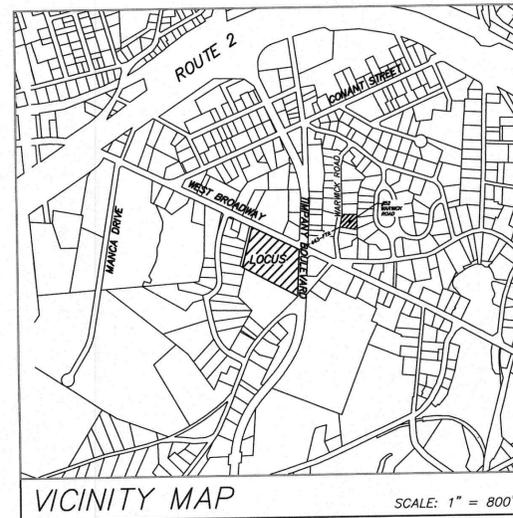


**DEFINITIVE SITE PLAN**  
**RESTAURANT AND COMMERCIAL CENTER**  
**TIMPANY BOULEVARD & WEST BROADWAY**  
**IN**  
**GARDNER, MASSACHUSETTS**  
**JUNE 22, 2018**  
**PERMITTING REVISIONS - FEBRUARY 5, 2020**



**APPLICANT & OWNER:**

TIMPANY CROSSROAD, LLC  
 AMY FANTONI  
 442 WEST BROADWAY  
 GARDNER, MASSACHUSETTS 01440

**CIVIL ENGINEER & LAND SURVEYOR:**

HANNIGAN ENGINEERING, INC.  
 8 MONUMENT SQUARE  
 LEOMINSTER, MASSACHUSETTS 01453  
 TEL: (978) 534-1234

**PLAN INDEX**

SHEET 1	EXISTING CONDITIONS PLAN
SHEET 2	SITE DEVELOPMENT PLAN
SHEET 3	DRIVE THROUGH LAYOUT PLAN
SHEET 4	SITE LAYOUT PLAN
SHEET 5	SITE UTILITY PLAN
SHEET 6	SITE GRADING PLAN
SHEET 7	SITE LANDSCAPING PLAN
SHEET 8-12	CONSTRUCTION DETAILS
	PERMITTING SET



- EXISTING SIGN DESIGNATION**
- 1: PLEASANT STREET DETOUR
  - 2: RIGHT LANE ONLY
  - 3: RTE 68 SOUTH
  - 4: DETOUR ARROW
  - 5: AIRPORT
  - 6: SIGN POST STUD
  - 7: CHEVY SIGN
  - 8: SHELL W/DUNKIN DONUT
  - 9: LEFT LANE MUST TURN LEFT
  - 10: PLEASANT STREET DETOUR
  - 11: 2A EAST WESTMINSTER/FITCHBURG
  - 12: RIGHT LANE MUST TURN RIGHT
  - 13: RTE 2A WEST
  - 14: NO PASSING ZONE
  - 15: SIGNAL AHEAD
  - 16: 30 MPH / NO PARKING
  - 17: LEFT LANE MUST TURN LEFT
  - 18: RTE 2A W/ ARROW
  - 19: RTE 68 W/ ARROW
  - 20: DYER STREET STOP SIGN
  - 21: STEPHANIE DRIVE
  - 22: KEEP RIGHT ARROW

**LEGEND**

- EXISTING CONTOURS**
- 100.00' 242'
  - EXISTING PROPERTY LINES
  - EDGE OF WETLANDS
  - BUFFER ZONE
  - EX. DRAIN
  - EX. WATER MAIN
  - EX. SEWER
  - EX. HYDRANT
  - EXISTING WATER VALVE
  - EXISTING STAKE WALLS
  - EXISTING GAS LINE
  - EXISTING BENCHMARK
  - EXISTING SIGN (TYPE)
  - PROPOSED CONTOURS
  - PROPOSED PROPERTY LINES
  - PROP. SILT FENCE/HAYBALES
  - PROP. DRAIN
  - PROP. WATER MAIN
  - PROP. SEWER
  - PROP. UTILITY CONDUIT
  - PROP. WATER SERVICE
  - PROPOSED HYDRANT
  - PROPOSED WATER VALVE
  - PROP. FENCE LINE

N/F  
COMMONWEALTH OF MASSACHUSETTS  
MILITARY DEPARTMENT  
BK 3489, PG 369  
MAP R17-11-14  
(321 W BROADWAY)  
Rim=116.57  
Inv=108.57  
(PER CONTRACTOR MEASUREMENT)

N/F  
CHAIR CITY REALTY TRUST  
ANGELO G. SALVADORE  
MELODY J. SALVADORE, TRUSTEES  
BK 18537, PG 233  
MAP R17-11-15  
(295 W BROADWAY)

N/F  
GTY MA/NI LEASING, INC.  
C/O NOURIA ENERGY CORP.  
BK 52535, PG 351  
MAP R17-11-25  
(264 TIMPANY BLVD)

**APPLICANT:**  
TIMPANY CROSSROADS, LLC  
442 WEST BROADWAY  
GARDNER, MA 01440

**PARKING CALCULATION:**  
RESTAURANT (99):  
1 SPACE PER 4 SEATS  
200 SEATS / 4 SEATS  
50 SPACES REQUIRED

**EAST FOOD RESTAURANT (STARBUCKS):**  
1 SPACE PER 70 SF (NET)  
(2,315 S.F./70(0.5))  
17 SPACES REQ'D

**COMMERCIAL/RETAIL**  
1 SPACE PER 250 S.F. NET FLOOR  
15,615 S.F. x 1 SPACE / 250S.F.  
63 SPACES REQUIRED (GROSS)

**OFFICE**  
1 SPACE PER 300 S.F. NET FLOOR  
1,350 S.F. x 1 SPACE / 300 S.F.  
5 SPACES REQUIRED (GROSS)

**TOTAL PARKING REQUIRED = 145 SPACES**  
**TOTAL PARKING PROVIDED = 181 SPACES**  
**TOTAL EXISTING PARKING = 126 SPACES**  
**TOTAL PROPOSED PARKING = 55 SPACES**

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MAP/PARCEL: MAP R17, PARCELS 16/14, 16/4, 11/1, 11/2, 11/10, 11/3, 11/4, 11/5, 11/6, 11/7, 16/3, 16/1  
DEED BOOK/PAGE: 51883/336; 52648/306; 51507/219; 51893/333; 51883/340; 51536/178; 51536/181; 51895/184; 56933/143  
PROJECT FRONTAGE: 435.70 FT (WEST BROADWAY)  
PROJECT AREA: 464.01 FT (TIMPANY BOULEVARD)  
4.57 ACRES

**ZONING INFORMATION**  
ZONING DISTRICT: COMMERCIAL (C2)  
DIMENSIONAL REQUIREMENTS:  
MINIMUM AREA: 30,000 SF  
MINIMUM FRONTAGE: 100 FEET  
MAXIMUM HEIGHT: 48 FEET  
MINIMUM SETBACKS:  
FRONT YARD: 30 FT  
SIDE YARD: 20 FT  
REAR YARD: 30 FT

- GENERAL NOTES:**
1. PROPERTY LINE INFORMATION BASED DEEDS AND PLANS OF RECORD. NO CERTIFICATION OF PROPERTY LINES SHOWN ON THIS PLAN IS INTENDED OR IMPLIED BY HANNIGAN ENGINEERING, INC. PROPERTY LINE DETERMINATIONS MADE BY A ON-THE-GROUND PROPERTY LINE SURVEY. TOPOGRAPHIC INFORMATION IS THE RESULT OF AN ON-THE-GROUND TOPOGRAPHIC SURVEY BY HANNIGAN ENGINEERING, INC. IN JANUARY OF 2017.
  2. AREAS SUBJECT TO PROTECTION UNDER THE WETLANDS PROTECTION ACT HAVE BEEN DELINEATED BY CARON ENVIRONMENTAL, INC. IN JANUARY OF 2017. THESE AREAS ARE DEPICTED ON THE PLANS BASED ON FIELD SURVEY LOCATION DURING THE TOPOGRAPHIC SURVEY.
  3. LOCATION OF ALL UTILITIES ARE APPROXIMATE AS SHOWN AND BASED UPON VISIBLE STRUCTURES AT THE TIME OF THE FIELD SURVEY. LOCATION OF EXISTING UTILITIES AND SUBSURFACE STRUCTURES, WHETHER OR NOT SHOWN ON THESE PLANS, SHALL BE DETERMINED BY THE CONTRACTOR, MARKED IN THE FIELD, AND REVIEWED BY THE ENGINEER PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. THE CONTRACTOR SHALL BE AWARE OF THE OBLIGATION TO ALL UTILITY COMPANIES AND AGENCY AS WELL AS DIG-SAFE PRIOR TO EXCAVATION. (SEE NOTE)
  4. NOTIFICATION REQUIREMENTS SHOWN ON THIS PLAN SHALL NOT RELIEVE THE CONTRACTOR OF ANY OTHER REQUIREMENTS WHICH MAY EXIST UNDER LOCAL, STATE, OR FEDERAL JURISDICTION TO WHICH THE CONTRACTOR IS OBLIGATED.
  5. RELOCATION OF AND/OR CONNECTION TO EXISTING UTILITIES SHALL BE PERFORMED IN ACCORDANCE WITH PROVISIONS OF THE APPROPRIATE UTILITY COMPANY AND/OR REGULATORY AGENCY.
  6. UNLESS OTHERWISE SPECIFIED, ALL MATERIALS AND WORKMANSHIP SHALL CONFORM WITH THE REQUIREMENTS OF THE CITY OF GARDNER AND THE MASS DOT SPECIFICATIONS OF HIGHWAYS AND BRIDGES.
  7. ALL SLOPES UNLESS OTHERWISE SPECIFIED, SHALL BE LOAMED AND SEEDED FOR STABILIZATION.
  8. ANY DEVIATIONS IN DESIGN AS SHOWN SHALL REQUIRE A REVIEW AND APPROVAL OF THE DESIGN ENGINEER OR FIRM. CHANGES MADE IN THE FIELD MADE WITHOUT AUTHORIZATION SHALL BE SUBJECT TO REVIEW BY THE ENGINEER AND APPROPRIATE APPROVING AUTHORITY. EXPENSES INCURRED TO BRING THE UNAUTHORIZED CHANGES TO ACCEPTABLE CONFORMANCE SHALL BE BORNE BY THE COMPANY OR CONTRACTOR MAKING THE UNAUTHORIZED CHANGE.
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  12. STOCKPILING OF MATERIAL SHALL NOT BE PERMITTED WITHIN ANY AREAS SUBJECT TO PROTECTION UNDER THE WETLANDS PROTECTION ACT WITHOUT PRIOR APPROVAL BY THE LOCAL CONSERVATION COMMISSION. STOCKPILES SHALL BE PLACED IN A SUITABLE LOCATION AND SURROUNDED BY A ROW OF STACKED HAY BALES FOR EROSION CONTROL.
  13. AREAS OF FILL TO BE COMPLETED TO A MINIMUM 95% DRY DENSITY IN AREAS WITHIN ROADWAYS AND UTILITY EASEMENTS. OTHER AREAS OF FILL TO BE COMPLETED TO A MINIMUM 90% DRY DENSITY. ALL FILL MATERIALS ARE TO BE CLEAN FILL, FREE OF DELETERIOUS MATERIALS AND DEBRIS.
  14. ALL SIDEWALKS AND RAMPS TO CONFORM TO REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT (ADA), AS REQUIRED. SEE ARCHITECTURAL PLANS FOR PERFORMANCE REQUIREMENTS FOR PROPOSED BUILDINGS.
  15. THE AREA PROPOSED FOR DEVELOPMENT IS NOT WITHIN A 100 YEAR FLOOD PLAIN PER F.E.M.A. FIRM PANEL #2035-0008B, DATED JULY 2, 1981. COMPLIANCE WITH APPLICABLE REGULATIONS IS REQUIRED.
  16. ALL REINFORCED CONCRETE PIPE TO BE CLASS III UNLESS OTHERWISE NOTED.
  17. PRE-CONSTRUCTION CONFERENCE SHALL BE HELD PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
  18. ALL UTILITIES ARE TO BE INSTALLED BY A LICENSED UTILITY CONTRACTOR LICENSED BY THE CITY OF GARDNER.

NO.	DATE	REVISIONS	BY
6	2/5/2020	DRIVE-THROUGH MODIFICATIONS	CMA/WDH
5	04/16/2019	CONSTRUCTION REVISION #1	WDH
4	02/28/2019	ISSUED FOR CONSTRUCTION	WDH
3	12/26/2018	ACCESS/PARKING MODIFICATIONS	CMA/WDH

**HANNIGAN ENGINEERING, INC.**  
CIVIL ENGINEERS & LAND SURVEYORS

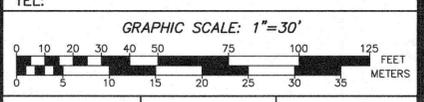
8 MONUMENT SQUARE  
LEOMINSTER, MASSACHUSETTS 01453  
WWW.HANNIGANENGINEERING.COM

(978) 534-1234 (T)  
(978) 534-6060 (F)

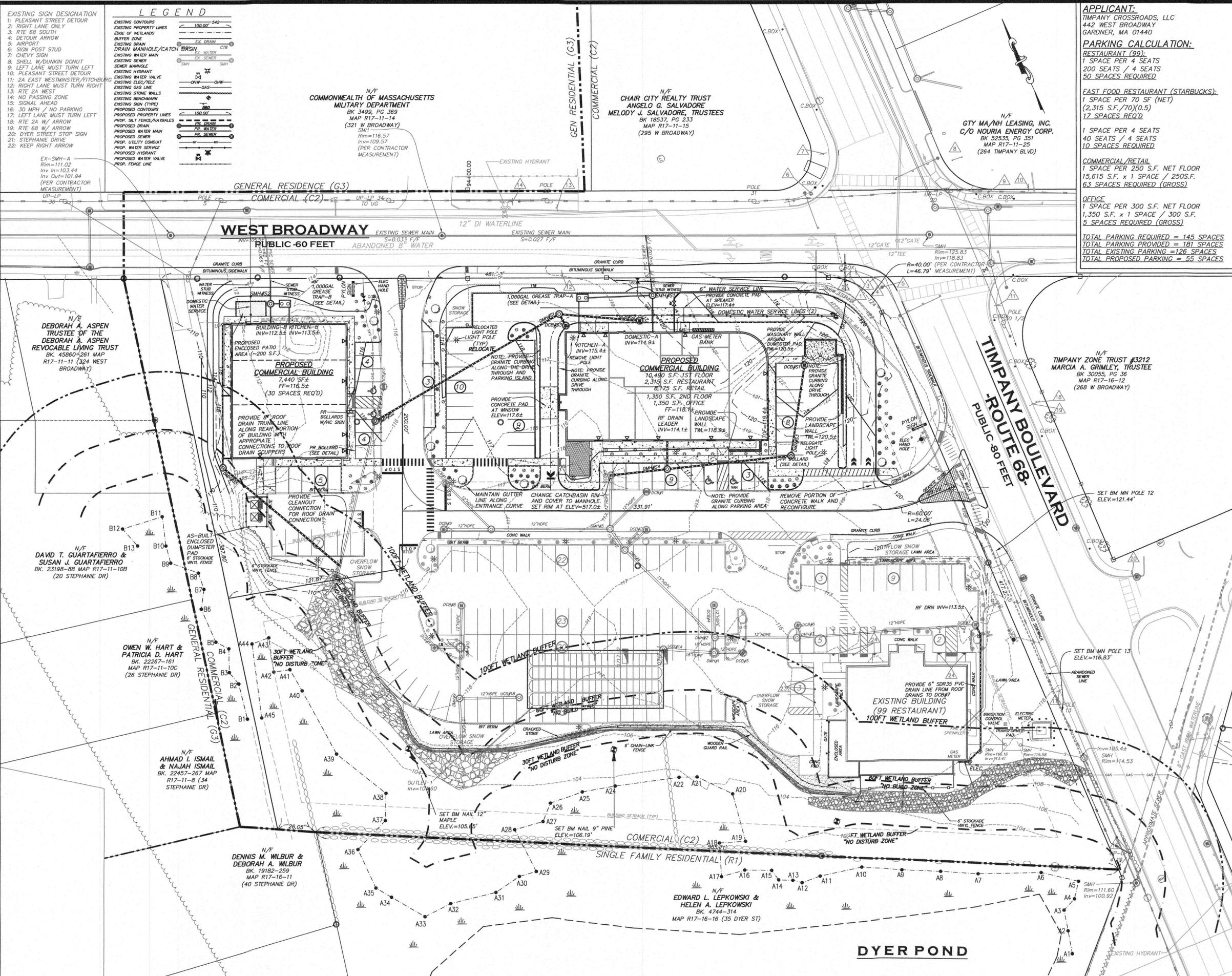
WILLIAM D. HANNIGAN  
REGISTERED PROFESSIONAL ENGINEER  
No. 367  
2-5-20

**SITE DEVELOPMENT PLAN**  
IN  
GARDNER, MASSACHUSETTS

PREPARED FOR:  
TIMPANY CROSSROADS, LLC  
AMY FANTONI  
442 WEST BROADWAY  
GARDNER, MASSACHUSETTS  
TEL:



