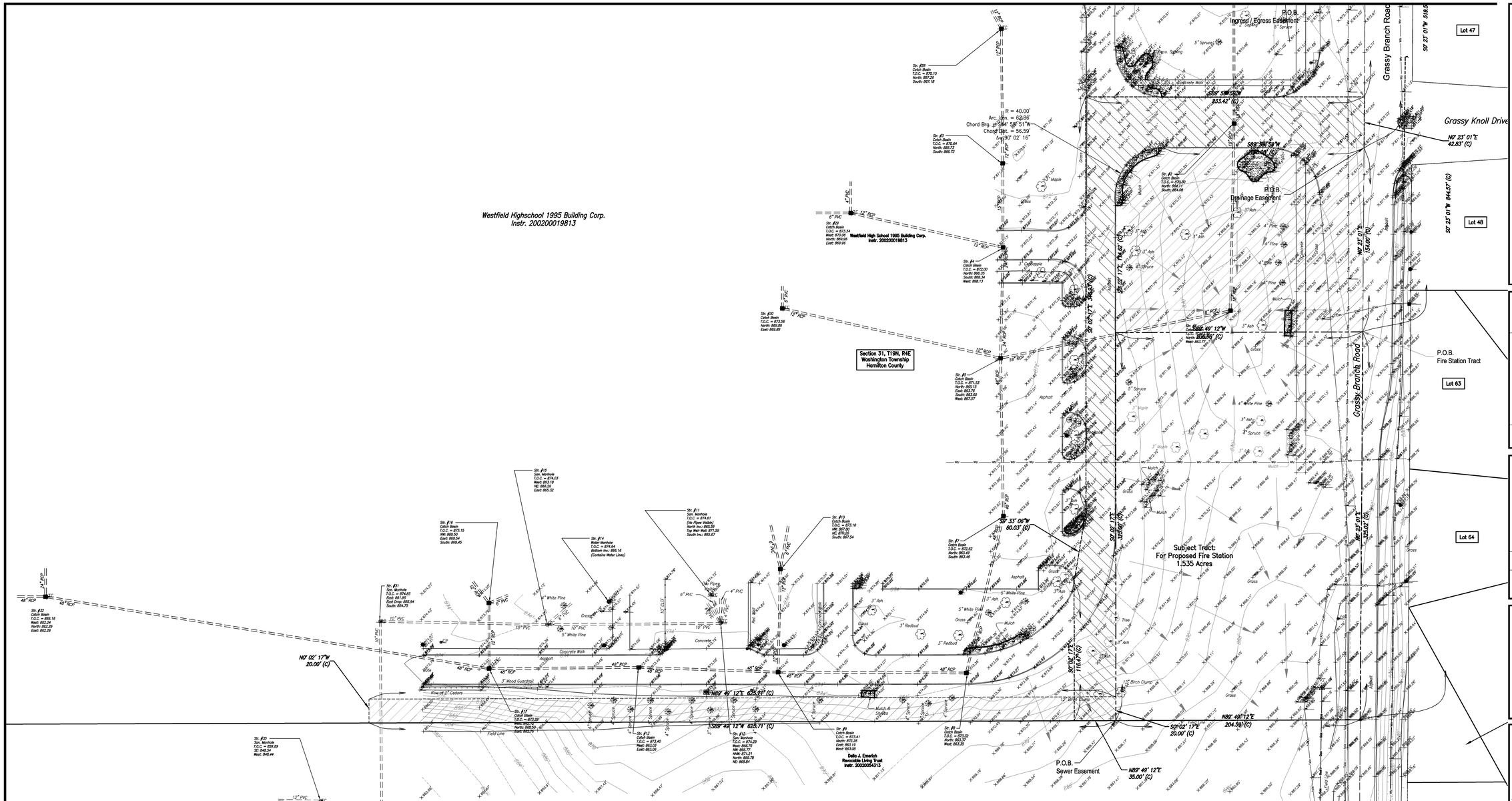


RQAW

CONSULTING ENGINEERS & ARCHITECTS

RQAW Corporation
10401 N. Meridian St. Suite 400
Indianapolis, Indiana 46290
(317) 815-7200 FAX (317) 815-7201

sym	revisions	date

N

scale:
1" = 40'
0 40' 80'
GRAPHIC SCALE

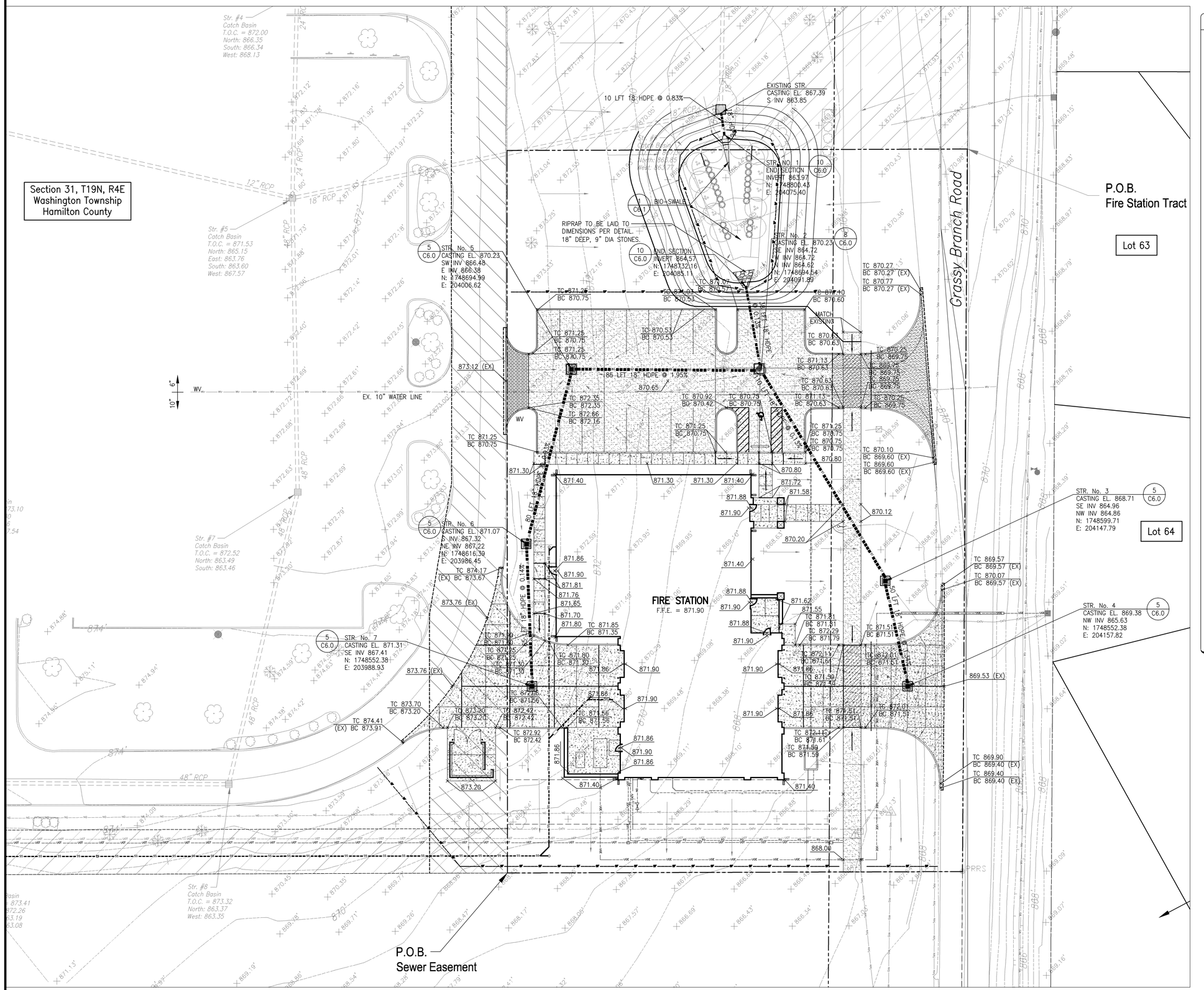
job#	
contract#	
designed:	ECR
drawn:	DRP
checked:	ECR
date:	4/27/10

TOPOGRAPHY SURVEY

FIRE STATION 83
WESTFIELS, INDIANA

Copyright © 2009 by RQAW Corporation. All rights reserved.

SHEET
C0.1
OF



LEGEND

- FIRE HYDRANT
- POWER POLE
- INLET
- SIGN
- SANITARY/STORM MANHOLE
- GAS/WATER VALVE
- POST INDICATOR VALVE
- THRUST BLOCK
- FLAG POLE
- END SECTION
- MANHOLE/INLET SILT FENCE
- BOLLARD
- MEDIUM DUTY ASPHALT PAVING
- CONCRETE PAVING
- RIPRAP
- SEEDING
- SODDING
- WOODEN FENCE
- OHE — OVERHEAD ELECTRIC LINE
- UGE — UNDERGROUND ELECTRIC LINE
- G — GAS LINE
- CATV — CABLE TELEVISION
- SS — SANITARY SEWER LINE
- FM — SANITARY SEWER FORCE MAIN
- ST — STORM SEWER LINE
- 750 — EXISTING CONTOURS
- 970 — PROPOSED CONTOURS
- FO — FIBER OPTIC CABLE
- SF — SILT FENCE
- OHT — OVERHEAD TELEPHONE
- UGT — UNDERGROUND TELEPHONE
- ESMT — EASEMENT LINE
- W — WATER LINE
- FP — FIRE PROTECTION LINE

LEGEND-001

HOLEY MOLEY SAYS CALL
1-800-382-5544

AT LEAST TWO FULL WORKING DAYS BEFORE YOU DIG

RQAW
CONSULTING ENGINEERS & ARCHITECTS
RQAW Corporation
10401 N. Meridian St. Suite 400
Indianapolis, Indiana 46290
(317) 815-7200 FAX (317) 815-7201

sym	revisions	date

N

scale: 1" = 20'

0 20' 40'

GRAPHIC SCALE

REGISTERED PROFESSIONAL ENGINEER No. 10810185 STATE OF INDIANA

job#	
contract#	
designed:	ECR
drawn:	DRP
checked:	ECR
date:	4/27/10

SITE GRADING PLAN

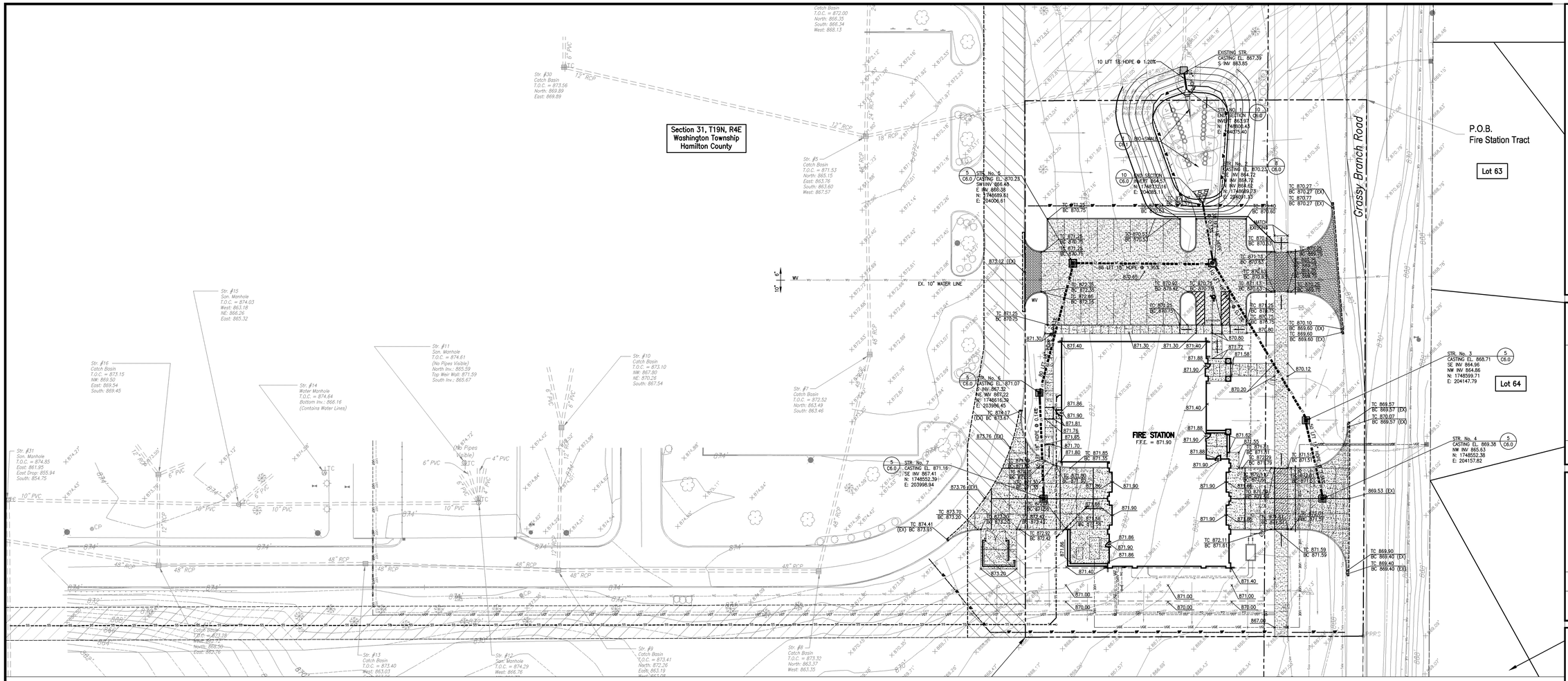
FIRE STATION 83
WESTFIELS, INDIANA

Copyright © 2009 by RQAW Corporation. All rights reserved.

