"	1" x 36"	10.4	9.5	7.1

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LIGHT FIXTURES:

TYPE A LIGHT FIXTURES SHALL BE COMPRISED OF THE FOLLOWING COMPONENTS:

LUMINAIRE:
NLS CAT. No. BV-1-T3-32L-53-40K-240-BLK-T2R-PC240

POLE:
NLS CAT. No. RSAP-10-4R-125-9BC-SGL-BLK-3430-T2R

BASE:
NLS CAT. No. DPB-200-4R-BLK

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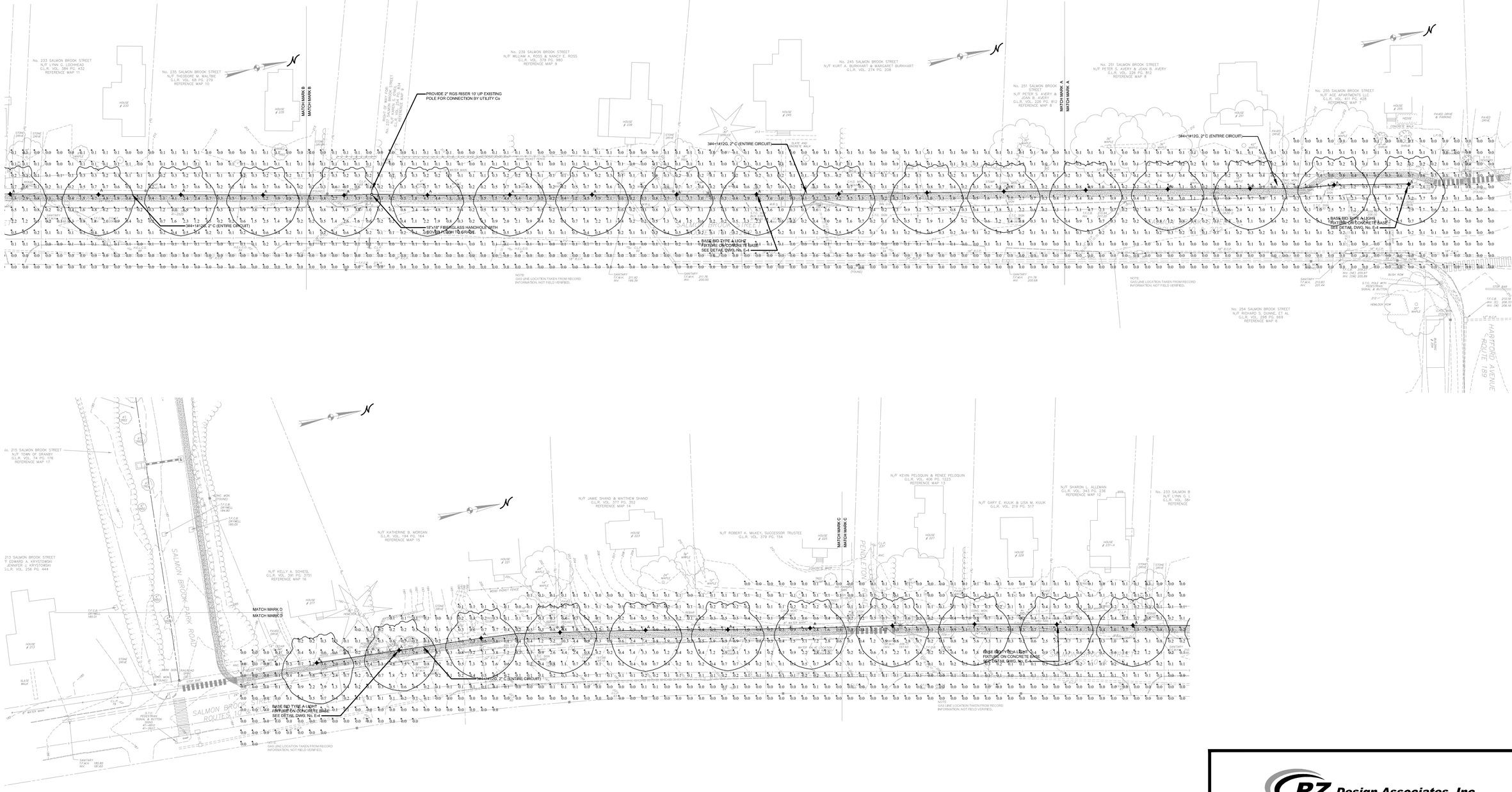

Filename: Salmon Brook Street - Granby - REV 1.AGI

Luminaire Schedule							
Symbol	Qty	Label	Arrangement	Lum. Lumens	Lum. Watts	LLF	Description
▣	28	A	SINGLE	5844	54	0.790	NLS Lighting BV-1-T3-32L-53-40K-UNV-BLK-T2R - RSAP-10-4R-125-9BC-SGL-BLK-3430-T2R - DPB-200-4R-BLK

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
ROADWAY	Illuminance	Fc	0.54	10.3	0.0	N.A.	N.A.

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REVISIONS

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PHOTOMETRIC PLAN

TOWN OF GRANBY
PROPOSED SIDEWALKS - PROJ. # L055-001
ROUTE 10 - SALMON BROOK STREET & ROUTE 189 HARTFORD AVENUE
GRANBY, CONNECTICUT

THIS PLAN IS NOT VALID WITHOUT A LIVE SEAL & SIGNATURE
Kevin W. Clark

SCALE: 1" = 40' | DATE: April 21, 2017 | JOB#: G2012.02 | SHEET: E-5

CLARK ENGINEERING
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