CALC:	CMA/WDH	DRWN:	CMA/WDH	SCALE:	1"=30'
CHKD:	WDH	APPD:	WDH	DATE:	JUN 22, 2018
SRV:	JEF/PJB	FB:	E2630.013117	JOB NO:	2630
TAB:	(2) SITE	SHEET	2 OF 12	PLAN NO:	CG-13-7



ATERLINE

EXISTING SEWER MAIN

S=0.027 F/F

**WEST BROADWAY**  
PUBLIC-60 FEET

APPLICANT:  
TIMPANY CROSSROADS, LLC  
442 WEST BROADWAY  
GARDNER, MA 01440

**PROJECT INFORMATION**

**LAND INFORMATION**  
MAP/PARCEL: MAP R17, PARCELS 16/14; 16/4; 11/1; 11/2;  
11/10; 11/3; 11/4; 11/5; 11/6; 11/7; 16/3; 16/1  
DEED BOOK/PAGE: 51883/336; 52649/306; 51507/219; 51883/333;  
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PROJECT FRONTAGE: 435.70 FT (WEST BROADWAY)  
PROJECT AREA: 464.01 FT (TIMPANY BOULEVARD)  
4.57 ACRES±

**ZONING INFORMATION**  
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DIMENSIONAL REQUIREMENTS:  
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FRONT YARD: 30 FT  
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  - THE AREA PROPOSED FOR DEVELOPMENT IS NOT WITHIN A 100 YEAR FLOOD PLAIN PER F.E.A.M.A. FIRM PLAN #2008-0008, DATED: JULY 2, 1981. COMPLIANCE WITH APPLICABLE REGULATIONS IS REQUIRED.
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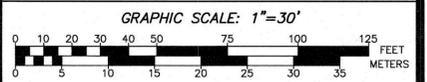
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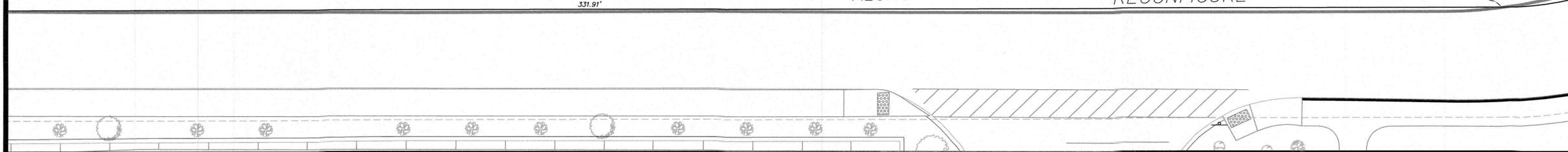
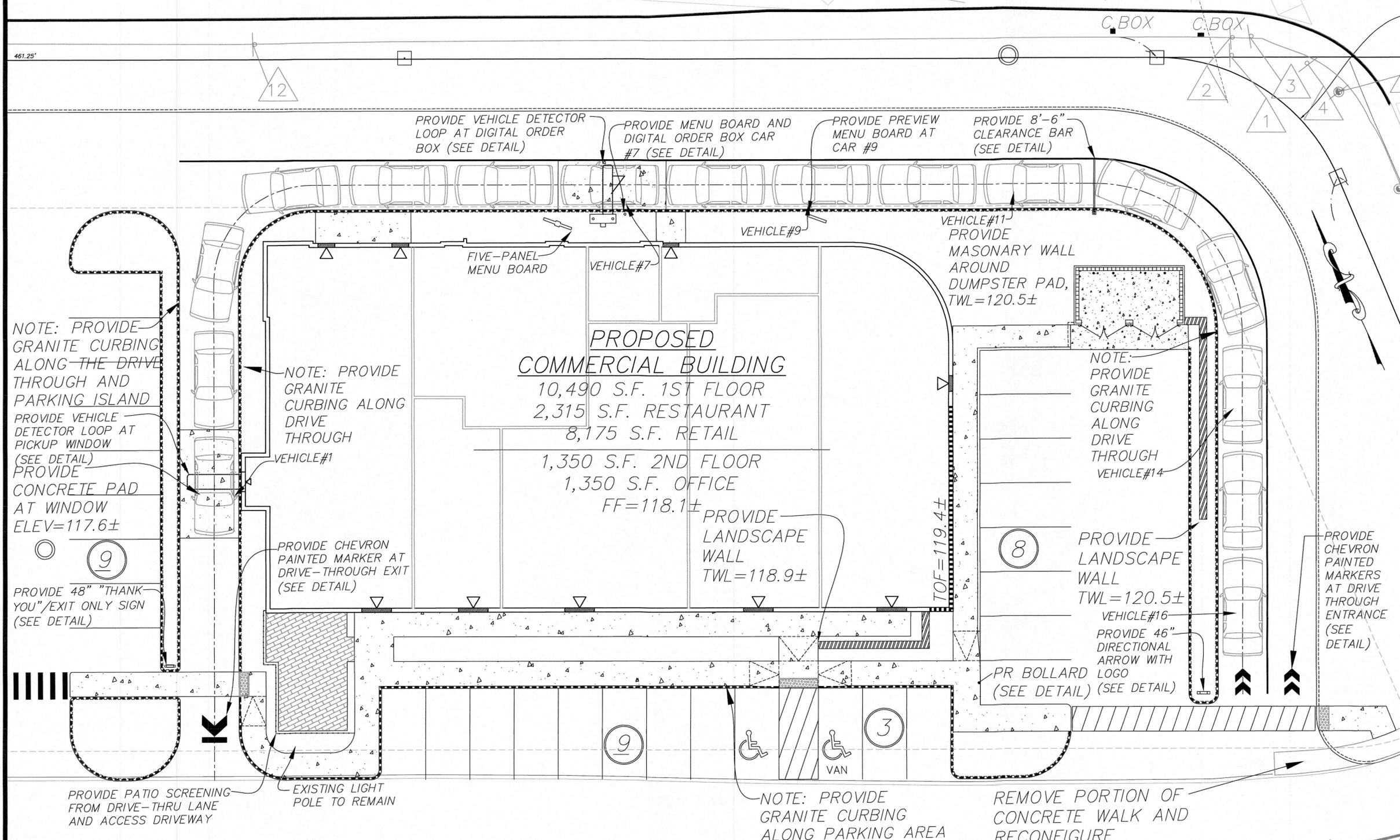
**HANNIGAN ENGINEERING, INC.**  
CIVIL ENGINEERS & LAND SURVEYORS  
8 MONUMENT SQUARE (978) 534-1234 (T)  
LEMINSTER, MASSACHUSETTS 01453 (978) 534-6060 (F)  
WWW.HANNIGANENGINEERING.COM

**DRIVE-THROUGH LAYOUT PLAN**  
IN  
**GARDNER, MASSACHUSETTS**

PREPARED FOR:  
TIMPANY CROSSROADS, LLC  
AMY FANTONI  
442 WEST BROADWAY  
GARDNER, MASSACHUSETTS  
TEL:



CALC:	CMA/WDH	DRWN:	CMA/WDH	SCALE:	1"=30'
CHKD:	WDH	APPD:	WDH	DATE:	JUN 22, 2018
SRV:	JEF/PJB	FB:	E2630.013117	JOB NO:	2630
TAB:	(3) DRIVE	SHEET	3 OF 12	PLAN NO:	C-13-7



**LEGEND**

EXISTING CONTOURS	100.00' - 542
EXISTING PROPERTY LINES	---
EDGE OF WETLANDS	---
BUFFER ZONE	---
EXISTING DRAIN	---
DRAIN MANHOLE/CATCH BASIN	---
EXISTING WATER MAIN	---
EXISTING SEWER	---
EXISTING HYDRANT	---
EXISTING WATER VALVE	---
EXISTING ELEC. POLE	---
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PROP. UTILITY CONDUIT	---
PROP. WATER SERVICE	---
PROPOSED HYDRANT	---
PROPOSED WATER VALVE	---
PROP. FENCE LINE	---

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MILITARY DEPARTMENT  
BK 3499, PG 369  
MAP R17-11-14  
(321 W BROADWAY)

N/F  
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MELODY J. SALVADORE, TRUSTEES  
BK 18537, PG 233  
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(295 W BROADWAY)

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C/O NOURIA ENERGY CORP.  
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  - APPLICANT SHOULD BE AWARE OF OBLIGATIONS TO COMPLY WITH CHAPTER 131, SECTION 40 OF THE MASSACHUSETTS GENERAL LAWS, OTHERWISE KNOWN AS THE WETLANDS PROTECTION ACT, AND THE ASSOCIATED REGULATIONS (310 CMR 10.00).
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  - AREAS OF FILL TO BE COMPACTED TO A MINIMUM 95% DRY DENSITY IN AREAS WITHIN ROADWAYS AND UTILITY EASEMENTS. OTHER AREAS OF FILL TO BE COMPACTED TO A MINIMUM 90% DRY DENSITY. ALL FILL MATERIALS ARE TO BE CLEAN FILL, FREE OF DELETERIOUS MATERIALS AND DEBRIS.
  - ALL SIDEWALKS AND RAMPS TO CONFORM TO REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT (ADA), AS REQUIRED. SEE ARCHITECTURAL PLANS FOR CONFORMANCE REQUIREMENTS FOR PROPOSED BUILDINGS.
  - THE AREA PROPOSED FOR DEVELOPMENT IS NOT WITHIN A 100 YEAR FLOOD PLAIN PER F.E.M.A. FIRM PANEL #25045-0008B, DATED JULY 2, 1981. COMPLIANCE WITH APPLICABLE REGULATIONS IS REQUIRED.
  - ALL REINFORCED CONCRETE PIPE TO BE CLASS III UNLESS OTHERWISE NOTED.
  - PRE-CONSTRUCTION CONFERENCE SHALL BE HELD PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
  - ALL UTILITIES ARE TO BE INSTALLED BY A LICENSED UTILITY CONTRACTOR LICENSED BY THE CITY OF GARDNER.

NO.	DATE	REVISIONS	BY
6	2/5/2020	DRIVE-THROUGH MODIFICATIONS	CMA/WDH
5	04/16/2019	CONSTRUCTION REVISION #1	WDH
4	02/28/2019	ISSUED FOR CONSTRUCTION	WDH
3	12/26/2018	ACCESS/PARKING MODIFICATIONS	CMA/WDH

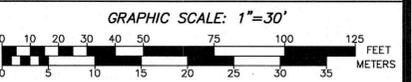


**HANNIGAN ENGINEERING, INC.**  
CIVIL ENGINEERS & LAND SURVEYORS

8 MONUMENT SQUARE (978) 534-1234 (T)  
LEOMINSTER, MASSACHUSETTS 01453 (978) 534-6060 (F)  
WWW.HANNIGANENGINEERING.COM

**SITE LAYOUT PLAN**  
IN  
GARDNER, MASSACHUSETTS

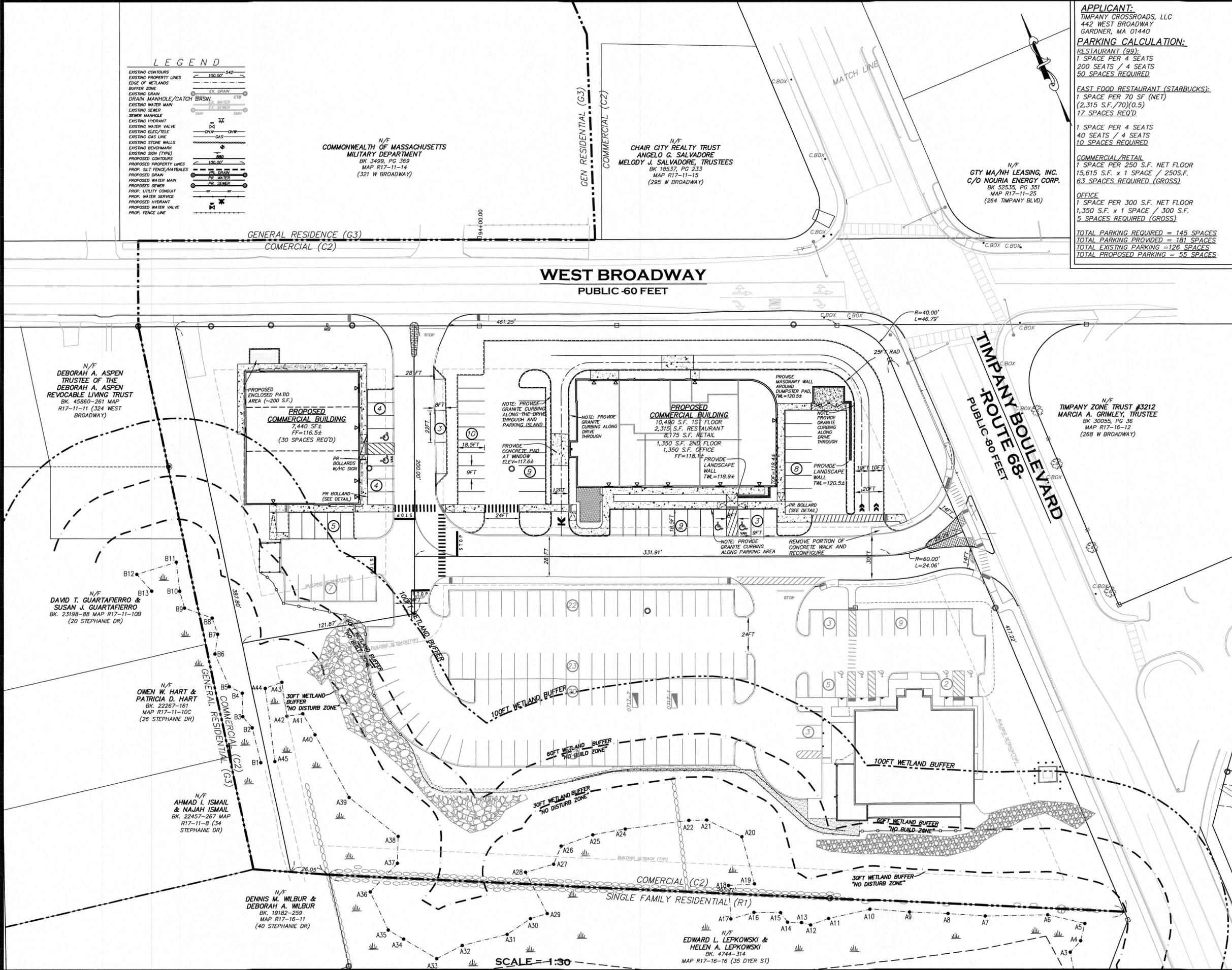
PREPARED FOR:  
TIMPANY CROSSROADS, LLC  
AMY FANTONI  
442 WEST BROADWAY  
GARDNER, MASSACHUSETTS  
TEL:



CALC:	CMA/WDH	DRWN:	CMA/WDH	SCALE:	1"=30'
CHKD:	WDH	APPD:	WDH	DATE:	JUN 22, 2018
SRV:	JEFF/PJB	FB:	E2630.013117	JOB NO:	2630
TAB:	(4) LAYOUT	SHEET:	4 OF 12	PLAN NO:	C-13-7

**WEST BROADWAY**  
PUBLIC-60 FEET

**TIMPANY BOULEVARD**  
PUBLIC-80 FEET



SCALE = 1"=30'

N/F  
EDWARD L. LEPKOWSKI &  
HELEN A. LEPKOWSKI  
BK 4744-314  
MAP R17-16-16 (35 DYER ST)