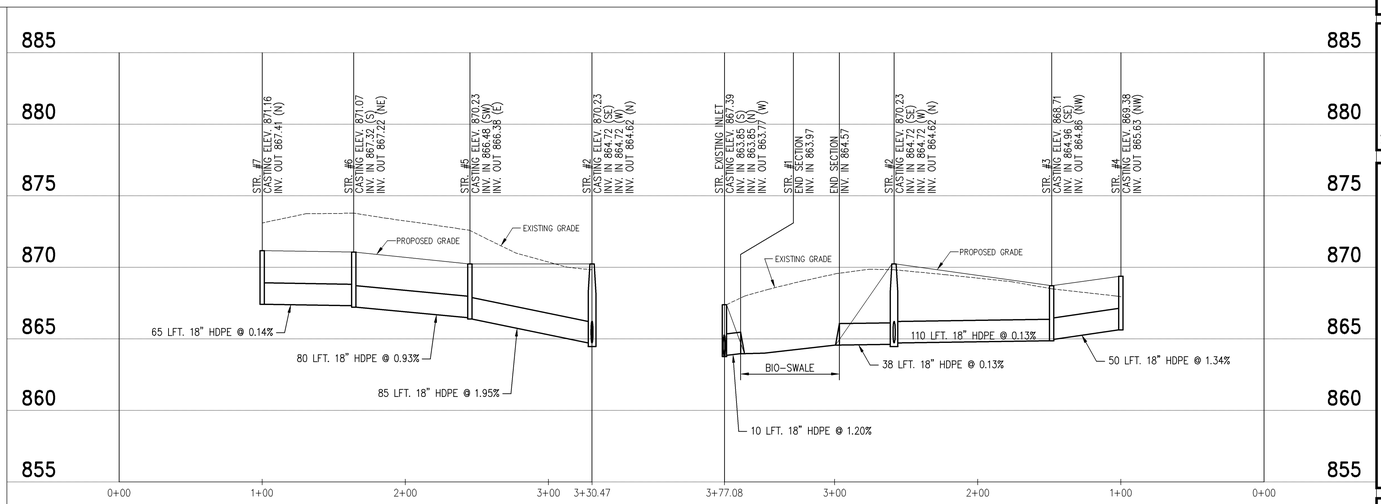
SHEET

C2.0

OF



SITE PLAN
SCALE: 1" = 30'



STORM SEWER PROFILE
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

RQAW
CONSULTING ENGINEERS & ARCHITECTS
RQAW Corporation
10401 N. Meridian St. Suite 400
Indianapolis, Indiana 46290
(317) 815-7200 FAX (317) 815-7201

sym	revisions	date

N

scale:

0 GRAPHIC SCALE

REGISTERED PROFESSIONAL ENGINEER No. 10810185 STATE OF INDIANA

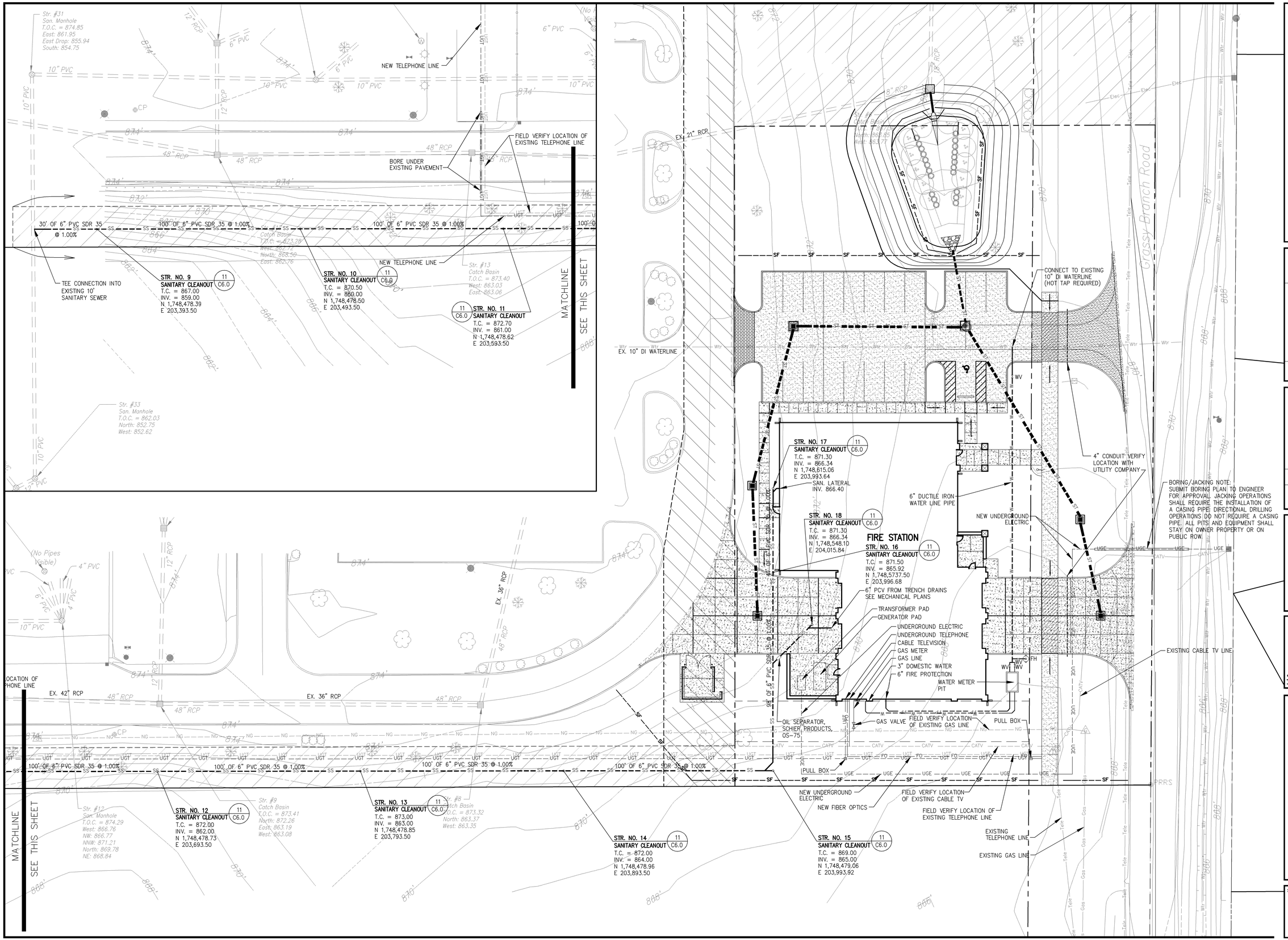
job#	
contract#	
designed:	ECR
drawn:	DRP
checked:	ECR
date:	4/27/10

STORM SEWER PLAN AND PROFILE

FIRE STATION 83
WESTFIELS, INDIANA

Copyright © 2009 by RQAW Corporation. All rights reserved.

SHEET
C2.1
OF



RQAW
CONSULTING ENGINEERS & ARCHITECTS
RQAW Corporation
10401 N. Meridian St., Suite 401
Indianapolis, Indiana 46290
(317) 815-7200 FAX (317) 815-7201

sym	revisions	date

N

scale: 1" = 20'

0 20' 40'

GRAPHIC SCALE

LILLEY M. ARONSON REGISTERED No. 10810185 STATE OF INDIANA PROFESSIONAL ENGINEER

job#	
contract#	
designed:	ECR
drawn:	DRP
checked:	ECR
date:	4/27/10

SITE UTILITY PLAN

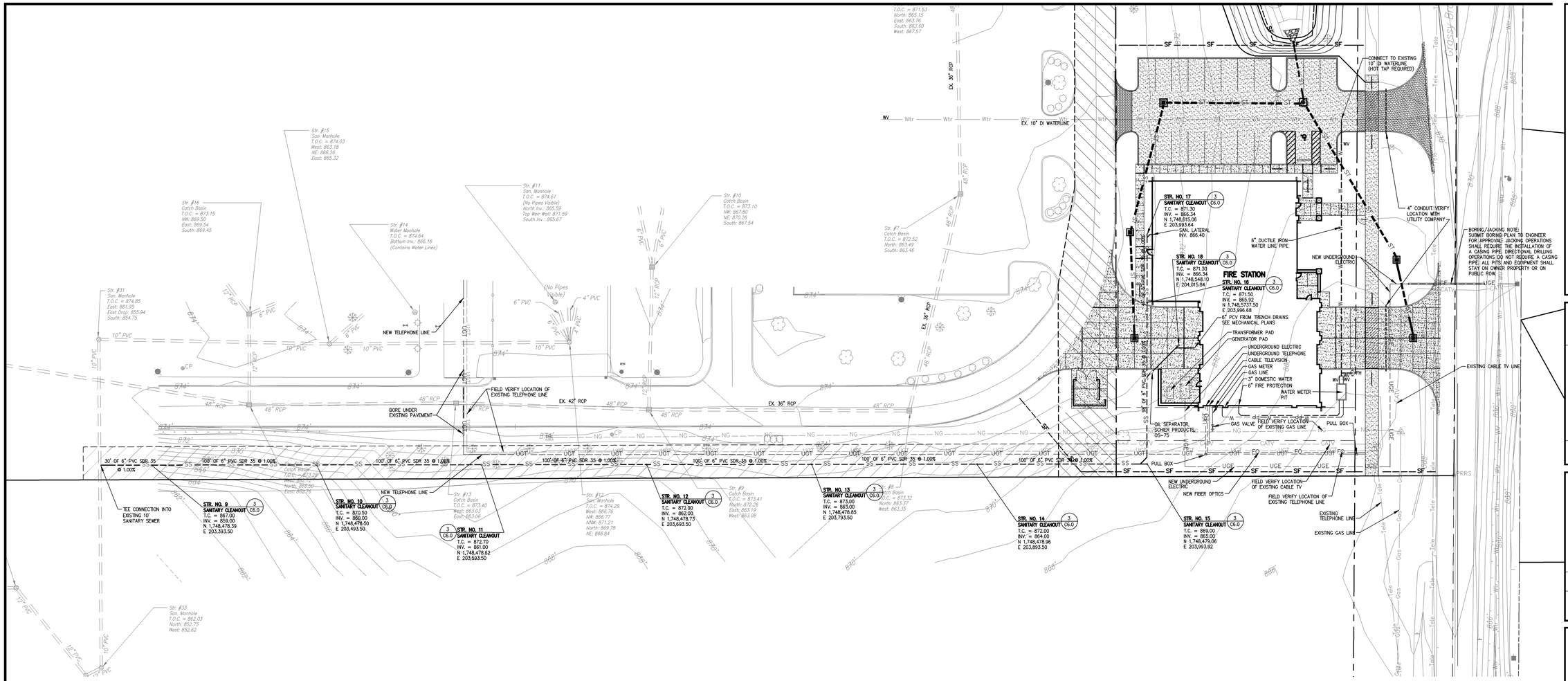
FIRE STATION 83
WESTFIELS, INDIANA

Copyright © 2009 by RQAW Corporation. All rights reserved.