N/F  
DENNIS M. WILBUR &  
DEBORAH A. WILBUR  
BK 19182-259  
MAP R17-16-11  
(40 STEPHANIE DR)

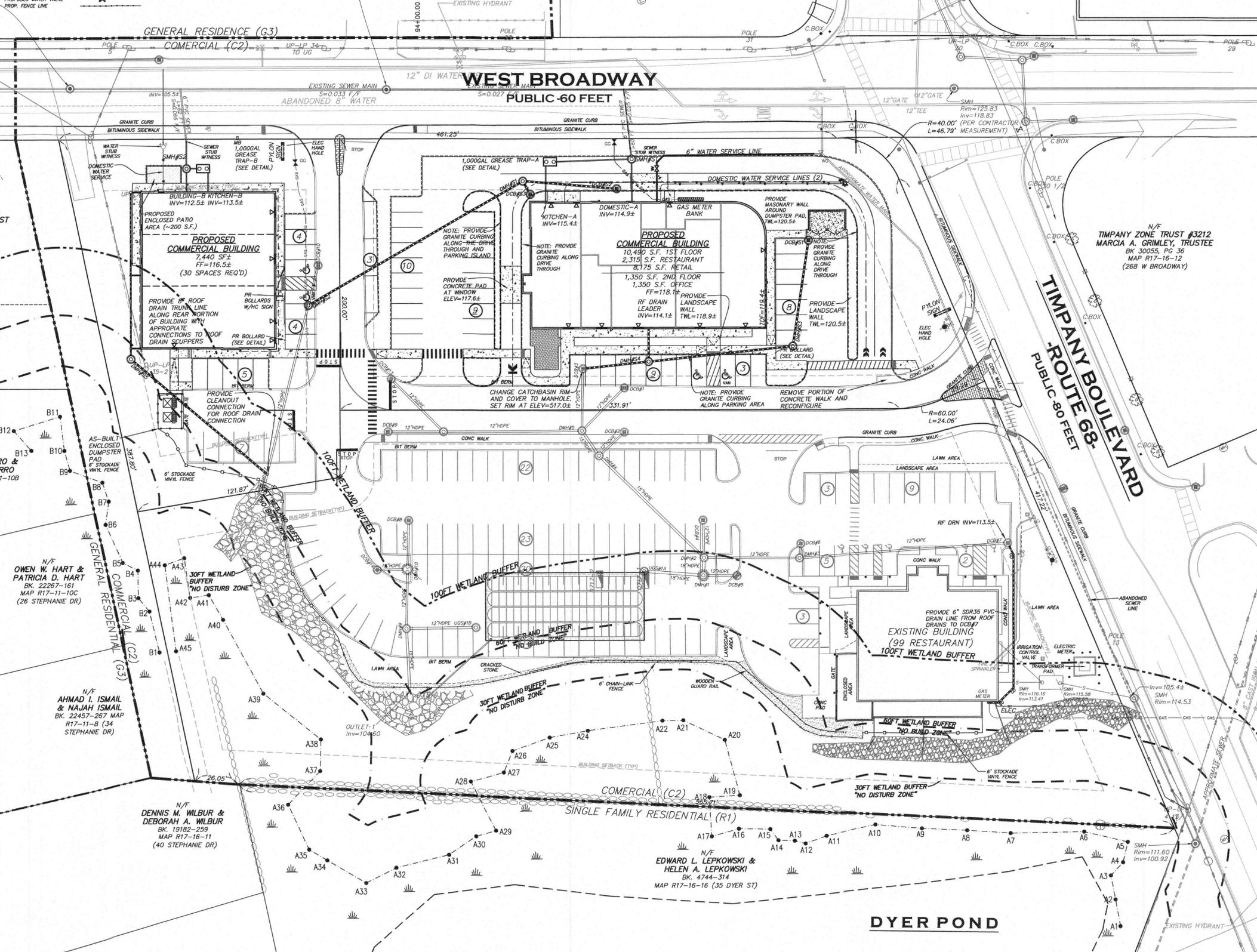
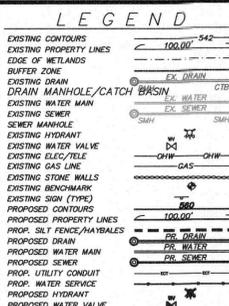
N/F  
OMEN W. HART &  
PATRICIA D. HART  
BK 22267-161  
MAP R17-11-10C  
(26 STEPHANIE DR)

N/F  
DAVID T. GUARTAFIERRO &  
SUSAN J. GUARTAFIERRO  
BK 23198-88 MAP R17-11-10B  
(20 STEPHANIE DR)

N/F  
DEBORAH A. ASPEN  
TRUSTEE OF THE  
DEBORAH A. ASPEN  
REVOCABLE LIVING TRUST  
BK 45860-261 MAP  
R17-11-11 (324 WEST  
BROADWAY)

SCHEDULE OF DRAINAGE STRUCTURES & ELEVATIONS		
FROM	PIPE	TO
DCB#S1 RM=112.2± INV=114.1± SUMP=110.1±	12" HDPE L=61 FT S=0.010 F/F	DMH#S1 RM=118.8± INV=113.5±(DCB#S1) INV=113.4±(OUT)
DCB#S2 RM=116.9± INV=113.8± SUMP=109.8±	12" HDPE L=50 FT S=0.009 F/F	DMH#S2 RM=117.2± INV=113.3±(DCB#S2) INV=113.2±(DCB#S3) INV=112.2±(OUT)
DCB#S3 RM=117.0± INV=113.7± SUMP=109.7±	12" HDPE L=9 FT S=0.044 F/F	DMH#S3 RM=117.2± INV=113.3±(DCB#S3) INV=113.3±(DCB#S2) INV=112.2±(OUT)
DMH#S1 RM=117.2± INV=113.3±(DCB#S2) INV=113.3±(DCB#S3) INV=112.2±(OUT)	12" HDPE L=9 FT S=0.044 F/F	DMH#S2 RM=117.2± INV=113.3±(DCB#S2) INV=113.3±(DCB#S3) INV=112.2±(OUT)
DMH#S2 RM=115.9± INV=111.9±(DMH#S1) INV=111.8±(DMH#S2) INV=111.8±(OUT)	12" HDPE L=82 FT S=0.010 F/F (INSTALLED)	DMH#S1 RM=118.8± INV=113.5±(DCB#S1) INV=113.4±(DCB#S2) INV=113.4±(DCB#S3) INV=112.2±(OUT)
DMH#S3 RM=118.8± INV=113.5±(DCB#S1) INV=113.4±(DCB#S2) INV=113.4±(DCB#S3) INV=112.2±(OUT)	12" HDPE L=82 FT S=0.010 F/F (INSTALLED)	DMH#S2 RM=117.2± INV=113.3±(DCB#S2) INV=113.3±(DCB#S3) INV=112.2±(OUT)
DMH#S4 RM=116.8± INV=112.7±(DMH#S3) INV=112.6±(OUT)	12" HDPE L=82 FT S=0.009 F/F	DMH#S3 RM=118.8± INV=113.5±(DCB#S1) INV=113.4±(DCB#S2) INV=113.4±(DCB#S3) INV=112.2±(OUT)
DMH#S5 RM=115.0± INV=111.5±(CO#1) INV=111.4±(OUT)	12" HDPE L=103 FT S=0.005 F/F	DMH#S4 RM=116.8± INV=112.7±(DMH#S3) INV=112.6±(OUT)
RF DRN-LENGTH BLDG INV=114.1±(OUT)	12" DUCTILE IRON L=19 FT S=0.078 F/F	DMH#S5 RM=115.0± INV=111.5±(CO#1) INV=111.4±(OUT)
CO#1 RM=116.4± INV=113.6±(OUT)	8" SDR35 PVC L=96 FT S=0.021 F/F	DMH#S6 RM=116.8± INV=112.7±(DMH#S5) INV=112.6±(OUT)

SCHEDULE OF SEWER STRUCTURES & ELEVATIONS		
FROM	PIPE	TO
BUILDING SEWER-A (LENGTH BLDG) INVERT=114.5± (DOMESTIC FLOWS)	6" SCH 40 PVC L=24 FT S=0.021 F/F (CAST IRON WITHIN 10 FEET OF FOUNDATION)	SMH#S1 RM=117.4± INV=114.4±(N-DOM) INV=114.4±(N-KIT) INV=114.3±(OUT)* *VERIFY IN FIELD.
BUILDING SEWER-A (KITCHEN FLOW)	4" CAST IRON L=24 FT S=0.020 F/F	GREASE TRAP-A (1,000 GAL) RM=117.9± INV=115.0± SUMP=112.9± INV=114.7±(OUT)
GREASE TRAP-A (1,000 GAL) RM=117.9± INV=115.0± SUMP=112.9± INV=114.7±(OUT)	4" SCH 40 PVC L=40 FT S=0.011 F/F (CAST IRON WITHIN 10 FEET OF FOUNDATION)	SMH#S2 RM=117.4± INV=114.3±(N-DOM) INV=114.3±(N-KIT) INV=114.3±(OUT)* *VERIFY IN FIELD.
BUILDING SEWER-B (WILLIAMS BLDG) INVERT=112.5± (DOMESTIC FLOWS)	6" CAST IRON L=11 FT S=0.028 F/F (CAST IRON WITHIN 10 FEET OF FOUNDATION)	SMH#S3 RM=116.4± INV=112.2±(N-DOM) INV=112.2±(N-KIT) INV=108.5±(OUT)* *VERIFY IN FIELD.
BUILDING SEWER-B (KITCHEN FLOW)	4" CAST IRON L=11 FT S=0.022 F/F	GREASE TRAP-B (1,000 GAL) RM=116.4± INV=112.2±(N-DOM) INV=112.2±(N-KIT) INV=108.5±(OUT)* *VERIFY IN FIELD.
GREASE TRAP-B (1,000 GAL) RM=116.4± INV=112.2±(N-DOM) INV=112.2±(N-KIT) INV=108.5±(OUT)* *VERIFY IN FIELD.	4" CAST IRON L=5 FT S=0.020 F/F	SMH#S4 RM=116.4± INV=112.2±(N-DOM) INV=112.2±(N-KIT) INV=108.5±(OUT)* *VERIFY IN FIELD.



**APPLICANT:**  
TIMPANY CROSSROADS, LLC  
442 WEST BROADWAY  
GARDNER, MA 01440

**N/F**  
GT MA/WH LEASING  
C/O NOURIA ENERGY  
BK 52535, PG 351  
MAP R17-11-25  
(284 TIMPANY BLD)

**N/F**  
CHAIR CITY REALTY TRUST  
ANGELO G. SALVADORE  
MELODY J. SALVADORE, TRUSTEES  
BK 18537, PG 233  
MAP R17-11-15  
(295 W BROADWAY)

**N/F**  
TIMPANY ZONE TRUST #3212  
MARCIA A. GRIMLEY, TRUSTEE  
BK 30055, PG 36  
MAP R17-16-12  
(268 W BROADWAY)

PROJECT INFORMATION	
<b>LAND INFORMATION</b>	
MAP/PARCEL:	MAP R17, PARCELS 16/14, 16/4, 11/1, 11/2, 11/10, 11/3, 11/4, 11/5, 11/6, 11/7, 16/3, 16/1
DEED BOOK/PAGE:	51883/336; 52648/306; 51507/218; 51883/333; 51883/340; 51536/178; 51536/181; 51865/184; 56933/143
PROJECT FRONTAGE:	435.70 FT (WEST BROADWAY)
PROJECT AREA:	464.01 FT (TIMPANY BOULEVARD) 4.57 ACRES±
<b>ZONING INFORMATION</b>	
ZONING DISTRICT:	COMMERCIAL (C2)
<b>DIMENSIONAL REQUIREMENTS:</b>	
MINIMUM AREA:	30,000 SF
MINIMUM FRONTAGE:	100 FEET
MINIMUM HEIGHT:	48 FEET
MINIMUM SETBACKS:	
FRONT YARD:	30 FT
SIDE YARD:	20 FT
REAR YARD:	30 FT

- GENERAL NOTES:**
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CIVIL ENGINEERS & LAND SURVEYORS

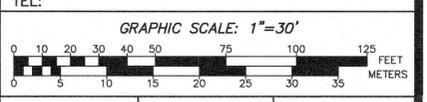
8 MONUMENT SQUARE (978) 534-1234 (T)  
LEWISTON, MASSACHUSETTS 01453 (978) 534-6060 (F)

WWW.HANNIGANENGINEERING.COM

**UTILITY PLAN**  
IN  
**GARDNER, MASSACHUSETTS**

PREPARED FOR:  
TIMPANY CROSSROADS, LLC  
AMY FANTONI  
442 WEST BROADWAY  
GARDNER, MASSACHUSETTS

TEL:



CALC:	CMA/WDH	DRWN:	CMA/WDH	SCALE:	1"=30'
CHKD:	WDH	APPD:	WDH	DATE:	JUN 22, 2018
SRV:	JEF/PJB	FB:	E2630.013117	JOB NO:	2630
TAB:	(5) UTIL	SHEET	5 OF 12	PLAN NO:	C-13-7

- EXISTING SIGN DESIGNATION
- 1: PLEASANT STREET DETOUR
  - 2: RIGHT LANE ONLY
  - 3: RTE 68 SOUTH
  - 4: DETOUR ARROW
  - 5: AIRPORT
  - 6: SIGN POST STUD
  - 7: CHEVY SIGN
  - 8: SHELL W/DUNKIN DONUT
  - 9: LEFT LANE MUST TURN LEFT
  - 10: PLEASANT STREET DETOUR
  - 11: 2A EAST WESTMINSTER/FITCHBURG
  - 12: RIGHT LANE MUST TURN RIGHT
  - 13: RTE 2A WEST
  - 14: NO PASSING ZONE
  - 15: SIGNAL AHEAD
  - 16: 30 MPH / NO PARKING
  - 17: LEFT LANE MUST TURN LEFT
  - 18: RTE 2A W/ ARROW
  - 19: RTE 68 W/ ARROW
  - 20: DYER STREET STOP SIGN
  - 21: STEPHANIE DRIVE
  - 22: KEEP RIGHT ARROW

**LEGEND**



**APPLICANT:**  
TIMPANY CROSSROADS, LLC  
442 WEST BROADWAY  
GARDNER, MA 01440

**PROJECT INFORMATION**

**LAND INFORMATION**  
MAP/PARCEL: MAP R17, PARCELS 16/14; 16/4; 11/1; 11/2; 11/10; 11/3; 11/4; 11/5; 11/6; 11/7; 16/3; 16/1  
DEED BOOK/PAGE: 51883/336; 52648/306; 51507/218; 51883/333; 51883/340; 51536/178; 51536/181; 51865/184; 56933/143  
PROJECT FRONTAGE: 435.70 FT (WEST BROADWAY)  
PROJECT AREA: 464.01 FT (TIMPANY BOULEVARD)  
4.57 ACRES

**ZONING INFORMATION**  
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DIMENSIONAL REQUIREMENTS:  
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REAR YARD: 30 FT

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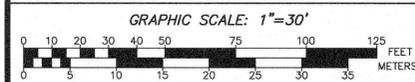