SHEET

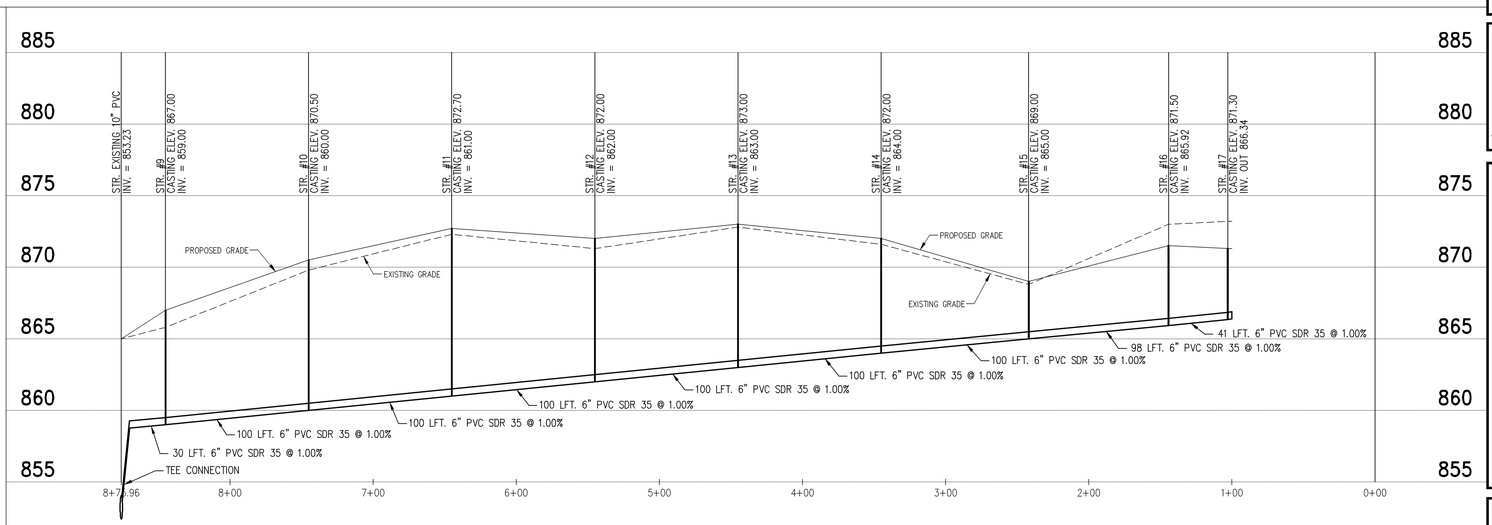
C3.0

OF



SITE PLAN

SCALE: 1" = 30'



SANITARY SEWER PROFILE

HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

RQAW
CONSULTING ENGINEERS & ARCHITECTS
RQAW Corporation
10401 N. Meridian St. Suite 400
Indianapolis, Indiana 46290
(317) 815-7200 FAX (317) 815-7201

sym	revisions	date

scale:

0 GRAPHIC SCALE

N

STATE OF INDIANA
No. 10810185
REGISTERED
PROFESSIONAL ENGINEER
M. DAVID PARKISON

job#	
contract#	
designed:	ECR
drawn:	DRP
checked:	ECR
date:	4/27/10

SANITARY SEWER PLAN AND PROFILE

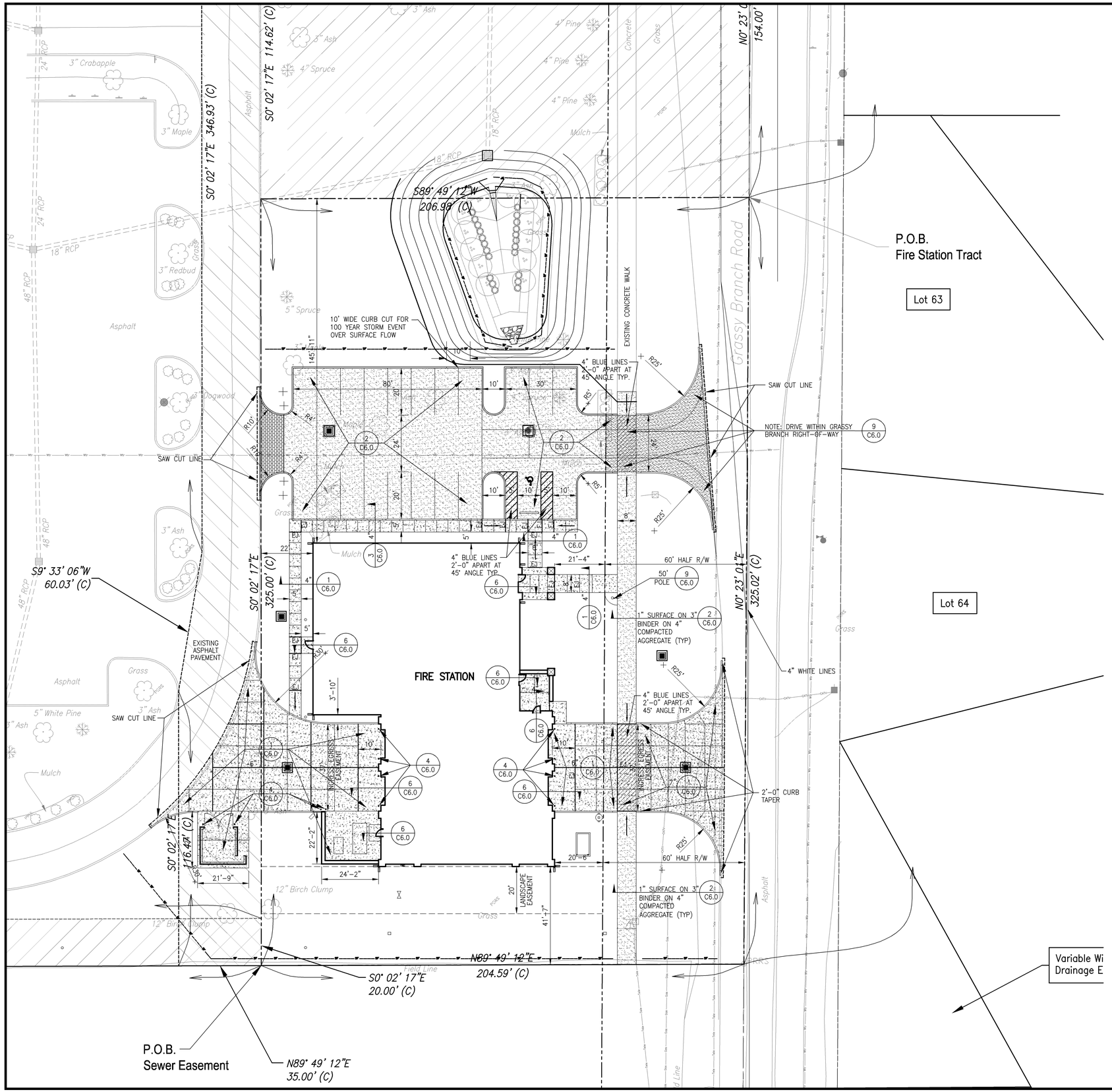
FIRE STATION 83
WESTFIELS, INDIANA

Copyright © 2009 by RQAW Corporation. All rights reserved.

SHEET

C3.1

OF



GENERAL NOTES

1. ALL ELEVATIONS SHOWN WITHIN THESE PLANS ARE BASED UPON U.S.G.S. DATUM.
2. THE CONTRACTOR SHALL COMPLY WITH THE CONSTRUCTION SAFETY STANDARDS AND THE OCCUPATIONAL SAFETY STANDARDS AS ISSUED BY THE U.S. DEPARTMENT OF LABOR AND THE INDIANA DEPARTMENT OF LABOR.
3. ALL WORK WITHIN THIS CONTRACT SHALL BE PERFORMED WITHIN THE CONSTRUCTION LIMITS SHOWN UNLESS AUTHORIZED BY OWNER AND/OR ENGINEER.
4. NO OPEN BURNING OF WASTE MATERIAL SHALL BE PERMITTED ON THE SITE WITHOUT APPROVAL OF THE DEVELOPER AND APPROPRIATE REGULATORY AGENCIES.
5. ALL MATERIALS AND WORKMANSHIP SHALL COMPLY WITH ALL APPLICABLE CODES, SPECIFICATIONS, LOCAL ORDINANCES, INDUSTRY STANDARDS AND UTILITY COMPANY REGULATIONS.
6. THE CONTRACTOR SHALL VERIFY ALL FIELD CONDITIONS PRIOR TO THE START OF WORK AND REPORT ANY VARIATIONS TO THE ENGINEER.
7. STRIPPED TOPSOIL SHALL NOT BE USED TO CONSTRUCT ANY PERMANENT EMBANKMENT OR BACKFILL.
8. ALL AREAS DISTURBED BY CONSTRUCTION SHALL BE IMMEDIATELY SEEDED OR EROSION CONTROL MATTED PER SPECIFICATIONS UNLESS NOTED OTHERWISE ON THE PLANS.
9. ALL PROPOSED CONTOURS AND SPOT ELEVATIONS SHOWN WITHIN THESE PLANS REPRESENT THE FINAL FINISHED GRADES AND PAVEMENT SURFACE ELEVATIONS. REFER TO THE PAVEMENT DETAILS FOR PAVEMENT DEPTHS TO DETERMINE COMPACTED SUBGRADE ELEVATIONS.
10. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN ELECTRICAL, GAS, WATER, SANITARY SEWER AND STORM SEWER SERVICES TO EXISTING BUILDINGS DURING ALL PHASES OF CONSTRUCTION.
11. SITE SECURITY SHALL BE MAINTAINED AT ALL TIMES. NOTIFY OWNER OF ANY POSSIBLE VIOLATIONS.
12. ALL WATER SPECIFICATIONS AND DETAILS CAN BE FOUND ON THE WESTFIELD WEBSITE LOCATED AT WWW.WESTFIELD.IN.GOV UNDER DEVELOPMENT/CONSTRUCTION.
13. ALL FIRE HYDRANTS SHALL BE PAINTED WITH 2-COATS OF MAB "FIRE PROTECTION RED (7068)" PRIOR TO INSTALLATION.
14. BLUE REFLECTORS SHALL BE INSTALLED IN PAVEMENT TO MARK FIRE HYDRANTS PER THE CITY OF WESTFIELD'S UTILITY AND INFRASTRUCTURE CONSTRUCTION STANDARDS.
15. ALL FIRE HYDRANTS SHALL HAVE A 5-INCH STORZ'S CONNECTION (MUELLER MODEL 290220 FOR CASTING AND 290221 CAP OR COMPARABLE TO AND APPROVED BY WPWD). FIRE HYDRANTS SHALL BE PLACED PER THE DIRECTION OF THE WESTFIELD FIRE DEPARTMENT.
16. WATER MAINS SMALLER THAN 8-INCH, C-900 PIPE CAN BE USED. THE MAIN SHALL BE SADDLE TAPPED AND BEDDED WITH SAND 6-INCH UNDER AND 12-INCHES OVER THE PIPE WITH MARKING TAPE INSTALLED 2-FEET ABOVE THE WATER MAIN. NUMBER TWELVE (#12) GAUGE LOCATING WIRE SHALL BE TAPED TO THE TOP OF THE MAIN AND PULLED THROUGH ALL VALVE BOXES (TO THE SURFACE) FOR LOCATING PURPOSES. IF DUCTILE IRON PIPE IS USED, THE MAIN MUST BE POLY WRAPPED AND MARKING TAPE INSTALLED 2-FEET ABOVE THE WATER MAIN.
17. PIV AND FDC ARE TO BE LOCATED IN THE WATER METER VAULT.
18. ALL SANITARY SEWER SPECIFICATIONS AND DETAILS CAN BE FOUND ON THE WESTFIELD WEBSITE LOCATED AT WWW.WESTFIELD.IN.GOV UNDER DEVELOPMENT/CONSTRUCTION.
19. ALL SANITARY SEWER LATERALS MUST HAVE LOCATE WIRE RUN WHEN INSTALLING. LOCATE WIRE SHALL BE ATTACHED TO TOP OF LATERALS. LOCATOR TAPE SHALL BE PLACED 2-FEET ABOVE LATERAL.
20. EROSION CONTROL PLAN MUST BE EXECUTED BEFORE ANY CONSTRUCTION COMMENCES.
21. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED IN THE FIELD BY THE WPWD INSPECTORS THAT ARE NOT SHOWN ON PLANS.
22. ALL EROSION CONTROL MATERIAL NEEDS TO BE APPROVED BY THE WPWD INSPECTORS PRIOR TO INSTALLATION.