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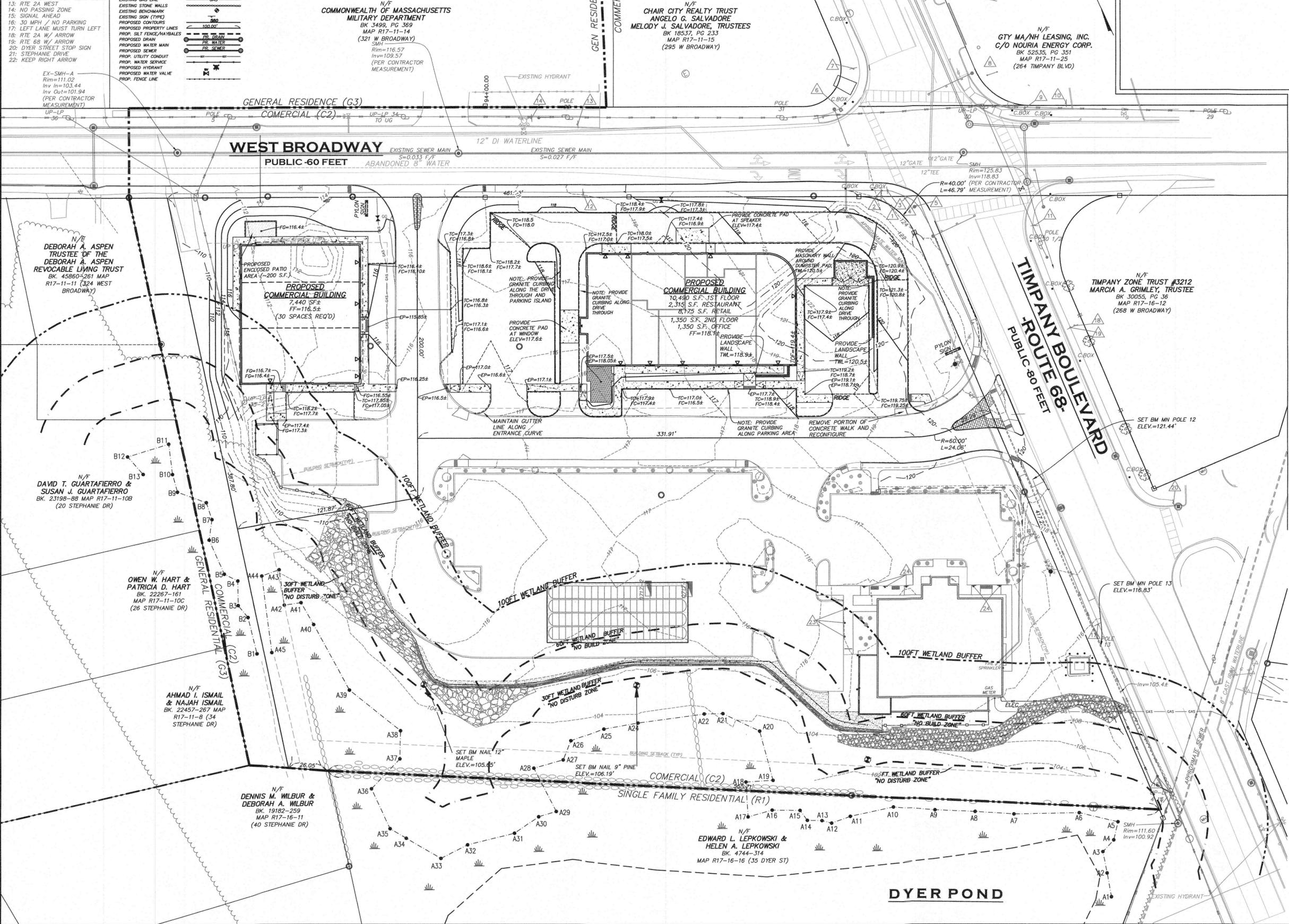
8 MONUMENT SQUARE (978) 534-1234 (T)  
LECOMINSTER, MASSACHUSETTS 01453 (978) 534-6060 (F)  
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**SITE GRADING PLAN**  
IN  
GARDNER, MASSACHUSETTS

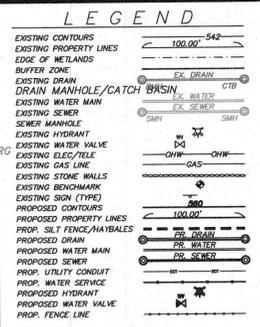
PREPARED FOR:  
TIMPANY CROSSROADS, LLC  
AMY FANTONI  
442 WEST BROADWAY  
GARDNER, MASSACHUSETTS  
TEL:



CALC:	CMA/WDH	DRWN:	CMA/WDH	SCALE:	1"=30'
CHKD:	WDH	APPD:	WDH	DATE:	JUN 22, 2018
SRV:	JEF/PJB	FB:	E2630.013117	JOB NO:	2630
TAB:	(6) GRAD	SHEET	6 OF 12	PLAN NO:	C-13-7



- EXISTING SIGN DESIGNATION
- 1: PLEASANT STREET DETOUR
  - 2: RIGHT LANE ONLY
  - 3: RTE 68 SOUTH
  - 4: DETOUR ARROW
  - 5: AIRPORT
  - 6: SIGN POST STUD
  - 7: CHEVY SIGN
  - 8: SHELL W/DUNKIN DONUT
  - 9: LEFT LANE MUST TURN LEFT
  - 10: PLEASANT STREET DETOUR
  - 11: 2A EAST WESTMINSTER/FITCHBURG
  - 12: RIGHT LANE MUST TURN RIGHT
  - 13: RTE 2A WEST
  - 14: NO PASSING ZONE
  - 15: SIGNAL AHEAD
  - 16: 30 MPH / NO PARKING
  - 17: LEFT LANE MUST TURN LEFT
  - 18: RTE 2A W/ ARROW
  - 19: RTE 68 W/ ARROW
  - 20: DYER STREET STOP SIGN
  - 21: STEPHANIE DRIVE
  - 22: KEEP RIGHT ARROW



N/F  
COMMONWEALTH OF MASSACHUSETTS  
MILITARY DEPARTMENT  
BK 3499, PG 369  
MAP R17-11-14  
(321 W BROADWAY)

N/F  
CHAIR CITY REALTY TRUST  
ANGELO G. SALVADORE, TRUSTEES  
MELODY J. SALVADORE, TRUSTEES  
BK 18537, PG 233  
MAP R17-11-15  
(285 W BROADWAY)

N/F  
GTY MA/NI LEASING, INC.  
C/O NOURIA ENERGY CORP.  
BK 52535, PG 351  
MAP R17-11-25  
(264 TIMPANY BLVD)

**APPLICANT:**  
TIMPANY CROSSROADS, LLC  
442 WEST BROADWAY  
GARDNER, MA 01440

**LANDSCAPE CALCULATION:**  
150 SF OF PLANTED AREA IS REQUIRED FOR EVERY 1,000SF OF PAVEMENT AREA

TOTAL PAVEMENT AREA = 57,706 SF  
TOTAL REQUIRED LANDSCAPE AREA = 8,656 SF  
TOTAL PROVIDED LANDSCAPE AREA = 8,925 SF

**COVERAGE CALCULATION:**  
TOTAL LOT AREA = 199,069 SF  
TOTAL BUILDING AREA = 25,310 SF  
MAXIMUM ALLOWABLE BUILDING COVERAGE IS 50%  
TOTAL BUILDING COVERAGE = 12.7%

**NOTE:**  
FINAL LAYOUT AND DESIGN OF PLANTING AREAS TO BE DESIGNED BY OTHERS PRIOR TO INSTALLATION.

**PROJECT INFORMATION**

**LAND INFORMATION**  
MAP/PARCEL: MAP R17, PARCELS 16/14; 16/4; 11/1; 11/2;  
11/10; 11/3; 11/4; 11/5; 11/6; 11/7; 16/3; 16/1  
DEED BOOK/PAGE: 51883/336; 52648/306; 51507/219; 51883/333;  
51883/340; 515336/178; 51536/181; 51865/184;  
56933/143

PROJECT FRONTAGE: 454.01 FT (WEST BROADWAY)  
PROJECT AREA: 464.01 FT (TIMPANY BOULEVARD)  
4.57 ACRES±

**ZONING INFORMATION**  
ZONING DISTRICT: COMMERCIAL (C2)  
DIMENSIONAL REQUIREMENTS:  
MINIMUM AREA: 30,000 SF  
MINIMUM FRONTAGE: 100 FEET  
MAXIMUM HEIGHT: 48 FEET  
MINIMUM SETBACKS:  
FRONT YARD: 30 FT  
SIDE YARD: 30 FT  
REAR YARD: 30 FT

**GENERAL NOTES:**

1. PROPERTY LINE INFORMATION BASED DEEDS AND PLANS OF RECORD. NO CERTIFICATION OF PROPERTY LINES SHOWN ON THIS PLAN IS INTENDED OR IMPLIED BY HANNIGAN ENGINEERING, INC. PROPERTY LINE DETERMINATIONS MADE BY A ON-THE-GROUND PROPERTY LINE SURVEY. TOPOGRAPHIC INFORMATION IS THE RESULT OF AN ON-THE-GROUND TOPOGRAPHIC SURVEY BY HANNIGAN ENGINEERING, INC. IN JANUARY OF 2017.
2. AREAS SUBJECT TO PROTECTION UNDER THE WETLANDS PROTECTION ACT HAVE BEEN DELINEATED BY CAROL ENVIRONMENTAL IN JANUARY OF 2017. THESE AREAS ARE DEPICTED ON THE PLANS BASED ON FIELD SURVEY LOCATION DURING THE TOPOGRAPHIC SURVEY.
3. LOCATION OF ALL UTILITIES ARE APPROXIMATE AS SHOWN AND BASED UPON VISIBLE STRUCTURES AT THE TIME OF THE FIELD SURVEY. LOCATION OF EXISTING UTILITIES AND SUBSURFACE STRUCTURES, WHETHER OR NOT SHOWN ON THESE PLANS, SHALL BE DETERMINED BY THE CONTRACTOR MARKED IN THE FIELD, AND REVIEWED BY THE ENGINEER PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. THE CONTRACTOR SHALL BE AWARE OF THE OBLIGATION TO ALL UTILITY COMPANIES AND AGENCY AS WELL AS DIG-SAFE PRIOR TO EXCAVATION. (SEE NOTE)
4. NOTIFICATION REQUIREMENTS SHOWN ON THIS PLAN SHALL NOT RELIEVE THE CONTRACTOR OF ANY OTHER REQUIREMENTS WHICH MAY EXIST UNDER LOCAL, STATE, OR FEDERAL JURISDICTION TO WHICH THE CONTRACTOR IS OBLIGATED.
5. RELOCATION OF AND/OR CONNECTION TO EXISTING UTILITIES SHALL BE PERFORMED IN ACCORDANCE WITH PROVISIONS OF THE APPROPRIATE UTILITY COMPANY AND/OR REGULATORY AGENCY.
6. UNLESS OTHERWISE SPECIFIED, ALL MATERIALS AND WORKMANSHIP SHALL CONFORM WITH THE REQUIREMENTS OF THE CITY OF GARDNER AND THE MASS DOT SPECIFICATIONS FOR HIGHWAYS AND BRIDGES.
7. ALL SLOPES UNLESS OTHERWISE SPECIFIED, SHALL BE LOAMED AND SEEDED FOR STABILIZATION.
8. ANY DEVIATIONS IN DESIGN AS SHOWN SHALL REQUIRE A REVIEW AND APPROVAL OF THE DESIGN ENGINEER OR FIRM. CHANGES MADE IN THE FIELD MADE WITHOUT AUTHORIZATION SHALL BE SUBJECT TO REVIEW BY THE ENGINEER AND APPROPRIATE APPROVING AUTHORITY. EXPENSES INCURRED TO BRING THE UNAUTHORIZED CHANGES TO ACCEPTABLE CONFORMANCE SHALL BE BORNE BY THE COMPANY OR CONTRACTOR MAKING THE UNAUTHORIZED CHANGE.
9. ANY MATERIALS DISCOVERED ON-SITE WHICH ARE NOT SUITABLE FOR USE IN THE PROJECT AS SHOWN ON THESE PLANS SHALL BE REMOVED AND HAULED OFF-SITE TO AN APPROPRIATELY LICENSED FACILITY.
10. PLANS TO BE REVIEWED BY APPLICABLE UTILITY AGENCIES FOR COMPLIANCE WITH REGULATIONS. FINAL LOCATION IS SUBJECT TO CHANGE.
11. APPLICANT SHOULD BE AWARE OF OBLIGATIONS TO COMPLY WITH CHAPTER 131, SECTION 40 OF THE MASSACHUSETTS GENERAL LAWS, OTHERWISE KNOWN AS THE WETLANDS PROTECTION ACT, AND THE ASSOCIATED REGULATIONS (310 CMR 10.00).
12. STOCKPILING OF MATERIAL SHALL NOT BE PERMITTED WITHIN ANY AREAS SUBJECT TO PROTECTION UNDER THE WETLANDS PROTECTION ACT WITHOUT PRIOR APPROVAL BY THE LOCAL CONSERVATION COMMISSION. STOCKPILES SHALL BE PLACED IN A SUITABLE LOCATION AND SURROUNDED BY A ROW OF STACKED HAY BALES FOR EROSION CONTROL.
13. AREAS OF FILL TO BE COMPACTED TO A MINIMUM 95% DRY DENSITY IN AREAS WITHIN ROADWAYS AND UTILITY EASEMENTS. OTHER AREAS OF FILL TO BE COMPACTED TO A MINIMUM 90% DRY DENSITY. ALL FILL MATERIALS ARE TO BE CLEAN FILL, FREE OF DELETERIOUS MATERIALS AND DEBRIS.
14. ALL SIDEWALKS AND RAMPS TO CONFORM TO REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT (ADA), AS REQUIRED. SEE ARCHITECTURAL PLANS FOR CONFORMANCE REQUIREMENTS FOR PROPOSED BUILDINGS.
15. THE AREA PROPOSED FOR DEVELOPMENT IS NOT WITHIN A 100 YEAR FLOOD PLAIN PER F.E.M.A. FIRM PANEL #250305-0009B, DATED: JULY 2, 1981. COMPLIANCE WITH APPLICABLE REGULATIONS IS REQUIRED.
16. ALL REINFORCED CONCRETE PIPE TO BE CLASS III UNLESS OTHERWISE NOTED.
17. PRE-CONSTRUCTION CONFERENCE SHALL BE HELD PRIOR TO THE COMMENCEMENT OF CONSTRUCTION OF A LICENSED UTILITY CONTRACTOR LICENSED BY THE CITY OF GARDNER.
18. ALL UTILITIES ARE TO BE INSTALLED BY A LICENSED UTILITY CONTRACTOR LICENSED BY THE CITY OF GARDNER.

NO.	DATE	REVISIONS	BY
6	2/3/2020	DRIVE-THROUGH MODIFICATIONS	CMA/WDH
5	04/16/2019	CONSTRUCTION REVISION #1	WDH
4	02/28/2019	ISSUED FOR CONSTRUCTION	WDH
3	12/26/2018	ACCESS/PARKING MODIFICATIONS	CMA/WDH

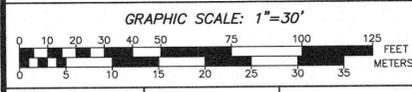


**HANNIGAN ENGINEERING, INC.**  
CIVIL ENGINEERS & LAND SURVEYORS

8 MONUMENT SQUARE (978) 534-1234 (T)  
LEOMINSTER, MASSACHUSETTS 01453 (978) 534-6060 (F)  
WWW.HANNIGANENGINEERING.COM

**LANDSCAPING PLAN**  
IN  
GARDNER, MASSACHUSETTS

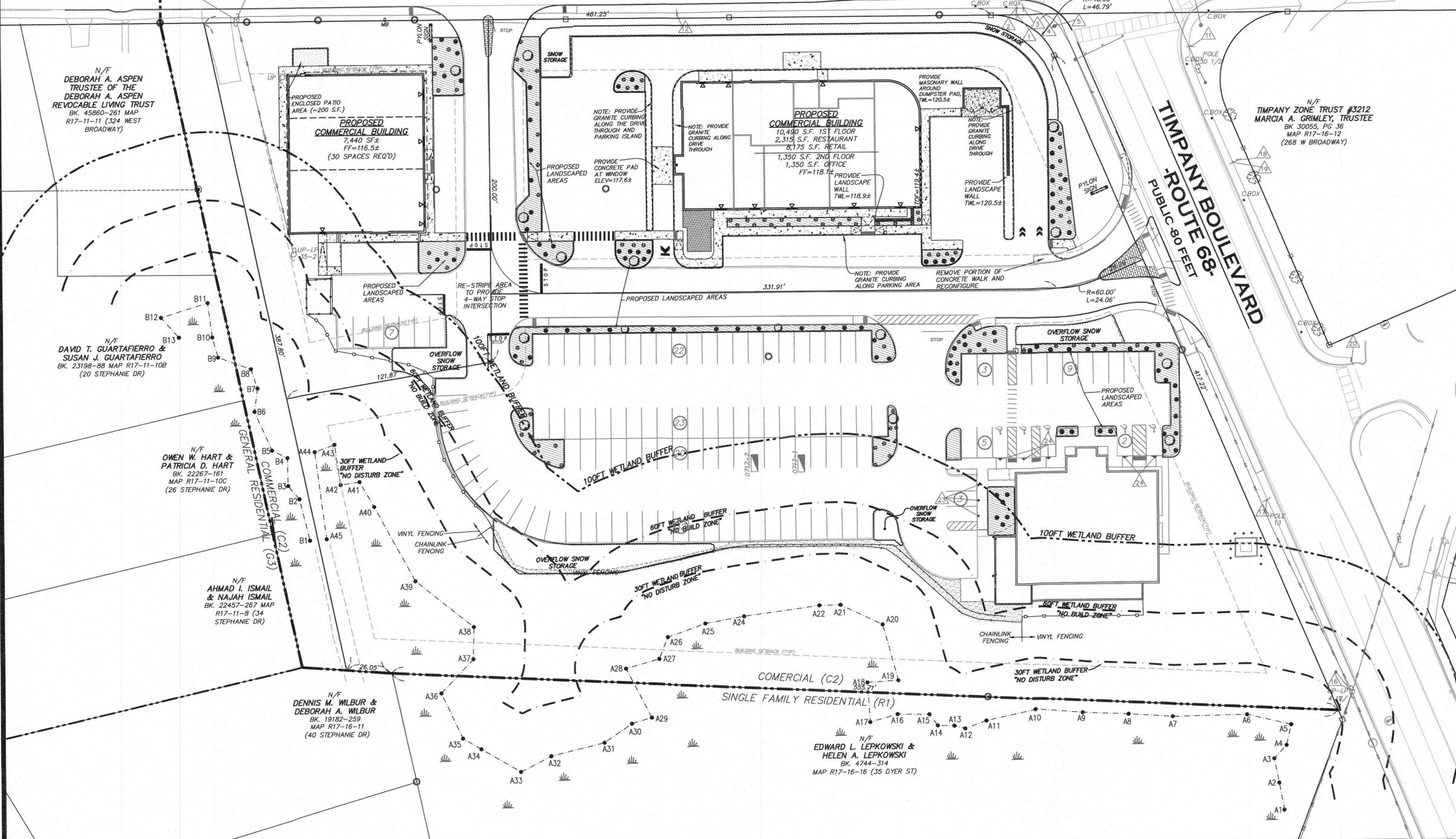
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**WEST BROADWAY**  
PUBLIC-60 FEET