GENNOTE-002

RQAW
CONSULTING ENGINEERS & ARCHITECTS
RQAW Corporation
10401 N. Meridian St. Suite 400
Indianapolis, Indiana 46290
(317) 815-7200 FAX (317) 815-7201

sym	revisions	date

N

scale: 1" = 20'

0 20' 40'

GRAPHIC SCALE

STATE OF INDIANA
No. 10810185
REGISTERED PROFESSIONAL ENGINEER
ERIC C. RAMSEY

job#	
contract#	
designed:	ECR
drawn:	DRP
checked:	ECR
date:	4/27/10

SITE LAYOUT PLAN

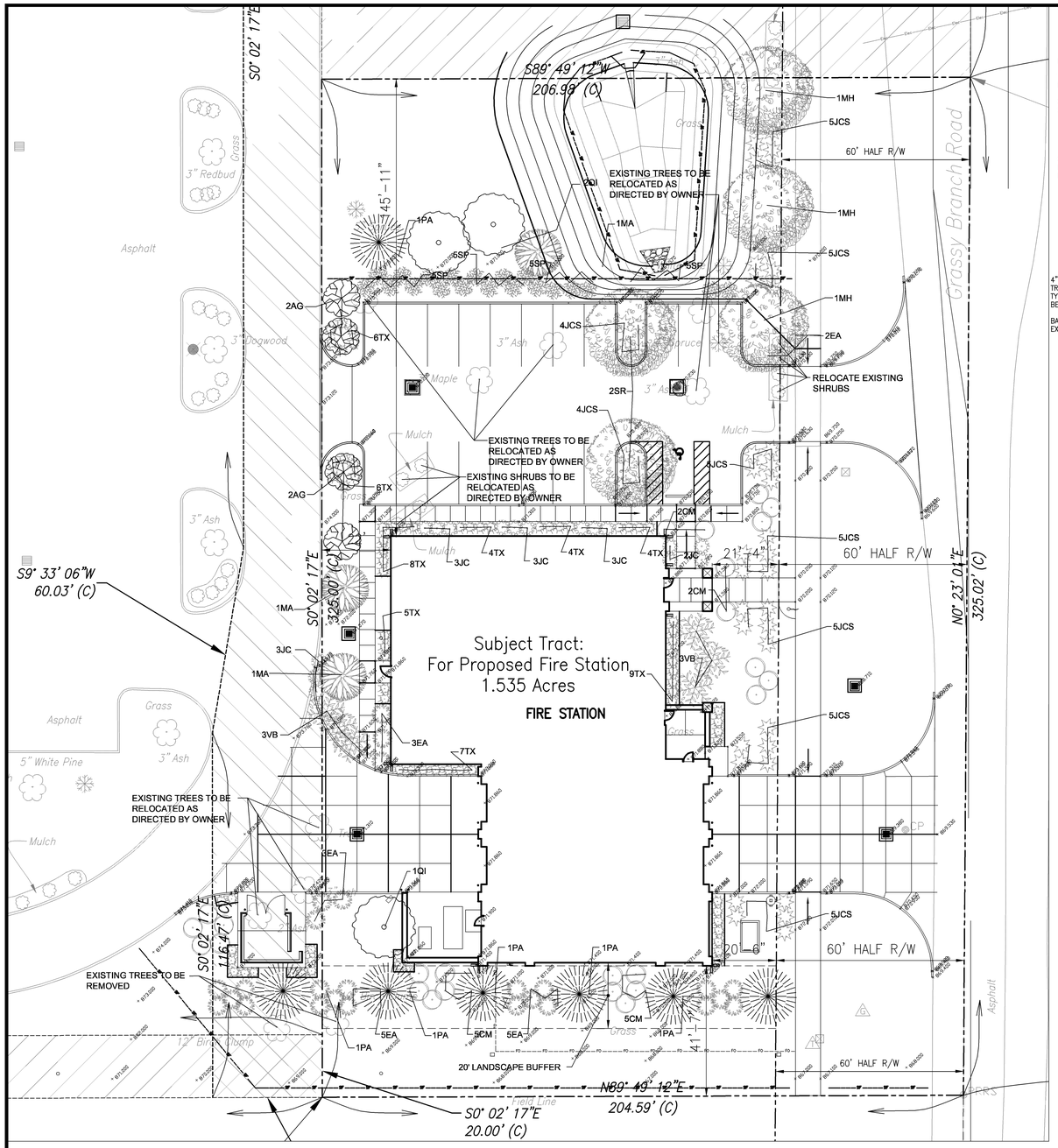
FIRE STATION 83
WESTFIELS, INDIANA

Copyright © 2009 by RQAW Corporation. All rights reserved.

SHEET

C4.0

OF



Legend of Symbols and Abbreviations

- Subject Tract Line
- Section Line
- Public Right of Way
- Ingress/ Egress Easement
- Sewer Easement
- Drainage Easement

◉	Found or Set Monument (See Report)	(R)	Record Distance
⁄	Indicates Mutual Ownership	(C)	Calculated Distance
(101–102)	Indicates Point–Point Distance	(M)	Measured Distance
		P.O.B.	Point of Beginning

Descriptions of Proposed Tracts and Easements

Ingress / Egress Easement

A part of the Southeast Quarter of Section 31, Township 19 North, Range 4 East, in Washington Township, Hamilton County, Indiana, being more particularly described as follows:

Commencing at the Northeast Corner of the Southeast Quarter of said section, being marked by 5/8" rebar found; thence South 0 degrees 23 minutes 01 seconds West, on the East line of said quarter section, 322.72 feet to the point of beginning: thence South 89 degrees 59 minutes 59 seconds West, 233.42 feet; thence South 0 degrees 02 minutes 17 seconds East, 346.93 feet; thence South 9 degrees 33 minutes 06 seconds West, 60.03 feet; thence South 0 degrees 02 minutes 17 seconds East, 116.47 feet to the south line of the Westfield High School 1995 Building Corporation lands described in Instrument #200200019813, found in the Office of the Hamilton County Recorder; thence North 89 degrees 49 minutes 12 seconds East, on the south line of said lands, 35 feet to a 5/8" Rebar with yellow cap stamped "USI CONSULTANTS RS FIRM #0018" set on the Southwest corner of the afore described "Fire Station Tract"; thence North 0 degrees 02 minutes 17 seconds West, on the West line of said "Fire Station Tract", 439.62 feet; thence on a tangent curve to the right, having a radius of 40.00 feet, an arc length of 62.86 feet and being subtended by a chord bearing North 44 degrees 58 minutes 51 seconds East, having a chord distance of 56.59 feet; thence North 89 degrees 59 minutes 59 seconds East, 168.08 feet to the east line of said quarter section; thence North 0 degrees 23 minutes 01 seconds East, 42.83 feet to the point of beginning.

Ingress / Egress Easement

Sewer Easement

A part of the Southeast Quarter of Section 31, Township 19 North, Range 4 East, in Washington Township, Hamilton County, Indiana, being more particularly described as follows:

Commencing at the Northeast Corner of the Southeast Quarter of said section, being marked by 5/8" rebar found; thence South 0 degrees 23 minutes 01 seconds West, on the East line of said quarter section, 844.57 feet to a Railroad Spike found at the Southeast corner of the Westfield High School 1995 Building Corporation lands described in Instrument #200200019813, found in the Office of the Hamilton County Recorder; thence South 89 degrees 49 minutes 12 seconds West, on the south line of the said lands, 204.59 feet to a 5/8" Rebar with yellow cap stamped "USI CONSULTANTS RS FIRM #0018" set on the Southwest corner of the afore described "Fire Station Tract" and being the point of beginning of this description; thence South 89 degrees 49 minutes 12 seconds West, continuing on the south line of the said lands, 625.71 feet; thence North 0 degrees 02 minutes 17 seconds West, 20 feet; thence North 89 degrees 49 minutes 12 seconds East, parallel to the aforementioned south line of said lands, 625.71 feet to the West line afore described "Fire Station Tract"; thence South 0 degrees 02 minutes 17 seconds East, on said west line of the "Fire Station Tract", 20.00 feet to the point of beginning.

Fire Station Tract

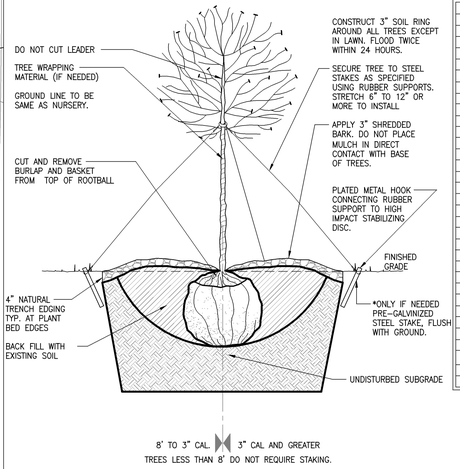
A part of the Southeast Quarter of Section 31, Township 19 North, Range 4 East, in Washington Township, Hamilton County, Indiana, being more particularly described as follows:

Commencing at the Northeast Corner of the Southeast Quarter of said section, being marked by 5/8" rebar found; thence South 0 degrees 23 minutes 01 seconds West, on the East line of said quarter section, 519.55 feet to a 2" Mag Spike with washer stamped "USI CONSULTANTS RS FIRM #0018", said monument being the point of beginning for this description: thence South 89 degrees 49 minutes 12 seconds West, 206.98 feet to a 5/8" Rebar with yellow cap stamped "USI CONSULTANTS RS FIRM #0018" (hereon being referred to as a "REBAR SET"); thence South 0 degrees 02 minutes 17 seconds East, 325.00 feet to a "REBAR SET" on the south line of the Westfield High School 1995 Building Corporation lands described in Instrument #200200019813, found in the Office of the Hamilton County Recorder; thence North 89 degrees 49 minutes 12 seconds East, on said south line of said lands, 204.59 feet to a Railroad Spike found on the East line of said quarter section; thence North 0 degrees 23 minutes 01 seconds East, on said quarter section line, 325.02 feet to the point of beginning, containing 1.535 acres more or less.

Drainage Easement

A part of the Southeast Quarter of Section 31, Township 19 North, Range 4 East, in Washington Township, Hamilton County, Indiana, being more particularly described as follows:

Commencing at the Northeast Corner of the Southeast Quarter of said section, being marked by 5/8" rebar found; thence South 0 degrees 23 minutes 01 seconds West, on the East line of said quarter section, 365.55 feet to the point of beginning: thence South 89 degrees 59 minutes 59 seconds West, 168.08 feet; thence on a tangent curve to the left, having a radius of 40.00 feet, an arc length of 62.86 feet and being subtended by a chord bearing South 44 degrees 58 minutes 51 seconds West, having a chord distance of 56.59 feet; thence South 0 degrees 02 minutes 17 seconds East, 114.62 feet to a 5/8" Rebar with yellow cap stamped "USI CONSULTANTS RS FIRM #0018" set on the Northwest corner of the afore described "Fire Station Tract"; thence North 89 degrees 49 minutes 12 seconds East, on the north line of said "Fire Station Tract", 206.98 feet to 2" Mag Spike with washer stamped "USI CONSULTANTS RS FIRM #0018" marking the Northeast corner of said "Fire Station Tract" also being on the east line of said quarter section; thence North 0 degrees 23 minutes 01 seconds East, 154.00 feet to the point of beginning.

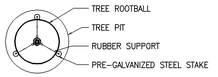


TREE PLANTING DETAIL 4
D252–SCALE: NONE

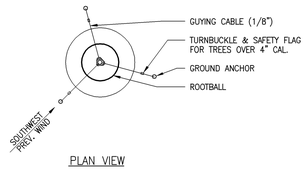
NAME: D252

PLANT SCHEDULE				
KEY	QTY	SIZE	SCIENTIFIC NAME	COMMON NAME
TREES				
SR	2	2 2 1/2" CAL. BB	SYRINGA RETICULATA	IVY SILK LILAC TREE
AG	4	2 2 1/2" CAL. BB	ACER GINNALA	AMUR MAPLE
QI	3	2 2 1/2" CAL. BB	QUERCUS ALBA	WHITE OAK
ARS	2	2 2 1/2" CAL. BB	ACER RUBRUM	SUN VALLEY MAPLE
PA	6	7 – 8', BB	PICEA ABIES	NORWAY SPRUCE
SHADE TREES				
MA	3	1 3/4"	MALUS 'JFS KW–5'	ROYAL RAINDROPS CRABAPPLE
MH	3	1 3/4"	MALUS HYBRIDA	CORALBURST CRABAPPLE
SHRUBS				
JC	14	18" CAN	JUNIPERUS CHINENSIS VAR. SARGENTII	GREEN SARGENT JUNIPER
CM	14	18 – 24", CONT.	CORNUS SERICEA/STOLONFERA	RED TWIG DOGWOOD
EA	18	18 – 24", CONT.	EUONYMUS ALATA	BURNING BUSH
SP	20	18 – 24", CONT.	SPIRAEA VANHOUTTE	RENAISSANCE SPIREA
TX	53	18 – 24", CONT.	TAXUS MEDIA 'CHADWICKII'	CHADWICK'S YEW
VB	6	18 – 24", CONT.	VIBURNUM PLICATUM TOMENTOSUM 'MARIESII'	MARIES DOUBLE FILE VIBURNUM
JCS	88	18" CAN	JUNIPERUS CHINENSIS 'SEA GREEN'	SEA GREEN JUNIPER
LAWN				
HYDRO SEED ALL AREAS DISTURBED BY CONSTRUCTION WITH "KENTUCKY BLUE GRASS MIX NO LESS THAN 80/20" EXCEPT AS NOTED OTHERWISE ON PLANS.				

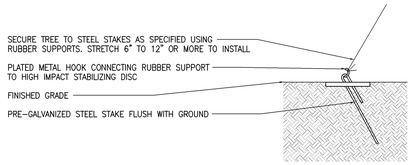
TREE SAVER – PROFESSIONAL TREE ANCHORING SYSTEM
LAWSON + LAWSON, INC.
479 GARDNER AVENUE
MARTINVILLE, IN. 46151
(800) 833-5323



STAKING PLAN



PLAN VIEW



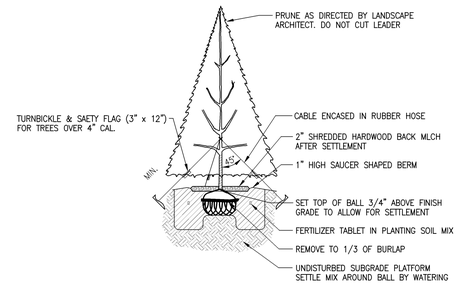
GROUND CONNECTION SECTION ENLARGMENT

PRODUCT NO.	DESCRIPTION	STAKE LENGTH	CALIPER
TS0020–L6/16	6 FT. LONG RUBBER SUPPORTS	16"	UP TO 3"
TS0020–L6/24	6 FT. LONG RUBBER SUPPORTS	24" FOR SANDY/ LOOSE SOIL	UP TO 3"
TS0020–L8/16	8 FT. LONG RUBBER SUPPORTS	16"	UP TO 4"
TS0020–L8/24	8 FT. LONG RUBBER SUPPORTS	24" FOR SANDY/ LOOSE SOIL	UP TO 4"
TS0030–LJ/11	4'–6" LONG RUBBER SUPPORTS	11"	UP TO 2"
TS0030–LJ/16	4'–6" LONG RUBBER SUPPORTS	16" FOR SANDY/ LOOSE SOIL	UP TO 2"

*STAKING ONLY IF NEEDED

TREE ANCHORING DETAIL 1
D253–SCALE: NONE

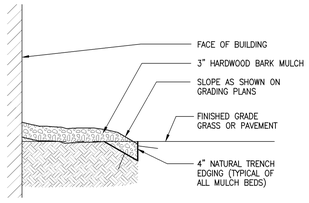
NAME: D253



SECTION VIEW

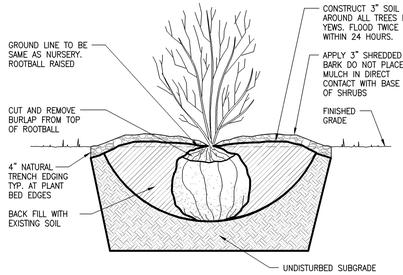
EVERGREEN TREE DETAIL 5
D255–SCALE: NONE

NAME: D255



TRENCH EDGING DETAIL 2
D251–SCALE: 1" = 1'

NAME: D251



* = FOR PLANT MATERIAL GREATER THAN 30" HIGH INCREASE MIN. DIM. BETWEEN SOIL BALL AND WALL OF HOLE TO 9"

SHRUB PLANTING DETAILS 3
D254–SCALE: NONE

NAME: D254

ROAW
CONSULTING ENGINEERS & ARCHITECTS
ROAW Corporation
10401 N. Meridian St., Suite 401
Indianapolis, Indiana 46290
(317) 815-7200 FAX (317) 815-7201

sym	revisions	date

N

scale: 1" = 30'
0 30' 60'
GRAPHIC SCALE

STATE OF INDIANA
No. 10810105
PROFESSIONAL ENGINEER
REGISTERED

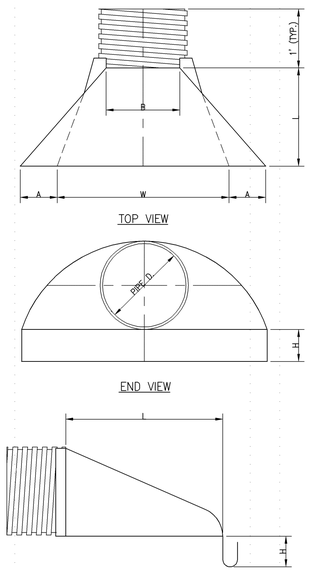
job#	
contract#	
designed:	ECR
drawn:	DRP
checked:	ECR
date:	4/27/10

LANDSCAPE PLAN

FIRE STATION 83
WESTFIELS, INDIANA

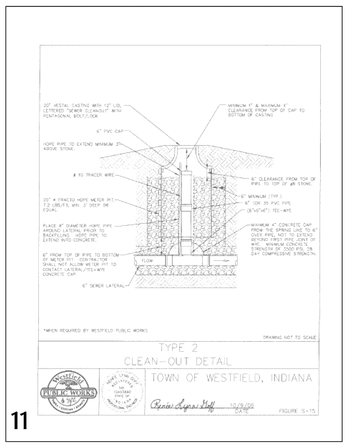
Copyright © 2009 by ROAW Corporation. All rights reserved.

SHEET
C5.0
OF

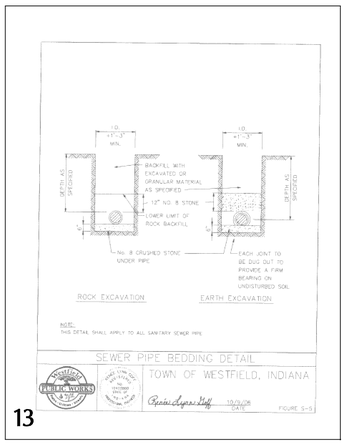


PIPE DIAMETER	DIMENSIONS (INCHES)					
	PART NO.	A (1+/-)	B MAX	H (1+/-)	L (1/2 +/-)	W (2 +/-)
12" AND 15"	1210NP	6.5	10	6.5	25	29
18"	1810NP	7.5	15	6.5	32	35
24"	2410NP	7.5	18	6.5	36	45
30"	3010NP	10.5	NA	7.0	53	68
36"	3610NP	10.5	NA	7.0	53	68

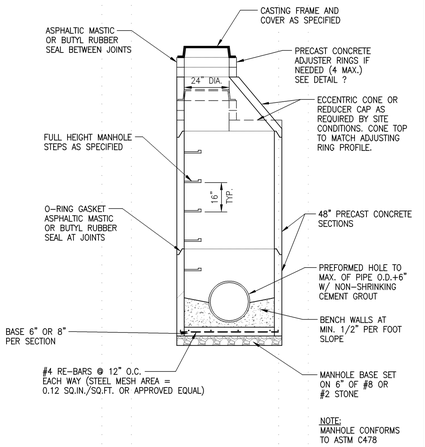
10 HDPE END SECTION DETAIL
SCALE: NONE STES-HDPE-001



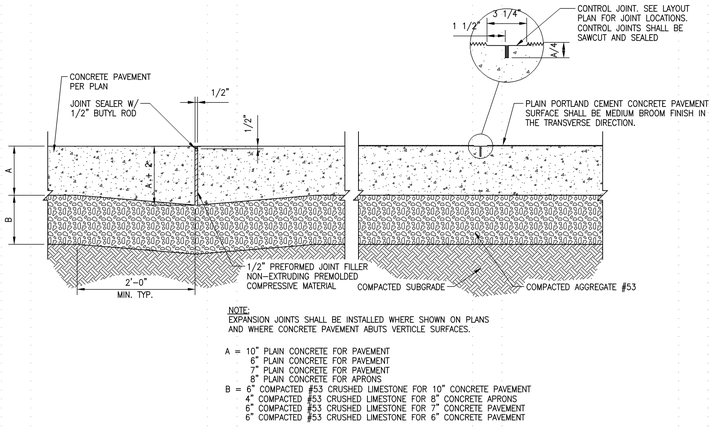
11



13



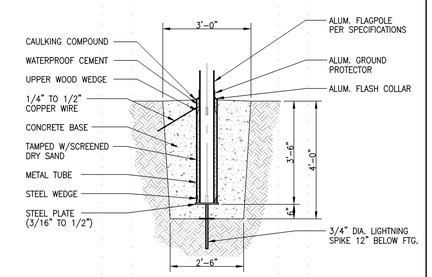
7 STANDARD MANHOLE FOR 12" THRU 24" PIPE SIZES
SCALE:NONE STPW-002



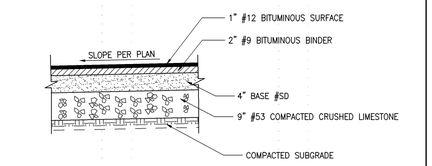
NOTE:
EXPANSION JOINTS SHALL BE INSTALLED WHERE SHOWN ON PLANS AND WHERE CONCRETE PAVEMENT ABUTS VERTICLE SURFACES.