**TIMPANY BOULEVARD**  
ROUTE 68  
PUBLIC-80 FEET



N/F  
DEBORAH A. ASPEN  
TRUSTEE OF THE  
DEBORAH A. ASPEN  
REVOCABLE LIVING TRUST  
BK. 45860-261 MAP  
R17-11-11 (324 WEST  
BROADWAY)

N/F  
DAVID T. QUARTAFIERRO  
&  
SUSAN J. QUARTAFIERRO  
BK. 23198-88 MAP R17-11-10B  
(20 STEPHANIE DR)

N/F  
OMEN W. HART &  
PATRICIA D. HART  
BK. 22267-161  
MAP R17-11-10C  
(26 STEPHANIE DR)

N/F  
AHMAD I. ISMAIL  
& NAJAH ISMAIL  
BK. 22457-267 MAP  
R17-11-8 (34  
STEPHANIE DR)

N/F  
DENNIS M. WILBUR &  
DEBORAH A. WILBUR  
BK. 19182-259  
MAP R17-16-11  
(40 STEPHANIE DR)

N/F  
EDWARD L. LEPKOWSKI &  
HELEN A. LEPKOWSKI  
BK. 4744-314  
MAP R17-16-16 (35 DYER ST)

**EROSION & SEDIMENTATION CONTROL PLAN**

**GENERAL:**

1. THE PURPOSE OF THIS PLAN IS TO PRESENT A PREVENTIVE METHOD OF CONSTRUCTION TO MINIMIZE THE IMPACT OF THE CONSTRUCTION ACTIVITIES UPON WETLAND AND OTHER SENSITIVE AREAS. THE DATA CONTAINED ON THIS PLAN IS INTENDED TO ASSIST THE DEVELOPER OR CONTRACTORS' EXPERTISE AND IS NOT MEANT TO CIRCUMVENT LOGICAL DECISIONS REQUIRED BY A VARIETY OF FIELD CONDITIONS INCLUDING WEATHER AND THE TYPE OF EQUIPMENT AVAILABLE TO THE CONTRACTOR.
2. THE CONTRACTOR IS TO BE AWARE OF THE REQUIREMENTS AND OBLIGATIONS TO COMPLY WITH CHAPTER 131, SECTION 40 OF THE MASSACHUSETTS GENERAL LAWS, OTHERWISE KNOWN AS THE WETLANDS PROTECTION ACT, AND ITS ASSOCIATED REGULATIONS (310 CMR 10.00). CERTAIN PERMITS IN THE FORM OF AN ORDER OF CONDITIONS, OR OTHER FORMAT, MAY BE REQUIRED FOR THE CONSTRUCTION AS DEPICTED ON THIS PLAN. THESE PERMITS SHALL BE REVIEWED AND ADHERED TO BY THE CONTRACTOR THROUGHOUT THE CONSTRUCTION PROCESS. THE CONTRACTOR SHALL ALSO MAINTAIN COPIES OF ALL PERMITS ON SITE AT ALL TIMES.
3. IF CHANGES IN THE PROJECT ARE REQUIRED DUE TO FIELD CONDITIONS THE DEVELOPER/CONTRACTOR SHALL PROMPTLY NOTIFY THE ENGINEER FOR REVIEW OF THESE CONDITIONS. UPON REVIEW, AND PRIOR TO THE IMPLEMENTATION OF ANY CHANGE, THE DEVELOPER AND THE ENGINEER SHALL MEET WITH THE APPROPRIATE LOCAL AND/OR STATE OFFICIAL, OR ITS AGENT, TO DETERMINE IF THE CHANGE REQUIRES MODIFICATION TO EXISTING APPROVED PERMITS.
4. ALTERATION AND/OR DESTRUCTION OF WETLAND AREAS WITHOUT PRIOR CONSENT OF THE CONSERVATION COMMISSION IS PROHIBITED. SILTATION PLUMES, ILLUOT DISCHARGES, OR INADVERTENT ALTERATION SHALL BE CONSIDERED AS ACTIVITIES NOT PERMITTED BY THE ORDER AND SHALL BE REPORTED TO THE CONSERVATION COMMISSION ALONG WITH THE PROPOSED MITIGATIVE MEASURES.
5. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, THE EROSION AND SEDIMENT CONTROL BARRIERS SHALL BE INSTALLED AS SHOWN ON THE PLANS. THE CONTRACTOR SHALL MAINTAIN THE EROSION CONTROL BARRIER UNTIL ALL WORK IS COMPLETE AND ALL AREAS HAVE BEEN STABILIZED. THE REMOVAL OF SEDIMENT CONTROL DEVICES SHALL BE ONLY UPON THE APPROVAL OF THE CONSERVATION COMMISSION.
6. EROSION AND SEDIMENTATION CONTROL DEVICES, SUCH AS CHECK DAMS, SEDIMENT BASINS, ETC. ARE TO BE INSTALLED AS SHOWN ON THE SITE DEVELOPMENT PLANS WITH ASSOCIATED DETAILS, AS APPROPRIATE.
7. CONSTRUCTION OPERATIONS SHALL NOT CAUSE NOTICEABLE SEDIMENTATION PLUMES TO OCCUR ON OR SURROUNDING THE PROJECT. SHOULD SEDIMENT BEHIND THE EROSION CONTROL BARRIERS, THE CONTRACTOR SHALL STOP WORK AND INSTALL ADDITIONAL MITIGATION MEASURES TO PREVENT FURTHER SEDIMENTATION.
8. NO MATERIAL SUBJECT TO EROSION SHALL BE STOCKPILED OVERNIGHT WITHIN 100 FEET OF ANY WETLAND AREAS WITHOUT PROPER EROSION AND SEDIMENTATION DEVICES IN PLACE.
9. EQUIPMENT SHALL NOT BE PARKED WITHIN WETLAND OR BUFFER AREAS EXCEPT DURING ACTUAL OPERATIONS REQUIRING SAID EQUIPMENT.
10. ACCUMULATED SEDIMENT ALONG EROSION CONTROL BARRIERS SHALL BE PERIODICALLY REMOVED AND DISPOSED OF BY THE CONTRACTOR AS REQUIRED BY THE CONSERVATION COMMISSION OR AS DIRECTED BY THE ENGINEER.

**EROSION CONTROL METHODS:**

1. IT IS OF GREAT IMPORTANCE THAT CONCENTRATION OF RUNOFF BE AVOIDED IN ORDER TO PREVENT THE TRANSPORT OF SEDIMENT.
2. THE PRIMARY EROSION CONTROL METHOD TO BE UTILIZED IS TO LIMIT THE AREA OF DISTURBANCE DURING CONSTRUCTION ACTIVITIES. THIS IS ACCOMPLISHED BY PROMPT STABILIZATION OF DISTURBED AREAS UPON COMPLETION OF SEQUENCES OF CONSTRUCTION.
3. EROSION AND SEDIMENT CONTROL DEVICES SUCH AS HAY BALES, SILT FENCES, DIVERSION BERMS, ETC. SHALL BE UTILIZED FOR THE PROTECTION OF THE AREAS BEYOND THE LIMIT OF CONSTRUCTION.

**DEMARCATION OF SENSITIVE AREAS:**

1. IT IS RECOMMEND THAT BARRIERS BE PLACED ON THE SITE TO CONTROL THE LIMITS OF THE DISTURBANCE. HAY BALE BARRIERS PROVIDE SUCH DEMARCATION AND OTHER METHODS SUCH AS LOG BARRIERS, ROPE WITH FLAGGING, ETC. MAY BE UTILIZED.
2. CARE SHOULD BE TAKEN IN THE OPERATION OF EQUIPMENT, SUCH THAT ONLY THE MINIMUM AREA NEEDED TO BE ALTERED IS DISTURBED.

**ACCESS:**

1. ACCESS TO THE SITE SHALL BE MADE IN THE AREA OF A PERMANENT DRIVEWAY OR ROADWAY UNLESS DOING SO WOULD RESULT IN A TRAFFIC HAZARD.
2. AN AREA OF CRUSHED STONE SHALL BE PLACED AT THE DRIVEWAY ENTRANCE TO INSURE THAT MUD IS NOT TRACKED ONTO THE EXISTING ROAD (SEE CONSTRUCTION ENTRANCE DETAIL). IF MUD IS INADVERTENTLY TRACKED ONTO THE ROAD, IT SHOULD BE PROMPTLY REMOVED.
3. LABORERS VEHICLES SHALL BE PARKED IN A DESIGNATED AREA AS TO MINIMIZE DISTURBED SURFACES AND TO INSURE THAT RUTS ARE NOT CREATED AND WHICH COULD CARRY WATER TO A WETLAND OR OTHER SENSITIVE AREA.
4. SUITABLE MEASURES SHALL BE TAKEN TO INSURE THAT LARGE DELIVERY TRUCKS SERVING THE SITE DO NOT DAMAGE TO AREAS OF EXISTING VEGETATION OR CAUSE DISTURBANCE TO STABILIZED AREAS.

**ORDERLY CONSTRUCTION PROCEDURES:**

1. THE CONTRACTOR SHALL PERFORM SITE CONSTRUCTION IN A MANNER WHICH WILL INSURE THE STABILIZATION OF AREAS IN PROXIMITY OF OR TRIBUTARY TO WETLAND AREAS AS SOON AS POSSIBLE.
2. EROSION CONTROL DEVICES SUCH AS HAY BALE BARRIERS, SILT FENCES AND MULCH SHALL BE BROUGHT TO THE SITE AND STOCKPILED PRIOR TO INITIATING CONSTRUCTION.
3. THE CONTRACTOR SHALL PROVIDE AREAS FOR THE TEMPORARY STORAGE OF CONSTRUCTION DEBRIS. CONSTRUCTION DEBRIS SHALL NOT BE ALLOWED TO ACCUMULATE FOR AN EXTENDED PERIOD OF TIME.

**CLEARING:**

1. LAND CLEARING SHALL BE PERFORMED IN PHASES CONSISTENT WITH ACTUAL CONSTRUCTION REQUIREMENTS. FINAL LAND CLEARING SHALL BE LIMITED TO RETURN TO GRADE SLOPES.
2. TREES SHALL BE CUT AND STUMPS GROUND IN PLACE TO EXISTING GRADE TO MAINTAIN SOIL STABILIZATION.
3. BRUSH AND BRANCHES SHOULD BE CHIPPED AND UTILIZED FOR WOOD MULCH IF PRACTICAL.
4. VEHICLES UTILIZED IN THE CLEARING OPERATION SHOULD NOT TRAVERSE WETLANDS OR FLOWING BROOKS OR STREAMS WITHOUT PRIOR APPROVAL FROM THE LOCAL CONSERVATION COMMISSION OR AGENT.

**GRUBBING AND STRIPPING:**

1. TOP SOIL SHALL BE RETAINED FOR LANDSCAPING PURPOSES.
2. GRUBBING AND STRIPPING OF SLOPES LEADING TO WETLAND AREAS SHOULD NOT BE UNDERTAKEN DURING PERIODS OF INTENSE RAINFALL.
3. TOP SOIL STOCKPILE LOCATIONS ARE DEPICTED ON THE SITE DEVELOPMENT PLAN, THE EROSION CONTROL PLAN, AND/OR THE CONSTRUCTION PHASING PLAN AND SHALL BE ADHERED TO.
4. WHEN WORKING IN THE VICINITY OF WETLANDS, TOP SOIL SATURATED WITH WATER SHALL BE REMOVED, AND CONTAINED PRIOR TO BEING USED.
5. AREAS LEADING TO WETLANDS SHALL HAVE HAY BALE BARRIERS INSTALLED ACROSS THEM IN ARCS POINTING DOWN THE HILL AT INTERVALS SUFFICIENT TO MITIGATE RUNOFF CARRYING SEDIMENT.
6. DURING PERIODS OF INTENSE RAINFALL, OR IF THE PROJECT IS TO BE LEFT FOR A PERIOD OF TIME, CONSIDERATION SHOULD BE GIVEN TO SUPPLEMENTARY HAY BALE BARRIERS WITH EITHER CRUSHED STONE OR ARMORED BARRIERS. CONSIDERATION MAY ALSO BE GIVEN TO DIVERTING RUNOFF INTO TEMPORARY SEDIMENTATION CONTROL AREAS.
7. WHENEVER PRACTICAL, NATURAL VEGETATION SHALL BE RETAINED, PROTECTED AND SUPPLEMENTED.

**ROUGH GRADING:**

1. THE ROUGH GRADING OF THE ROADWAY SHALL FOLLOW THE FILL AND EXCAVATION SEQUENCES, RESULTING IN SLOPES BEING MAINTAINED AWAY FROM WETLANDS AND SENSITIVE AREAS AS MUCH AS PRACTICAL.
2. DURING THIS PROCESS THE EROSION POTENTIAL IS HIGH. SUFFICIENT EROSION CONTROL BARRIERS SHOULD BE KEPT IN PROXIMITY TO THE WORK AREA TO ALLOW QUICK ACTION SHOULD EROSION BECOME AN ISSUE AND TO INSURE THAT NO SEDIMENT REACHES WETLANDS OR OTHER SENSITIVE AREAS.
3. IN AREAS OF CUT AND/OR FILL WHERE SLOPES COULD DIVERT WATER TOWARD WETLAND AREAS, DIVERSION TRENCHES AND/OR SWALES SHOULD BE CONSIDERED AND IMPLEMENTED TO DIVERT WATER AWAY FROM THESE AREAS.
4. STEEP SIDE SLOPES IN EXCAVATION OR FILL SHOULD BE AVOIDED.
5. DISTURBED AREAS SHALL BE STABILIZED BY LOAMING AND SEEDING OR RIPRAP IMMEDIATELY AFTER THE FINISH GRADE HAS BEEN MET. IF FINAL GRADING DOES NOT OCCUR DURING THE GROWING SEASON, THESE AREAS SHALL BE MULCHED BY HAY SECURED BY WEIGHTED SNOW FENCE, CHICKEN WIRE MESH OR JUTE NETTING WITH APPROPRIATE SECURING DEVICES.
6. A GROUND COVER SUFFICIENT TO RETAIN SOILS IN A STABILIZED CONDITION MUST BE PROVIDED WITHIN 14 WORKING DAYS, SEASON PERMITTING, ON ANY PORTION OF THE TRACT UPON WHICH FURTHER ACTIVE CONSTRUCTION IS NOT BEING UNDERTAKEN.