A = 10" PLAIN CONCRETE FOR PAVEMENT
6" PLAIN CONCRETE FOR PAVEMENT
7" PLAIN CONCRETE FOR PAVEMENT
8" PLAIN CONCRETE FOR APRONS
B = 6" COMPACTED #53 CRUSHED LIMESTONE FOR 10" CONCRETE PAVEMENT
4" COMPACTED #53 CRUSHED LIMESTONE FOR 8" CONCRETE APRONS
6" COMPACTED #53 CRUSHED LIMESTONE FOR 7" CONCRETE PAVEMENT
6" COMPACTED #53 CRUSHED LIMESTONE FOR 6" CONCRETE PAVEMENT

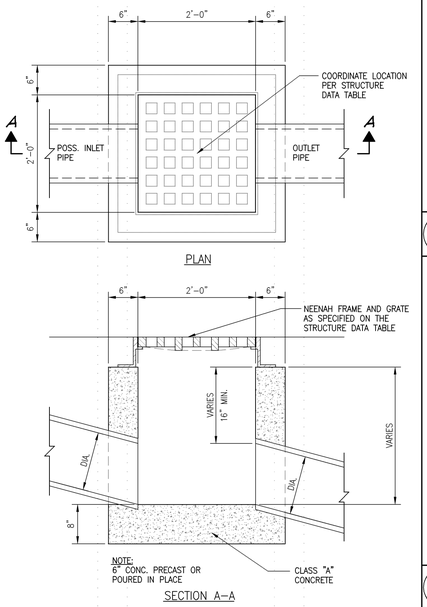
1 CONCRETE PAVEMENT EXPANSION & CONTROL JOINTS
SCALE:NONE d001.dwg



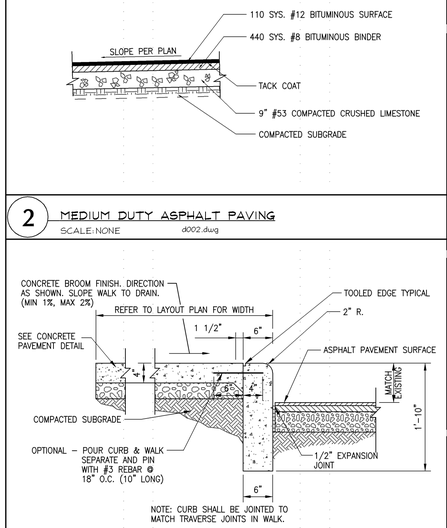
8 FLAGPOLE BASE DETAIL
SCALE: NONE FLP-001



9 HEAVY DUTY ASPHALT PAVING
SCALE:NONE d003.dwg

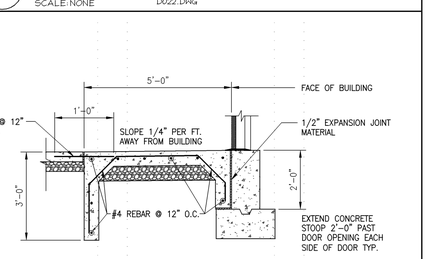


5 INLET TYPE "A" (MODIFIED 12" TO 18" PIPES)
SCALE:NONE D022.DWG

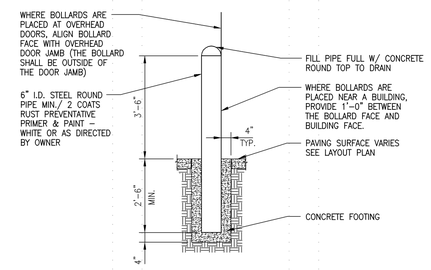


2 MEDIUM DUTY ASPHALT PAVING
SCALE:NONE d002.dwg

3 INTEGRAL CURB AND WALK
SCALE: NONE D152C.dwg



6 CONCRETE STOOP DETAIL
SCALE:NONE CPST-003



4 EXTERIOR BOLLARD
SCALE: NONE D117.dwg

RQAW
CONSULTING ENGINEERS & ARCHITECTS
RQAW Corporation
10401 N. Meridian St. Suite 400
Indianapolis, Indiana 46290
(317) 815-7200 FAX (317) 815-7201

sym	revisions	date

N

scale: 1" = 20'
0 20' 40'
GRAPHIC SCALE

STATE OF INDIANA REGISTERED PROFESSIONAL ENGINEER No. 10810185 ERIC W. CRAWFORD

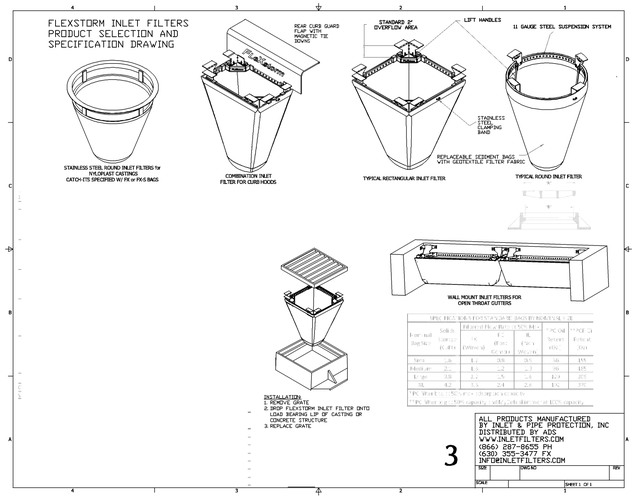
job#	
contract#	
designed:	ECR
drawn:	DRP
checked:	ECR
date:	4/27/10

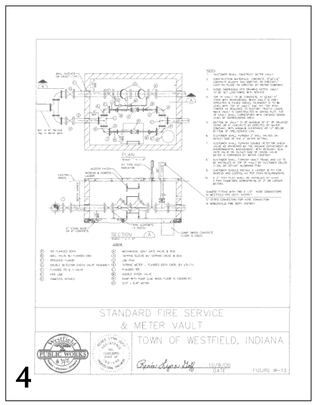
DETAILS

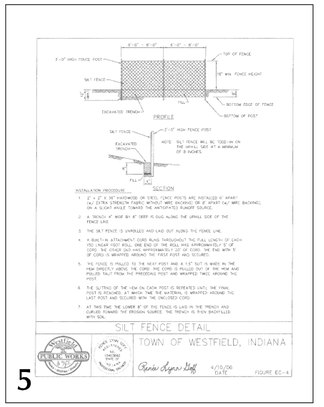
FIRE STATION 83
WESTFIELS, INDIANA

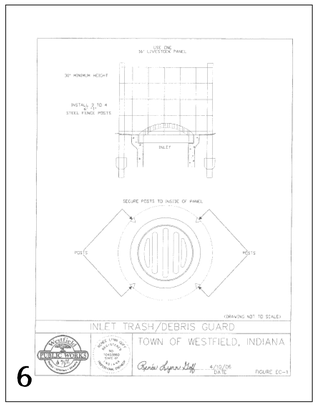
Copyright © 2009 by RQAW Corporation. All rights reserved.

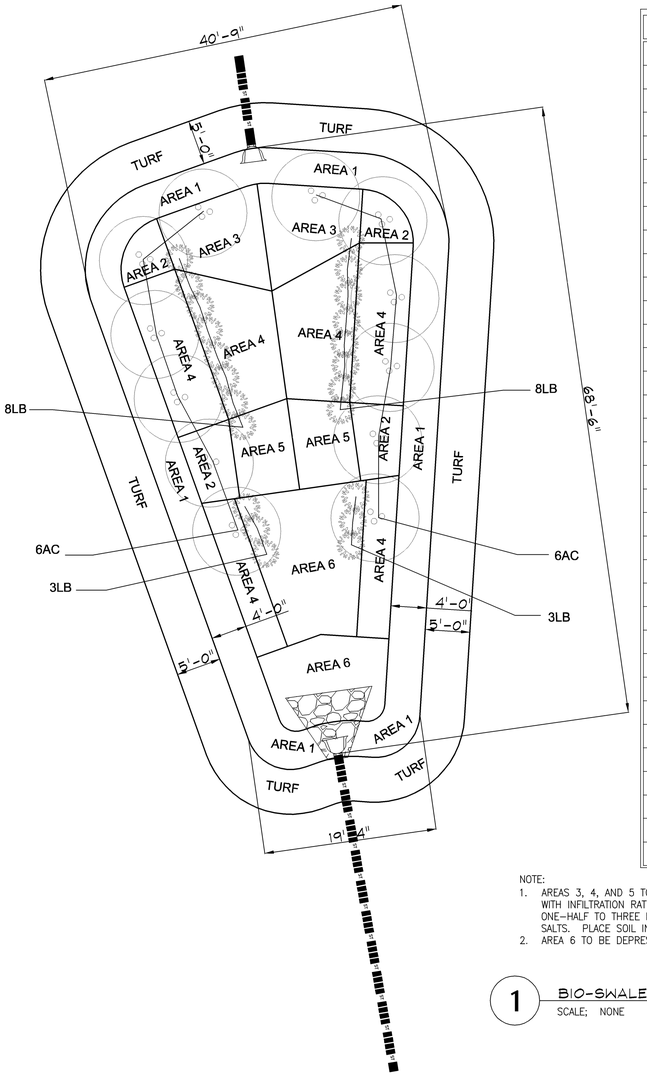
SHEET
C6.0
OF







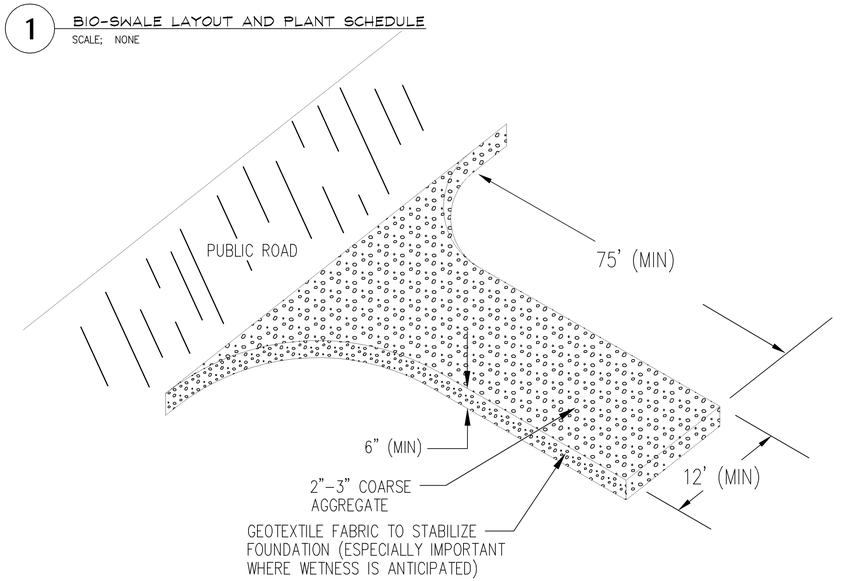




PLANT SCHEDULE				
AREA	QTY	SIZE	SCIENTIFIC NAME	COMMON NAME
			AREA 1	
1	57	2–3 FT.	SCHIZACHYRIUM SCOPARIUM	LITTLE BLUESTEM
1	57	1–3 FT.	BOUTELOUA CURTIPEDULA	SIDE–OATS GRAMA
1	57	2–4 FT.	SILENE REGIA	ROYAL CATCHFLY
1	57	1–2 FT.	ASCLEPIAS TUBEROSA	BUTTERFLYWEED
			AREA 2	
2	23	2–3 FT.	IRIS VERSICOLOR	WILD IRIS
2	23	2–3 FT.	CHASMANTHIUM LATIFOLIUM	NORTHERN SEED OATS
			AREA 3	
3	50	3–5 FT.	PANICUM VIRGATUM	SWITCH GRASS
			AREA 4	
4	50	3–5 FT.	LIATRIS SPICATA	DENSE BLAZING STAR
4	50	1–3 FT.	SPOROBOLUS HETEROLEPIS	PRAIRIE DROPSEED
4	50	3–5 FT.	RUBDECKIA SUBTOMENTOSA	BLACK–EYED SUSAN
			AREA 5	
5	26	4–6 FT.	EUPATORIUM MACULATUM	SPOTTED JOE–PYE WEED
			AREA 6	
6	26	3–4 FT.	ASCLEPIAS INCARNATA	SWAMP MILKWEED
6	26	1–3 FT.	LOBELIA SIPHILITICA	GREAT BLUE LOBELIA
6	26	1–3 FT.	LOBELIA CARDINALIS	CARDINAL FLOWER
6	26	2 FT.	CAREX GRAYI	RIVERBANK TUSSOCK SEDGE
6	26	1–2 FT.	CAREX EMORYI	BURR SEDGE
			TREES AND SHRUBS	
AC	12	5 FT.	AMELANCHIER CANADENSIS	SERVICE BERRY
LB	22	18–24" CONT.	LINDERIA BONZOIN	COMMON SPICEBUSH
			LAWN	
LAWN – SEED WITH "MIXTURE T" – (HIGH TRAFFIC/SUN TO SHADE/SLOPE MIX) AS SHOWN				
LAWN – SEED WITH "MIXTURE S" – (SALT TOLERANT SHOULDER MIX) AS SHOWN				

NOTE:
1. AREAS 3, 4, AND 5 TO CONSIST OF 4' OF PLANTING SOIL BEDDING. BEDDING TO CONSIST OF 10–25% CLAY CONTENT WITH INFILTRATION RATE OF ONE–HALF INCH PER HOURS. pH OF THE SOIL BETWEEN 5.5 AND 6.5. ONE AND ONE–HALF TO THREE PERCENT ORGANIC CONTEND. MAXIMUM OF 500 PARTS PER MILLION CONCENTRATION OF SOLUBLE SALTS. PLACE SOIL IN LIFTS OF 12 TO 18 INCHES.
2. AREA 6 TO BE DEPRESSED OR FLAT TO SLOW OR POND WATER.