**DRAINAGE:**

1. IF DRAINAGE PIPES OR SWALES ARE TO BE INSTALLED, THEY SHALL BE CONSTRUCTED FROM DOWNSTREAM UP AND CONSTRUCTION SHALL INCLUDE THE PLACEMENT OF OUTFALL RIPRAP AND OTHER MITIGATIVE MEASURES SHOWN ON THE PLAN.
2. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, HAY BALES OR OTHER SUITABLE METHODS TO ENTRAP SEDIMENT SHALL BE PLACED DOWNSTREAM.
3. THE TOE OF EMBANKMENTS SHALL BE STABILIZED IMMEDIATELY, MULCHED AND TACKED DOWN BY SUITABLE MEANS.
4. IF THE PROPOSED ROADWAY IS NOT PAVED IMMEDIATELY AFTER THE INSTALLATION OF DRAINAGE STRUCTURES, HAY BALES SHALL BE PLACED TO PROTECT THE INTEGRITY OF THE STRUCTURES.

**WATER SUPPLY:**

1. IF MUNICIPAL WATER SUPPLY IS TO BE UTILIZED, CARE SHOULD BE TAKEN TO INSURE THAT THE TRENCH DOES NOT DIVERT RUNOFF WATER TO A WETLAND AREA OR ONTO A ROAD WHERE IT WILL BE CARRIED INTO A WETLAND OR SENSITIVE AREA.
2. IF PRIVATE ON-SITE WELLS ARE PROPOSED, CARE SHOULD BE TAKEN IN THE CONSTRUCTION OF THE WELL TO INSURE THAT DRILLING FLUID DOES NOT DISCHARGE TO A STREAM, WETLAND OR SENSITIVE AREA.
3. WELL DRILLING OPERATIONS SHALL BE SUCH THAT WETLANDS ARE NOT DISTURBED AND THE INSTALLATION OF THE WATER LINE WILL NOT DIRECT WATER TOWARDS A WETLAND AREA.

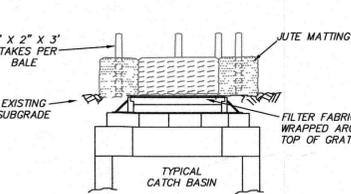
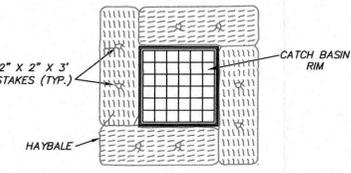
**BUILDING CONSTRUCTION:**

1. DURING THE CONSTRUCTION OF BUILDINGS, MATERIALS SHALL BE STOCKPILED IN A MANNER AS NOT TO DIVERT OR CONCENTRATE RUNOFF IN ORDER TO PREVENT THE TRANSPORT OF SEDIMENT.
2. THE LOT SHOULD BE KEPT LITTER FREE.
3. NO FUELS, SOLVENTS, PAINTS, ETC. SHALL BE STORED ON SITE. THESE PRODUCTS SHALL BE REMOVED FROM THE SITE EACH EVENING AND RETURNED THE FOLLOWING DAY.
4. BURIAL OF MATERIALS OR CONSTRUCTION DEBRIS IS PROHIBITED.
5. PLASTERERS AND PAINTERS SHALL BE INFORMED THAT DISCHARGE OF LIQUIDS INTO A WETLAND OR RESOURCE AREA IS PROHIBITED.

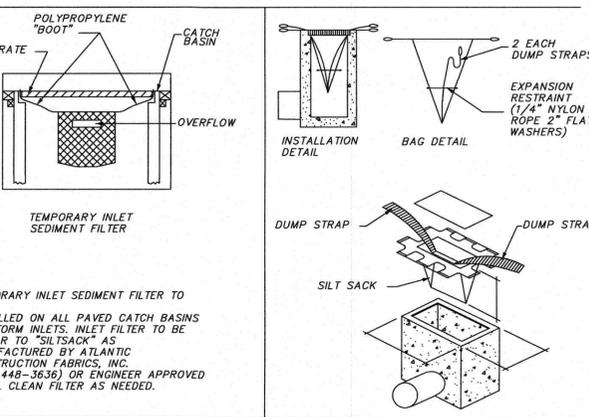
**LANDSCAPING:**

1. LANDSCAPING OF AREAS SHOULD OCCUR AS SOON AS POSSIBLE.
2. IF THE SEASON OR ADVERSE WEATHER CONDITIONS DO NOT PERMIT THE ESTABLISHMENT OF VEGETATION, TEMPORARY HAY MULCH OR OTHER MEANS OF STABILIZATION SHALL BE PERFORMED.
3. USE OF HERBICIDES MAY BE SUBJECT TO OTHER REGULATIONS.
4. CARE SHOULD BE TAKEN WITH FERTILIZERS SUCH THAT THEY ARE NOT CARRIED TO A WETLAND OR SENSITIVE AREA.
5. TRUNKS OF TREES SHOULD NOT BE COVERED WITH MORE THAN TWO (2) INCHES OF SOIL.
6. STUMPS SHALL BE GROUND DOWN INTO A WOOD MULCH AND UTILIZED OR REMOVED FROM THE SITE.

- NOTES:
1. INSTALL HAY BALES FOR TEMPORARY SEDIMENTATION CONTROL.
  2. PERFORM BUILDING AND SITE CONSTRUCTION.
  3. CLEAN OUT CATCH BASINS AND DRAINAGE.
  4. RESTORE ALL DISTURBED AREAS.
  5. LOAM AND SEED ALL DISTURBED AREAS.
  6. REMOVE TEMPORARY EROSION CONTROL AFTER VEGETATION IS ESTABLISHED.

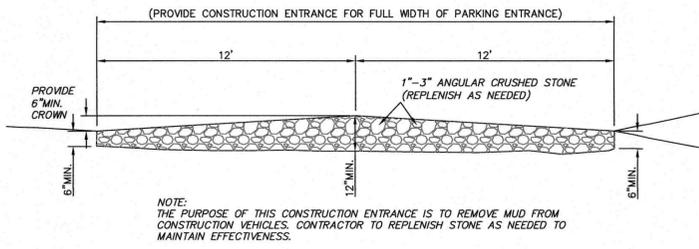


**TEMPORARY ROADWAY SEDIMENT CONTROL**  
NO SCALE



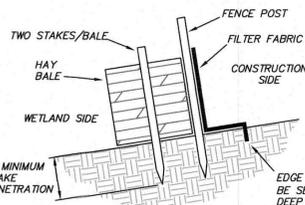
**SILT SACK DETAIL**  
NO SCALE

NOTE: TEMPORARY INLET SEDIMENT FILTER TO BE INSTALLED ON ALL PAVED CATCH BASINS OR STORM INLETS. INLET FILTER TO BE SIMILAR TO "SILT SACK" AS MANUFACTURED BY ATLANTIC CONSTRUCTION FABRICS, INC. (800-448-3636) OR ENGINEER APPROVED EQUAL CLEAN FILTER AS NEEDED.



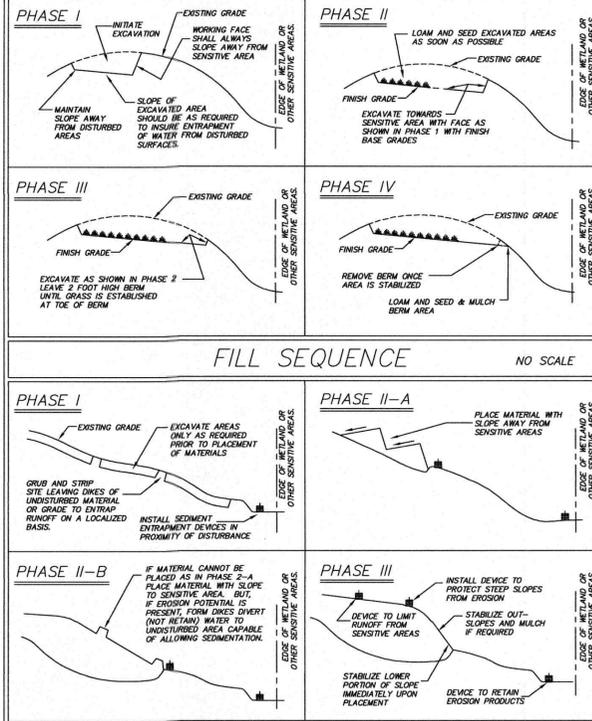
**CONSTRUCTION ENTRANCE**  
NO SCALE

NOTE: THE PURPOSE OF THIS CONSTRUCTION ENTRANCE IS TO REMOVE MUD FROM CONSTRUCTION VEHICLES. CONTRACTOR TO REPLENISH STONE AS NEEDED TO MAINTAIN EFFECTIVENESS.

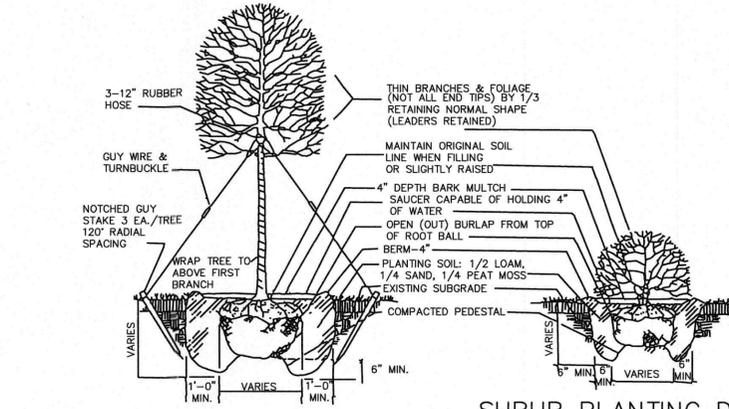
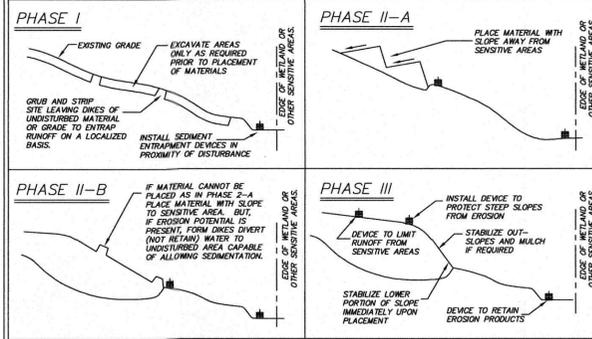


**HAYBALES WITH SILT FENCE DETAIL**  
NO SCALE

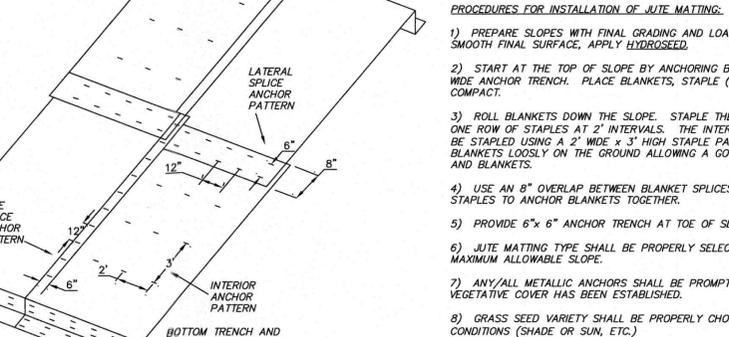
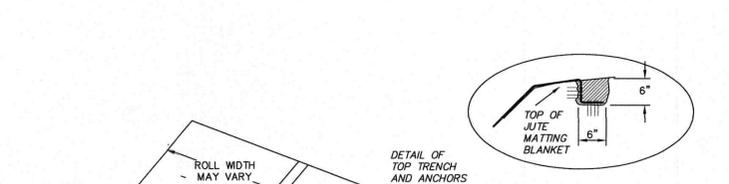
**EXCAVATION SEQUENCE** NO SCALE



**FILL SEQUENCE** NO SCALE



**DECIDUOUS TREE PLANTING DETAIL**  
NO SCALE



**JUTE MATTING PLACEMENT**  
FOR SLOPES BETWEEN 3:1 AND 2:1 (H:V)  
NO SCALE

- PROCEDURES FOR INSTALLATION OF JUTE MATTING:
- 1) PREPARE SLOPES WITH FINAL GRADING AND LOAM PLACEMENT. RAKE AND SMOOTH FINAL SURFACE, APPLY HYDROSEED.
  - 2) START AT THE TOP OF SLOPE BY ANCHORING BLANKETS IN A 6\"/>

**STORMWATER OPERATION AND MAINTENANCE PLAN**

THE FOLLOWING SHALL BE CONSIDERED THE OPERATION & MAINTENANCE PLAN (OMP) FOR THE STORMWATER COLLECTION FACILITY FOR THIS DEVELOPMENT. THIS OMP HAS BEEN PREPARED IN ACCORDANCE WITH THE STORMWATER MANAGEMENT POLICY AS ISSUED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.

**I. SYSTEM OWNERSHIP**

THE OPERATOR OF THE SYSTEM SHALL INCLUDE THE DRAINAGE INFRASTRUCTURE AND ALL OF ITS COMPONENTS AS SHOWN ON THE SITE DEVELOPMENT PLANS, INCLUDING THE DETENTION FACILITIES AND OUTFALL AREAS OF THE DRAINAGE SYSTEM. THE STRUCTURES OF THE SYSTEM SHALL INCLUDE THE DRAINAGE SWALES AND THE OUTFALL & CONTROL STRUCTURES. THE SYSTEM SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CONSTRUCTION DETAILS AND THE APPROVED PLANS.

UPON THE COMPLETION OF CONSTRUCTION THE DRAINAGE SYSTEM DESCRIBED ABOVE AND AS DEPICTED ON THE SITE PLANS SHALL BECOME PROPERTY OF THE LAND OWNER, WITH SPECIFIC EASEMENT RIGHTS TO THE OPERATOR OF THE SOLAR SYSTEM TO MAINTAIN THE DRAINAGE SYSTEM AS DEPICTED ON THE APPROVED PLANS. SAID EASEMENT RIGHTS SHALL BE SPECIFICALLY DESCRIBED IN LEASE DOCUMENTS FOR THE PROJECT.

**II. RESPONSIBLE PARTIES**

THE OPERATOR OF THE SITE SHALL BE CONSIDERED THE RESPONSIBLE PARTY FOR THE OPERATION AND MAINTENANCE OF THE STORMWATER MANAGEMENT SYSTEM. THE SYSTEM SHALL INCLUDE THE DRAINAGE INFRASTRUCTURE AND ALL OF ITS COMPONENTS AS SHOWN ON THE APPROVED PLANS. THE SYSTEM SHALL ALSO INCLUDE THE DETENTION FACILITIES AND THE OUTFALL AREAS OF THE DRAINAGE SYSTEM.

**III. INSPECTION & MAINTENANCE SCHEDULE**

THE FOLLOWING MAINTENANCE SCHEDULE SHALL BE FOLLOWED IN ORDER TO MAINTAIN THE EFFECTIVENESS OF THE STORMWATER MANAGEMENT SYSTEM.

STRUCTURE TYPE	INSPECTION	MAINTENANCE	TASK
RIP/RAP APRONS	EVERY 2 YEARS	EVERY 10 YEARS	CLEAN/ADD STONE
SUBDRAINS	EVERY 2 YEARS	EVERY 4 YEARS	REPLACE PEASTONE
OUTFALL STRUCTURES:	EVERY 2 YEARS	EVERY 10 YEARS	CLEAN/ADD STONE
CATCH BASINS	QUARTERLY AND AT THE END OF END OF THE FOLIAGE AND SNOW REMOVAL SEASONS	QUARTERLY, OR WHENEVER THE DEPTH OF DEPOSITS IS GREATER THAN OR EQUAL TO ONE HALF THE DEPTH FROM THE BOTTOM OF THE INVERT OF THE LOWEST PIPE	REMOVE SEDIMENT FROM SUMPS <b>***GRATES TO BE KEPT CLEAR THROUGHOUT THE YEAR***</b>
HYDROWORKS -HYDROGUARD	ANNUALLY IN THE SPRING	ANNUALLY IN THE SPRING	REMOVE SEDIMENT FROM SUMPS
PARKING LOT SWEEPING	N/A	ANNUALLY IN THE SPRING	REMOVE STREET SAND BUILDUP

NOTE: THE DETENTION BASINS ON THIS PROJECT MAY GROW VEGETATION IN THE BOTTOM WHICH MAY INCLUDE SPECIES PART OF THE WETLAND PROTECTION ACT. THESE PLANTS SHALL NOT BE CONSIDERED AS HAVING PROTECTION UNDER THE ACT AND SHALL BE CONSIDERED OPPORTUNISTIC GROWTH PLANTS. ADDITIONALLY, THIS AREA SHALL NOT BE CONSIDERED A CONSTRUCTED WETLAND.