1 BIO-SWALE LAYOUT AND PLANT SCHEDULE
SCALE; NONE



2 TEMPORARY CONSTRUCTION ENTRANCE DETAIL
SCALE; NONE

RQAW
CONSULTING ENGINEERS & ARCHITECTS
RQAW Corporation
10401 N. Meridian St. Suite 400
Indianapolis, Indiana 46290
(317) 815-7200 FAX (317) 815-7201

sym	revisions	date

scale: 1" = 20'
0 20' 40'
GRAPHIC SCALE

job# | contract# | designed: ECR | drawn: DRP | checked: ECR | date: 4/27/10

DETAILS
FIRE STATION 83
WESTFIELS, INDIANA

Copyright © 2009 by RQAW Corporation. All rights reserved.

SHEET
C6.1
OF

EROSION AND SEDIMENT CONTROL PLAN

1. INTRODUCTION

THE PROPOSED WESTFIELD FIRE STATION # 83 OS TP BE CONSTRUCTED ON THE WEST SIDE OF GRASSY BRANCH ROAD JUST ON THE EAST SIDE OF THE EXISTING ELEMENTARY SCHOOL ON THE NORTHEAST SIDE OF WESTFIELD INDIANA. SEE PROJECT LOCATION ON TITLE SHEET. THE LOCATION OF THIS PROJECT IS ALSO DESCRIBED IN THE PROJECT INFORMATION SECTION ON THIS SHEET.

THE PROPOSED PROJECT WILL CONSIST OF THE NEW FIRE STATION FACILITY, EARTHWORK, AND NEW PAVING. THE ENTIRE PROJECT WILL HAVE MINIMAL IMPACT ON NEARBY BUSINESSES AND RESIDENCES.

THE EXISTING SITE IS PRESENTLY MOWED GRASS.

ADJACENT LAND USE IS AS FOLLOWS: NORTH AND WEST, EXISTING ELEMENTARY SCHOOL, EAST, GRASSY BRANCH ROAD AND SUBDIVISION, SOUTH, OPEN FARM FIELD.

PRE-DEVELOPED STORM DRAINAGE RUNOFF FLOWS NORTH TO AN EXISTING AREA INLET THEN FLOWS THROUGH AN EXISTING STORM SEWER NETWORK TO AN EXISTING DETENTION BASIN.

THE POST DEVELOPED STORM DRAINAGE WILL BE COLLECTED IN A STORM SEWER NETWORK AND DISCHARGE TO THE NORTH INTO A BIO-SWALE/DETENTION BASIN INTO THE EXISTING AREA INLET WHICH THEN FLOWS THROUGH AN EXISTING STORM SEWER NETWORK TO AN EXISTING DETENTION BASIN.

THE HYDRAULICS OF THE SITE HAVE BEEN CALCULATED AND SUBMITTED IN A SEPARATE REPORT. RUNOFF RESULTS ARE AS FOLLOWS:
EXISTING RUNOFF:
10 YEAR, PRE-DEVELOPED RUNOFF = 1.91 CFS
100 YEAR, PRE-DEVELOPED RUNOFF = 4.71 CFS
PROPOSED RUNOFF:
10 YEAR, POST-DEVELOPED RUNOFF = 3.88 CFS
100 YEAR, POST-DEVELOPED RUNOFF = 5.02 CFS

THE SITE DOES NOT ACCEPT OFF-SITE STORMWATER.

THERE WILL BE NO DIRECT DISCHARGES OF STORMWATER IN TO THE EXISTING GROUND WATER.

THERE ARE NO WETLANDS LOCATED ON THE PROJECT SITE.

THIS PROJECT DOES NOT INCLUDE MINIMAL CONSTRUCTION IN A FLOODPLAIN.

STATE AND FEDERAL WATER QUALITY PERMITS ARE NOT REQUIRED FOR THIS PROJECT.

RECEIVING WATERS FROM THIS PROJECT IS COOL CREEK.

SEED MIXTURE SCHEDULE

PROPORTION BY WEIGHT	COMMON NAME	BOTANICAL NAME	MIN. % GERM.	MIN. % PURE SEED	MAX. % WEED SEED
PERMANENT MATRIX					
35%	TALL FESCUE	FESTUCA ELATIOR (VAR. ARUNDINACEA) (EQUAL AMOUNTS OF 'KENTUCKY 31' & 'ALTA')	85	98	0.30
21%	PERENN. RYEGRASS	LOLIUM PERENNE (EQUAL AMOUNTS OF 'FIESTA II' & MANHATTAN II')	90	97	0.30
14%	CREEPING RED FESCUE	FESTUCA RUBRA VAR.	90	98	0.30
TEMPORARY MATRIX					
23%	SEED OATS	AVINA SATIVA	-	-	0.50
7%	ANNUAL RYEGRASS	LOLIUM MULTIFLORUM	90	95	0.50

PROJECT LOCATION

SOILS MAP AND SOIL DESCRIPTIONS

BROOKSTON SILTY CLAY LOAM (Bs)
- SLOPE: 0 TO 2 PERCENT
- DEPTH TO RESTRICTIVE FEATURE: MORE THAN 80 INCHES
- DRAINAGE CLASS: POORLY DRAINED
- DEPTH TO WATER TABLE: ABOUT 0 TO 12 INCHES
- FREQUENCY OF FLOODING: NONE
- FREQUENCY OF PONDING: FREQUENT

CROSBY SILT LOAM (CcA)
- SLOPE: 0 TO 3 PERCENT
- DEPTH TO RESTRICTIVE FEATURE: 20 TO 40 INCHES TO DENSE MATERIAL
- DRAINAGE CLASS: SOMEWHAT POORLY DRAINED
- DEPTH TO WATER TABLE: ABOUT 6 TO 24 INCHES
- FREQUENCY OF FLOODING: NONE
- FREQUENCY OF PONDING: NONE

MIAMI SILT LOAM (MmB2)
- SLOPE: 2 TO 6 PERCENT
- DEPTH OF RESTRICTIVE FEATURE: 24 TO 40 INCHES TO DENSE MATERIAL
- DRAINAGE CLASS: MODERATELY WELL DRAINED
- DEPTH TO WATER TABLE: ABOUT 24 TO 42 INCHES
- FREQUENCY OF FLOODING: NONE
- FREQUENCY OF PONDING: NONE

PROJECT INFORMATION

PROJECT NAME	WESTFIELD FIRE STATION #83
COUNTY	HAMILTON COUNTY
14 DIGIT HUC CODE	05120201090030
PROJECT LOCATION DESCRIPTION	WESTFIELD, INDIANA
LATITUDE AND LONGITUDE	40° 02' 54", 86° 06' 37" W
CIVIL TOWNSHIP	WASHINGTON
QUARTER	SOUTHEAST QUARTER
SECTION	31
TOWNSHIP	T 19 N
RANGE	R 4 E

OWNER (TEMPORARY)	MEYER NAJEM CONSTRUCTION, LLC
CONTACT	KEVIN MCGOVERN
ADDRESS	13099 PARKSIDE DRIVE
CITY, STATE, ZIP	FISHERS, INDIANA, 46038
TELEPHONE	317 577-0007
FAX	317 577-0286
EMAIL	kmcgovern@meyer-najem.com

PLAN PREPARE CONTACT NAME	KELLEY M. ARONSON, P.E.
AFFILIATION	CONSULTANT/RQAW CORPORATION
ADDRESS	10401 N. MERIDIAN ST. SUITE 401
CITY, STATE, ZIP	INDIANAPOLIS, IN 46290
TELEPHONE	(317) 815-7217 (DIRECT)
FAX	(317) 815-7201
EMAIL	karonson@rqaw.com

EROSION CONTROL INSTALLATION RESPONSIBILITY

COMPANY NAME (TEMPORARY)	MEYER NAJEM CONSTRUCTION. LLC
CONTACT	KEVIN MCGOVERN
ADDRESS	13099 PARKSIDE DRIVE
CITY, STATE, ZIP	FISHERS, IN 46038
TELEPHONE	317 577-0007
FAX	317 577-0286
EMAIL	kmcgovern@meyer-najem.com

INDEX
SECTION 'A' ASSESSMENT OF CONSTRUCTION PLAN ELEMENTS

A	DESCRIPTION	LOCATION IN EROSION AND SEDIMENT CONTROL PLAN
1	INDEX SHOWING LOCATIONS OF REQUIRED PLAN ELEMENTS.	SEE THIS SHEET FOR A LEGEND OF ALL ELEMENTS REQUIRED.
2	11 X 17 INCH PLAT SHOWING BUILDING LOT NUMBERS/BOUNDRIES AND ROAD LAYOUT/NAMES.	AN 11 X 17 AVAILABLE UPON REQUEST FROM OWNER.
3	NARRATIVE DESCRIBING THE NATURE AND PURPOSE OF THE PROJECT.	SEE 'INTRODUCTION', THIS SHEET.
4	VICINITY MAP SHOWING PROJECT LOCATION	SEE TITLE SHEET.
5	LEGAL DESCRIPTION OF THE PROJECT SITE (INCLUDE LATITUDE AND LONGITUDE- NOI REQUIREMENT)	SEE 'PROJECT INFORMATION', THIS SHEET.
6	LOCATION OF ALL LOTS AND PROPOSED SITE IMPROVEMENTS (ROADS, UTILITIES,STRUCTURES, ETC.)	SEE ALL C-SERIES SHEETS IN THIS SET OF PLANS.
7	HYDROLOGIC UNIT CODE (14 DIGIT)	SEE 'PROJECT INFORMATION', THIS SHEET.
8	NOTATION OF ANY STATE OR FEDERAL WATER QUALITY PERMITS.	SEE 'INTRODUCTION', THIS SHEET. NONE REQUIRED.
9	SPECIFIC POINTS WHERE STORMWATER DISCHARGE WILL LEAVE THE SITE	SEE GRADING PLANS.
10	LOCATION AND NAME OF ALL WETLANDS, LAKES AND WATER COURSES ON AND ADJACENT TO THE SITE	SEE 'INTRODUCTION', THIS SHEET.
11	IDENTIFICATION OF ALL RECEIVING WATERS	SEE 'INTRODUCTION', THIS SHEET.
12	IDENTIFICATION OF POTENTIAL DISCHARGES TO GROUND WATER (ABANDONED WELLS, SINKHOLES, ETC.)	SEE 'INTRODUCTION', THIS SHEET.
13	100 YEAR FLOODPLAIN, FLOODWAYS, AND FLOODWAY FRINGES	SEE 'INTRODUCTION', THIS SHEET.
14	PRE-CONSTRUCTION AND POST CONSTRUCTION ESTIMATE OF PEAK DISCHARGE (10 YEAR STORM EVENT)	SEE 'INTRODUCTION', THIS SHEET. HYDRAULIC CALCULATION HAVE BEEN SUBMITTED SEPARATELY IN A "TECHNICAL REPORT".
15	ADJACENT LAND USE, INCLUDING UPSTREAM WATERSHED	SEE 'INTRODUCTION', THIS SHEET.
16	LOCATIONS AND APPROXIMATE BOUNDARIES OF ALL DISTURBED AREAS (CONSTRUCTION LIMITS)	SEE SITE LAYOUT PLANS.
17	IDENTIFICATION OF EXISTING VEGETATIVE COVER	SEE 'INTRODUCTION', THIS SHEET.
18	SOILS MAP INCLUDING SOIL DESCRIPTIONS AND LIMITATIONS	SEE 'SOILS MAP AND SOIL DESCRIPTIONS', THIS SHEET.
19	LOCATIONS, SIZE AND DIMENSIONS OF PROPOSED STORMWATER SYSTEMS (E.G. PIPES, SWALES AND CHANNELS)	SEE GRADING PLAN.
20	PLANS FOR ANY OFF-SITE CONSTRUCTION ACTIVITIES ASSOCIATED WITH THIS REPORT (SEWER/WATER TIE-INS)	THE WILL BE NO OFF-SITE CONSTRUCTION.
21	LOCATIONS OF PROPOSED SOIL STOCKPILES AND / OR BORROW/ DISPOSAL AREAS	THE WILL BE NO STOCKPILE OR BORROW AREAS FOR THIS PROJECT.
22	EXISTING SITE TOPOGRAPHY AT AN INTERVAL APPROPRIATE TO INDICATE DRAINAGE PATTERNS	SEE TOPOGRAPHIC SURVEY FOR EXISTING DRAINAGE PATTERNS.
23	PROPOSED FINAL TOPOGRAPHY AT AN INTERVAL APPROPRIATE TO INDICATE DRAINAGE PATTERNS	SEE GRADING PLAN FOR PROPOSED DRAINAGE PATTERNS.