**APPLICANT:**  
TIMPANY CROSSROADS, LLC  
442 WEST BROADWAY  
GARDNER, MA 01440

NO.	DATE	REVISIONS	BY
8	2/5/2020	DRIVE-THROUGH MODIFICATIONS	CMA/WDH
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4	02/28/2019	ISSUED FOR CONSTRUCTION	WDH
3	12/26/2018	ACCESS/PARKING MODIFICATIONS	CMA/WDH

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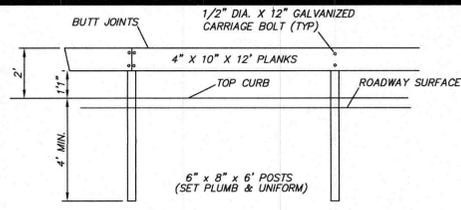
**CONSTRUCTION DETAILS**  
IN  
**GARDNER, MASSACHUSETTS**

PREPARED FOR:  
**TIMPANY CROSSROADS, LLC**  
AMY FANTONI  
442 WEST BROADWAY  
GARDNER, MASSACHUSETTS

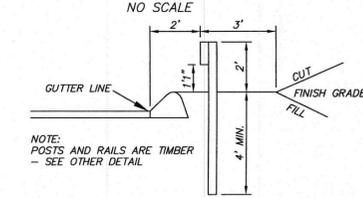
TEL:

CALC:	CMA/WDH	DRWN:	CMA/WDH	SCALE:	NA
CHKD:	WDH	APPD:	WDH	DATE:	JUN 22, 2018
SRV:	JEF/PJB	FB:	E2630.013117	JOB NO:	2630
TAB:	(8-12) DET	SHEET	8 OF 12	PLAN NO:	C-13-7

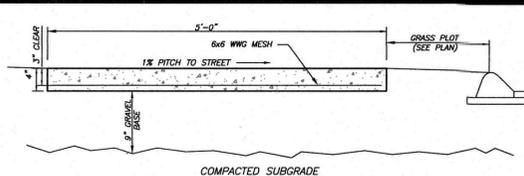




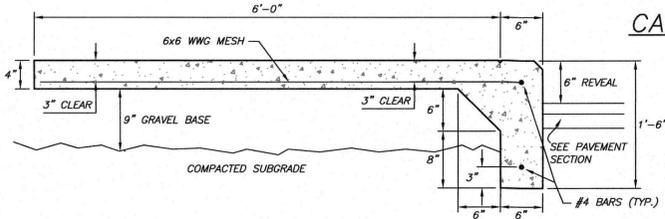
**WOOD GUARDRAIL DETAIL**  
NO SCALE



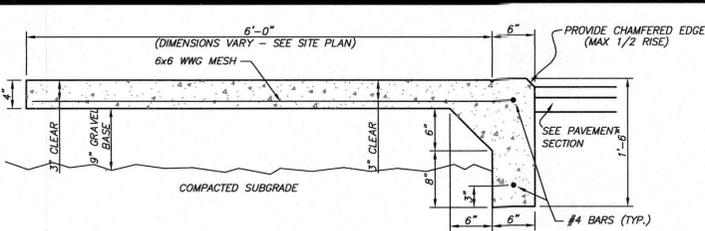
**GUARDRAIL LOCATION DETAIL**  
NO SCALE



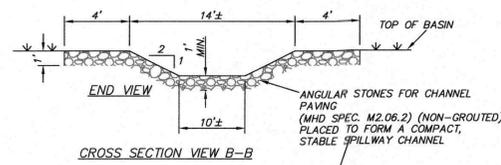
**CAST-IN-PLACE CONCRETE SIDEWALK**  
NO SCALE



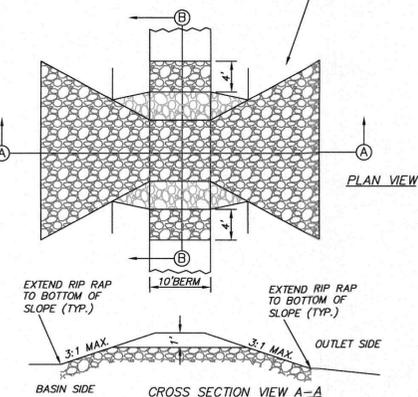
**CONCRETE SIDEWALK WITH CAST-IN-PLACE CURB**  
NO SCALE



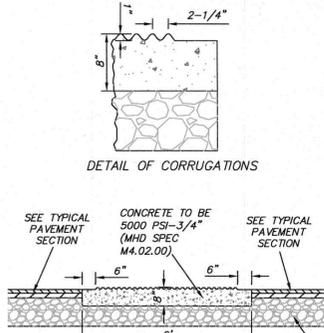
**CAST-IN-PLACE CONCRETE SIDEWALK (FLUSH CURB)**  
NO SCALE



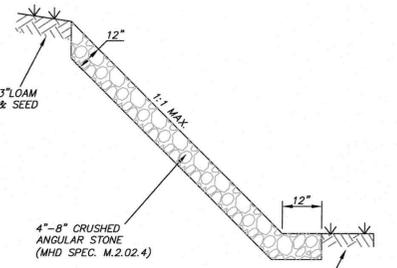
**SPILLWAY DETAIL**  
NO SCALE



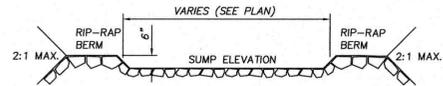
**SPILLWAY DETAIL**  
NO SCALE



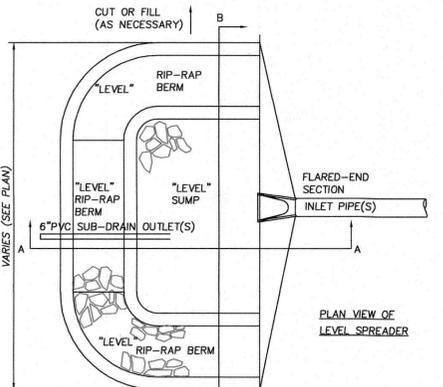
**GROOVED CONCRETE DIVIDER**  
NO SCALE



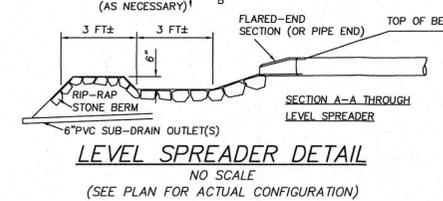
**1:1 RIP RAP SLOPE DETAIL**  
NO SCALE



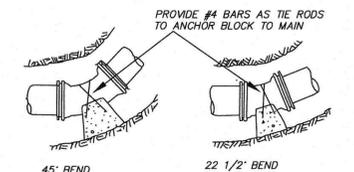
**SECTION B-B THROUGH LEVEL SPREADER**



**LEVEL SPREADER DETAIL**  
NO SCALE

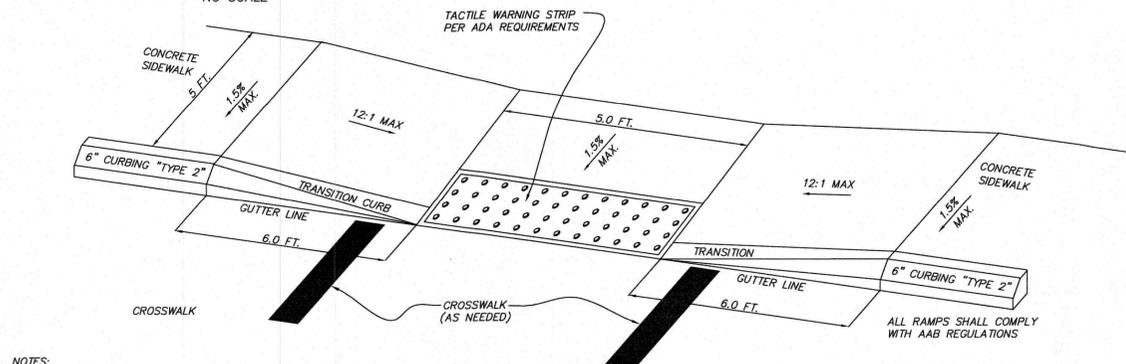


**LEVEL SPREADER DETAIL**  
NO SCALE



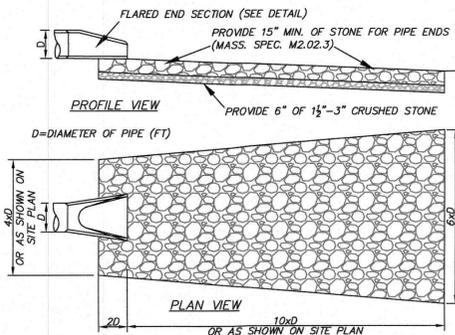
**THRUST BLOCK DETAILS**  
NO SCALE

PIPE SIZE	MIN. SURFACE AREA (S.F.) OF CONC. AGAINST UNDISTURBED EARTH	TEE
6"	2.0	2.5
8"	2.25	3.0
10"	2.5	3.5
12"	3.0	4.0
14"	3.5	4.5
16"	4.0	5.0
18"	4.5	5.5
20"	5.0	6.0

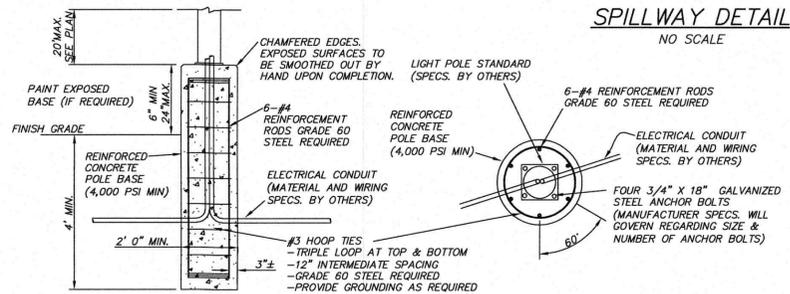


**ACCESSIBLE SIDEWALK DETAIL**  
NO SCALE

- NOTES:
1. THE CURBING DIMENSIONS SHOWN AT CROSSWALK EDGE ARE FIXED DISTANCES.
  2. RAMP SECTION AND MATERIALS TO BE CONSTRUCTED IN ACCORDANCE TO CONCRETE SIDEWALK DETAIL.
  3. PORTLAND CEMENT CONCRETE RAMPS ARE TO BE TEXTURED BY BROOMING IN A DIRECTION PARALLEL TO THE LENGTH OF THE RAMP.



**RIP RAP APRON DETAIL**  
NO SCALE

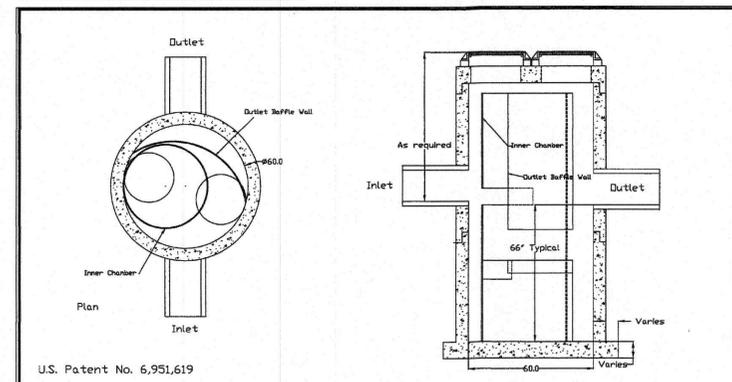


**TYPICAL LIGHT BASE DETAIL**  
NO SCALE

WQU: DMH-8

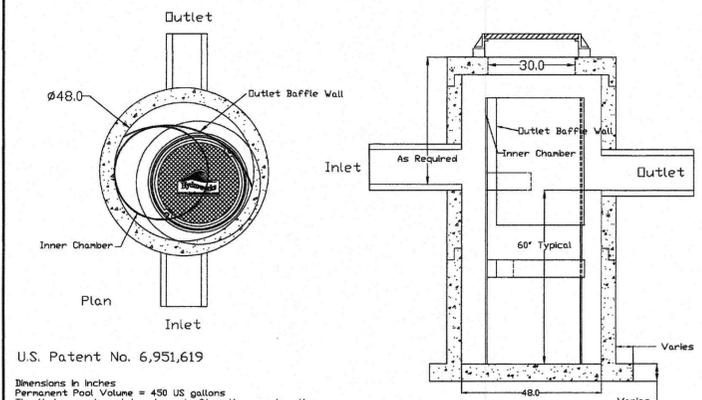
WQU: DMH-7

WQU: DMH-1



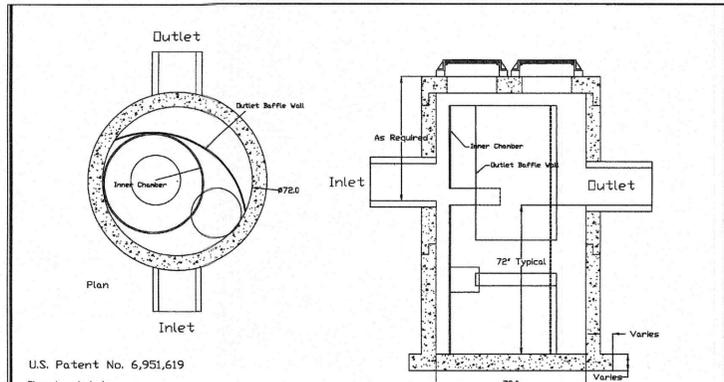
**Hydroworks HG5 (60\"/>**

PROJECT:	
LOCATION:	
REVISION DATE:	6/16/2017



**Hydroworks HG4 (48\"/>**

PROJECT:	
LOCATION:	
REVISION DATE:	6/16/2017



**Hydroworks HG6 (72\"/>**

PROJECT:	
LOCATION:	
REVISION DATE:	6/16/2017



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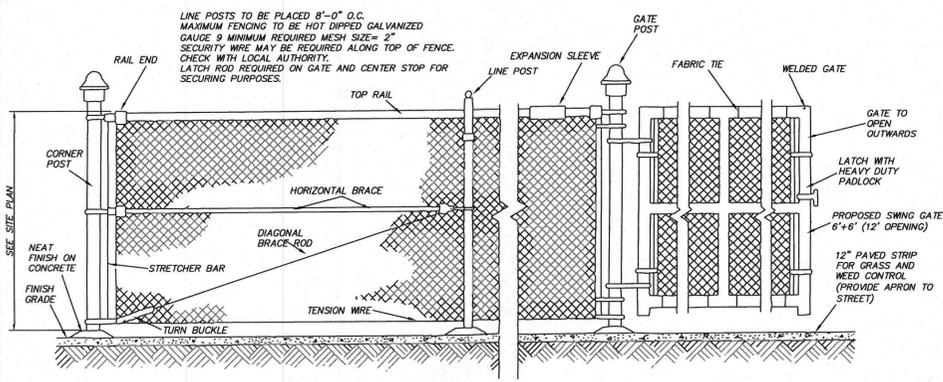
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**CONSTRUCTION DETAILS**  
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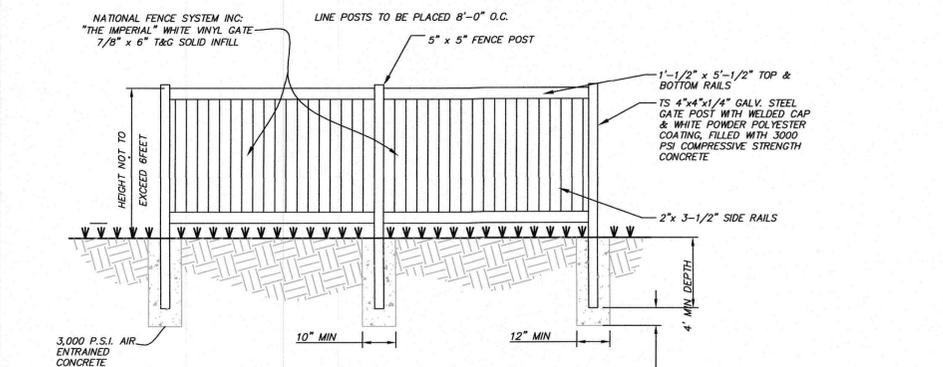
PREPARED FOR:  
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AMY FANTONI  
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GARDNER, MA 01440



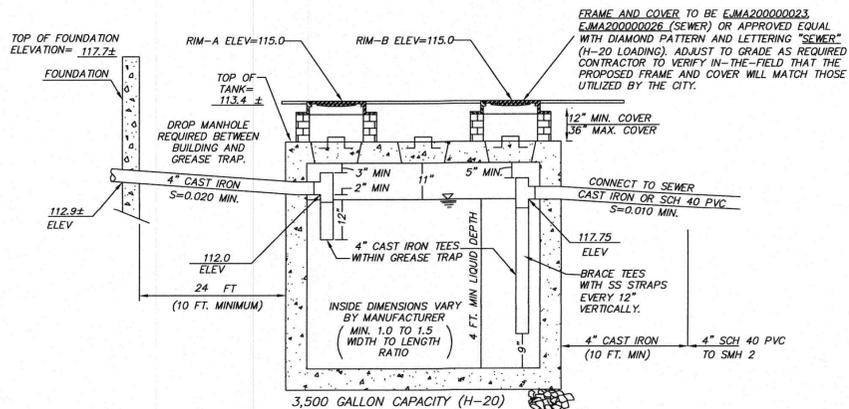
**CHAIN LINK FENCE DETAIL**  
NO SCALE



**VINYL FENCE DETAIL**  
NO SCALE

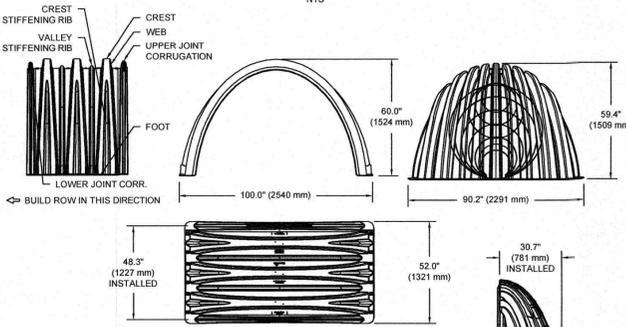


**PYLON SIGN**  
NO SCALE  
FINAL SIGN DESIGN AND LAYOUT SUBJECT TO CHANGE.



**GREASE TRAP TANK**  
NO SCALE  
PROVIDE 2\"/>

**MC-4500 TECHNICAL SPECIFICATION**  
NTS



**NOMINAL CHAMBER SPECIFICATIONS**

SIZE (W X H X INSTALLED LENGTH)	(2540 mm X 1524 mm X 1227 mm)
CHAMBER STORAGE	108.5 CUBIC FEET (3.01 m <sup>3</sup> )
MINIMUM INSTALLED STORAGE*	162.6 CUBIC FEET (4.60 m <sup>3</sup> )
WEIGHT	130.0 lbs. (59.0 kg)

**NOMINAL END CAP SPECIFICATIONS**

SIZE (W X H X INSTALLED LENGTH)	(2291 mm X 1509 mm X 781 mm)
END CAP STORAGE	35.7 CUBIC FEET (1.01 m <sup>3</sup> )
MINIMUM INSTALLED STORAGE*	108.7 CUBIC FEET (3.08 m <sup>3</sup> )
WEIGHT	135.0 lbs. (61.2 kg)

\*ASSUMES 12\"/>

STUBS AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B" STUBS AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T" END CAPS WITH A WELDED CROWN PLATE END WITH "C" END CAPS WITH A PREFABRICATED WELDED STUB END WITH "W"

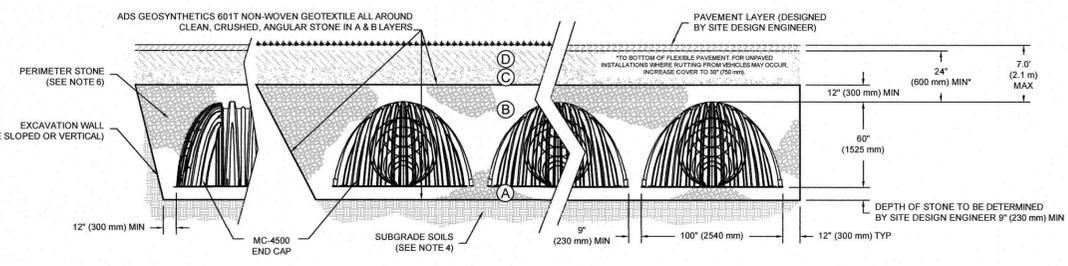
PART #	STUB	B	C
MC4500REPE00T	6\"/>		

NOTE: ALL DIMENSIONS ARE NOMINAL.

**ACCEPTABLE FILL MATERIALS: STORMTECH MC-4500 CHAMBER SYSTEMS**

MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	FINAL FILL: FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	INITIAL FILL: FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 24\"/>		

PLEASE NOTE:  
1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".  
2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 8\"/>

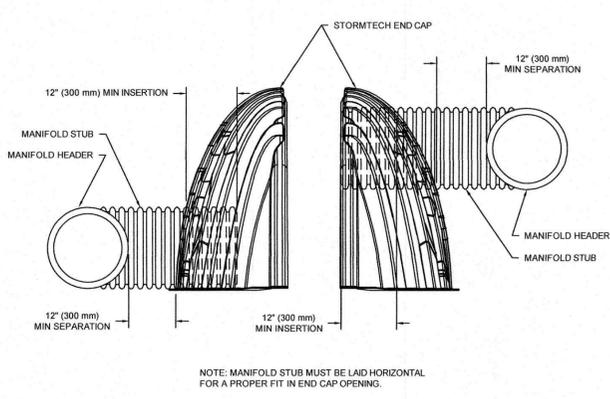


\*FOR COVER DEPTHS GREATER THAN 7.0' (2.1 m) PLEASE CONTACT STORMTECH

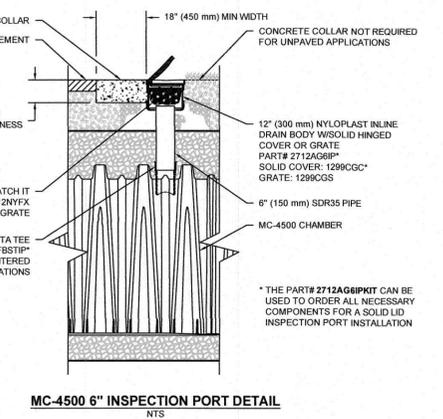
**NOTES:**

- MC-4500 CHAMBERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F2418 "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- MC-4500 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- "ACCEPTABLE FILL MATERIALS" TABLE ABOVE PROVIDES MATERIAL LOCATIONS, DESCRIPTIONS, GRADATIONS, AND COMPACTION REQUIREMENTS FOR FOUNDATION, EMBEDMENT, AND FILL MATERIALS.
- THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
- PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
- ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.

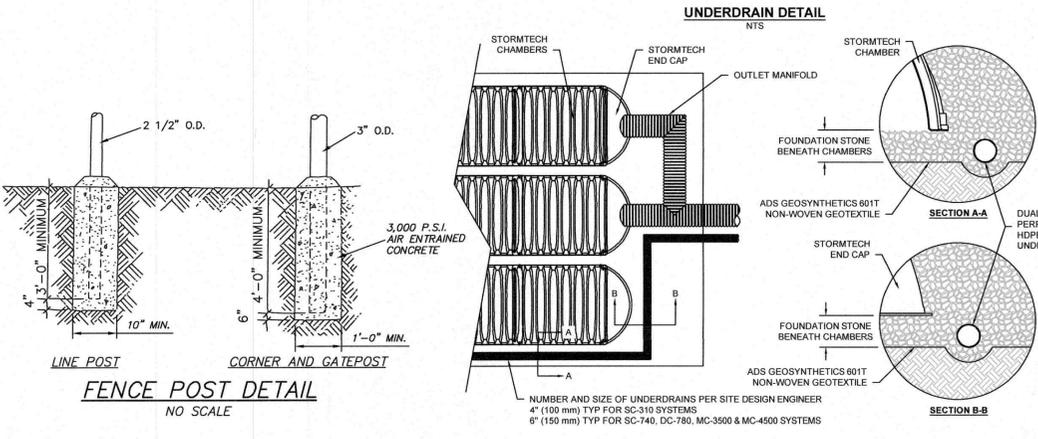
**MC-SERIES END CAP INSERTION DETAIL**  
NTS



NOTE: MANIFOLD STUB MUST BE LAID HORIZONTAL FOR A PROPER FIT IN END CAP OPENING.



**MC-4500 6\"/>**



NUMBER AND SIZE OF UNDERDRAINS PER SITE DESIGN ENGINEER  
4\"/>

**FENCE POST DETAIL**  
NO SCALE

**APPLICANT:**  
TIMPANY CROSSROADS, LLC  
442 WEST BROADWAY  
GARDNER, MA 01440

NO.	DATE	REVISIONS	CMA/WDH	BY
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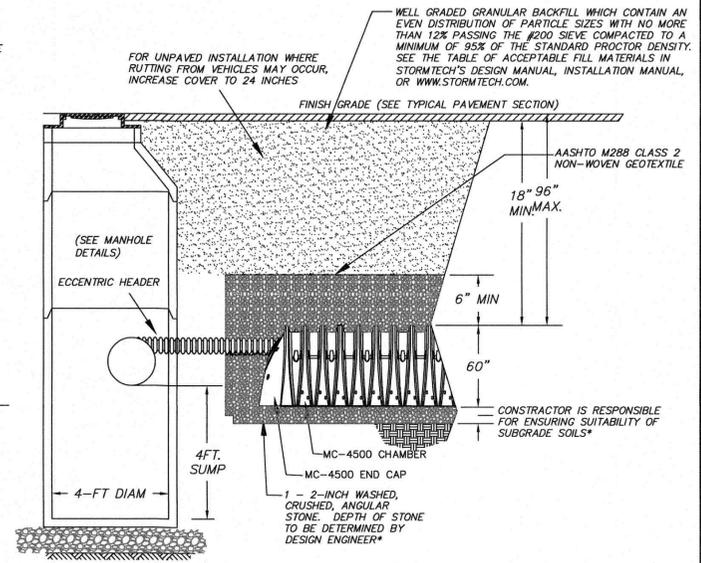
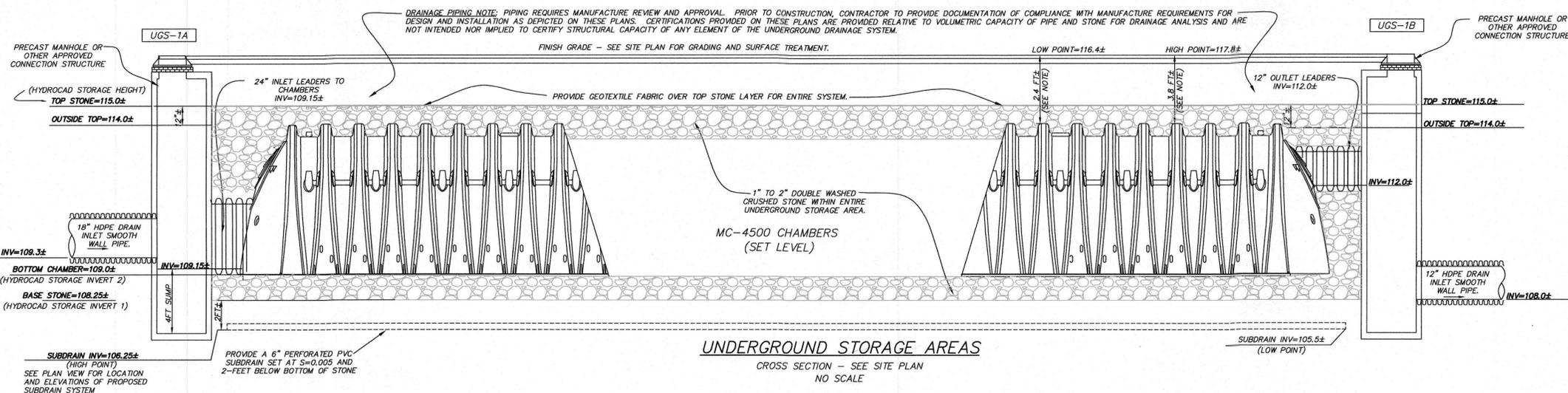
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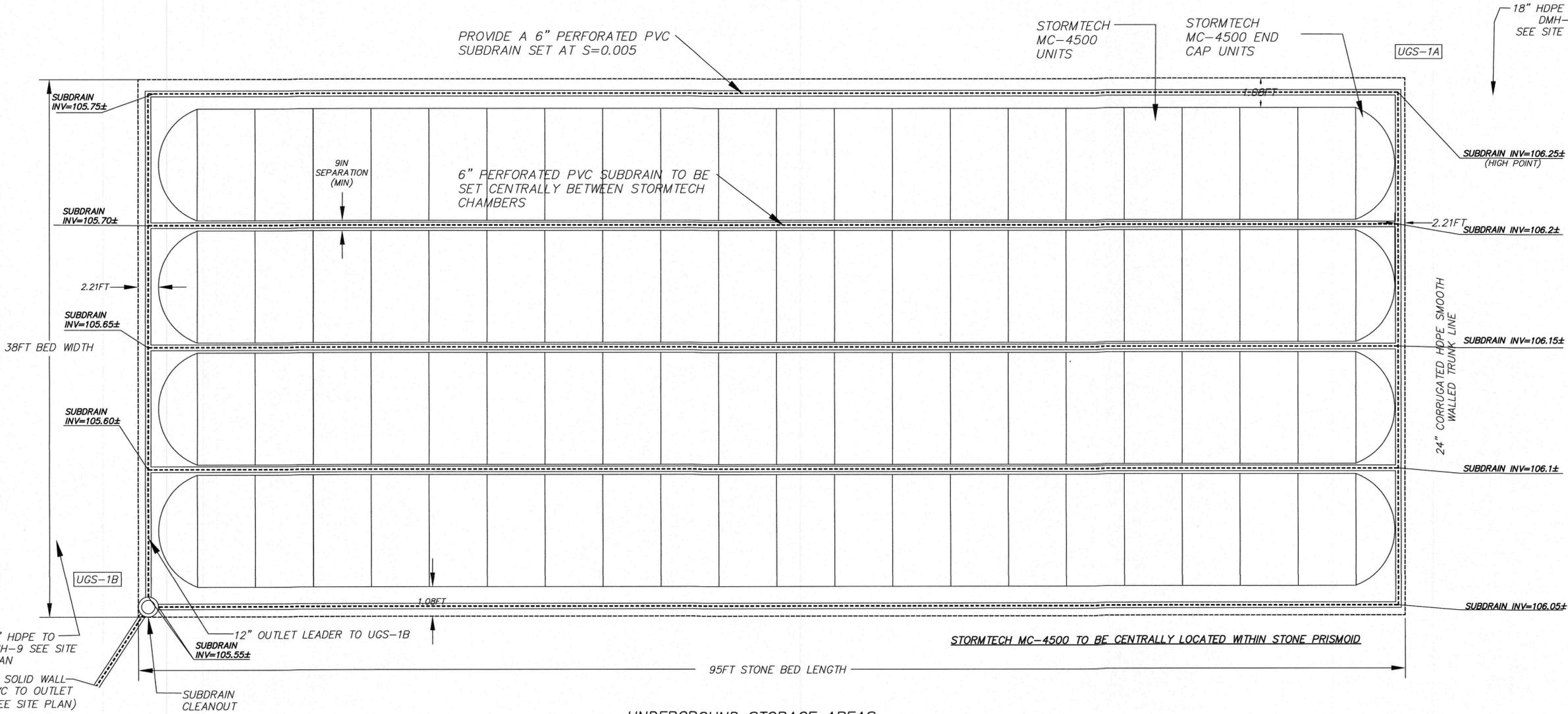
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IN  
GARDNER, MASSACHUSETTS

PREPARED FOR:  
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AMY FANTONI  
442 WEST BROADWAY  
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TEL:

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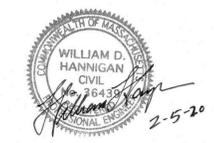


**STORMTECH MC-4500 CHAMBER SYSTEM  
MAN HOLE DETAIL**  
(NOT TO SCALE)



**UNDERGROUND STORAGE AREAS**  
PLAN VIEW - SEE SITE PLAN  
NO SCALE

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**APPLICANT:**  
TIMPANY CROSSROADS, LLC  
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GARDNER, MA 01440