SECTION 'B' STORMWATER POLLUTION PREVENTION PLAN - CONSTRUCTION COMPONENT

B	DESCRIPTION	LOCATION IN EROSION AND SEDIMENT CONTROL PLAN
1	DESCRIPTION OF POTENTIAL POLLUTANT SOURCES ASSOCIATED WITH CONSTRUCTION ACTIVITIES	SEE "MATERIAL HANDLING AND SPILL PREVENTION", THIS SHEET.
2	SEQUENCE DESCRIBING STORMWATER QUALITY MEASURE IMPLEMENTATION RELATIVE TO LAND DISTURBING ACTIVITIES.	SEE "SEQUENCE", THIS SHEET.
3	STABLE CONSTRUCTION ENTRANCE LOCATIONS AND SPECIFICATIONS (AT ALL POINTS OF INGRESS AND EGRESS)	SEE LAYOUT PLAN FOR LOCATION AND DIMENSIONS.
4	SEDIMENT CONTROL MEASURES FOR SHEET FLOW AREAS	SEE SEQUENCE", THIS SHEET.
5	SEDIMENT CONTROL MEASURES FOR CONCENTRATED FLOW AREAS.	THERE ARE NO CONCENTRATED FLOW AREAS.
6	STORM SEWER INLET PROTECTION MEASURE LOCATIONS AND SPECIFICATIONS.	SILT FENCES.
7	RUNOFF CONTROL MEASURES (E.G. DIVISIONS, ROCK CHECK DAMS, SLOPE DRAINS, ETC.)	SILT FENCES AND TEMPORARY SEEDING.
8	STORM WATER OUTLET PROTECTION. SPECIFICATIONS	RIPRAP APRONS WILL USED.
9	GRADE STABILIZATION STRUCTURE LOCATIONS AND SPECIFICATIONS	NONE USED.
10	LOCATION, DIMENSIONS, SPECIFICATIONS, AND CONSTRUCTION DETAILS OF EACH STORMWATER QUALITY MEASURE	BIO-SWALE WILL BE USED. SEE EROSION CONTROL PLANS, GRADING PLANS, AND DETAILS.
11	TEMPORARY SURFACE STABILIZATION METHODS APPROPRIATE FOR EACH SEASON (INCLUDE SEQUENCING.)	SEE "SEQUENCE" AND "SEED MIXTURE SCHEDULE", THIS SHEET.
12	PERMANENT SURFACE STABILIZATION SPECIFICATIONS (INCLUDE SEQUENCING.)	SEE "SEQUENCE" AND "SEED MIXTURE SCHEDULE", THIS SHEET.
13	MATERIAL HANDLING AND SPILL PREVENTION PLAN.	SEE "MATERIAL HANDLING AND SPILL PREVENTION", THIS SHEET.
14	MONITORING AND MAINTENANCE GUIDELINES FOR EACH PROPOSED STORMWATER QUALITY MEASURE.	SEE "EROSION CONTROL MONITORING AND MAINTENANCE", THIS SHEET.
15	EROSION AND SEDIMENT CONTROL SPECIFICATIONS FOR INDIVIDUAL BUILDING LOTS.	N/A

SECTION 'C' STORMWATER POLLUTION PREVENTION PLAN - POST CONSTRUCTION COMPONENT

C	DESCRIPTION	LOCATION IN EROSION AND SEDIMENT CONTROL PLAN
1	DESCRIPTION OF POLLUTANTS AND THEIR SOURCES ASSOCIATED WITH THE PROPOSED LAND USED.	SEE "POST CONSTRUCTION", THIS SHEET.
2	SEQUENCE DESCRIBING STORMWATER QUALITY MEASURE IMPLEMENTATION	SEE "SEQUENCE", THIS SHEET.
3	DESCRIPTION OF PROPOSED POST CONSTRUCTION STORMWATER QUALITY MEASURES (INCLUDE A WRITTEN DESCRIPTION OF HOW THESE MEASURES WILL REDUCE DISCHARGE OF EXPECTED POLLUTANTS)	SEE "POST CONSTRUCTION", THIS SHEET.
4	LOCATION, DIMENSIONS, SPECIFICATIONS, AND CONSTRUCTION DETAILS OF EACH STORMWATER QUALITY MEASURE	SEE GRADING PLANS AND DETAILS.
5	DESCRIPTION OF MAINTENANCE GUIDELINES FOR POST CONSTRUCTION STORMWATER QUALITY MEASURES	SEE "POST CONSTRUCTION", THIS SHEET.

2. SEQUENCE

PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL REVIEW ALL EXISTING CONDITIONS AND COMPARE THEM WITH THE PROPOSED CONDITIONS AS SHOWN ON THE DRAWINGS. ANY VARIATIONS SHALL BE BROUGHT IMMEDIATELY TO THE ATTENTION TO THE ENGINEER.

ALL PERIMETER SILT FENCE AND STRUCTURE PROTECTION WILL BE INSTALLED ACCORDING TO THE PLANS AND SPECIFICATIONS AND BE IN-PLACE PRIOR TO ANY EARTH MOVEMENT. IF THERE IS THE POSSIBILITY OF SEDIMENT WASH FLOW FROM ON-SITE TO OFF-SITE NOT IDENTIFIED ON THE PLANS, THE ENGINEER WILL BE NOTIFIED AND RECOMMENDED CONTROL MEASURES SHALL BE IMPLEMENTED.

THE STABILIZED CONSTRUCTION ENTRANCE WILL BE LOCATED ON THE NORTH SIDE OF THE PROPOSED FACILITY. CONTRACTOR PARKING AND LAYDOWN AREA WILL BE LOCATED IN THE PROPOSED PARKING LOT.

THIS PROJECT WILL BE CONSTRUCTED IN PHASES:

FIRST PHASE WILL BE INSTALLATION OF THE PERIMETER SILT FENCE AS SHOWN ON THE PLANS AND AT THE BASE OF ALL SLOPES WHERE POSSIBLE SEDIMENT WASH MAY OCCUR. THE EXISTING DISCHARGE STRUCTURE SHALL BE PROTECTED FROM SEDIMENT WASH AND MONITORED AT ALL TIMES DURING CONSTRUCTION.

SECOND PHASE WILL BE THE INSTALLATION OF THE SITE GRADING AND PROPOSED STORM WATER DRAINAGE NETWORK INCLUDING THE DETENTION BASIN AT THE LOCATION OF THE BIO-SWALE.

THIRD PHASE WILL BE THE CONSTRUCTION OF THE FIRE STATION FACILITY AND PAVED AREAS.

FINAL PHASE WILL BE FINE GRADING, SEEDING, AND ALL PLANT MATERIALS. THIS INCLUDES THE PLANT MATERIALS FOR THE BIO-SWALE. THE REMOVAL OF EROSION CONTROL DEVICES SHALL BE REMOVED ONCE THE TOPSOIL HAS STABILIZED. GENERAL SITE CLEANUP SHALL ALSO BE PERFORMED DURING THIS PHASE.

THE CONTRACTOR SHALL ENSURE THAT EROSION CONTROL DEVICES WILL BE USED AS SHOWN ON THE DRAWINGS. ADDITIONAL MEASURES MAY BE USED IF NECESSARY EVEN IF NOT SHOWN ON THE DRAWINGS.

ALL DISTURBED AREAS DURING CONSTRUCTION WILL BE TEMPORARY SEEDED WITHIN 7 DAYS AS PER SPECIFICATIONS TO PROVIDE TEMPORARY SURFACE STABILIZATION TO PREVENT SEDIMENT WASH OF THE TOPSOIL. TEMPORARY SEEDING WILL BE AFTER ROUGH GRADING HAS BEEN BROUGHT TO FINISH GRADE. ONCE CONSTRUCTION HAS BEEN COMPLETED AND FINAL GRADES ACHIEVED, PERMANENT SEEDING WILL BE PLACED AS DESCRIBED IN THE SPECIFICATIONS TO PROVIDE PERMANENT SURFACE STABILIZATION. SEEDING LIMITS WILL BE CONSIDERED TO BE ALL DISTURBED AREAS WITHIN THE CONSTRUCTION LIMITS.

AFTER CONSTRUCTION IS COMPLETED AND PERMANENT SEEDING HAS BEEN PLACED AND ESTABLISHED, THE SILT FENCE AND OTHER DEVICES MAY BE REMOVED.

3. MATERIAL HANDLING AND SPILL PREVENTION

POTENTIAL POLLUTANT SOURCES ASSOCIATED WITH CONSTRUCTION ACTIVITIES ON THIS SITE INCLUDE PETROLEUM PRODUCTS AND/OR MUD AND SEDIMENT FROM CONSTRUCTION EQUIPMENT, SOLID WASTE, AND DUST.

THERE WILL BE NO FUEL STORAGE ON SITE. ANY VEHICLE REFUELING WILL BE PERFORMED FROM A FUEL TRUCK OR BE REFUELED OFF SITE. THE CONTRACTOR SHALL TAKE STANDARD CARE DURING ANY REFUELING OPERATIONS.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THEIR VEHICLES THAT MAY BE ON SITE. ANY VEHICLE WITH VISUAL EVIDENCE OF OIL OR LUBRICATION LEAKING SHALL BE REPAIRED PRIOR TO ANY FURTHER USE ON SITE. THE CONTRACTOR AND OWNER WILL CLOSELY MONITOR THESE VEHICLES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY GROUND CONTAMINATION THAT MAY OCCUR FROM CONSTRUCTION VEHICLES.

DURING CONSTRUCTION, THE CONTRACTOR SHALL USE EXTREME CARE WHEN TRANSPORTING MATERIALS USED IN CONSTRUCTION SUCH AS SOLVENTS, LUBRICANTS, TAR, SEALANTS, ETC. IF ANY SPILLAGE OCCURS, THE CONTRACTOR OR THE OWNER SHALL BE IMMEDIATELY NOTIFIED AND THE AREA QUARANTINED. IT SHALL BE ISOLATED AS MUCH AS POSSIBLE TO PREVENT SPREADING. THE SOIL SHALL BE REMOVED AND PROPERLY DISPOSED OF OFF-SITE AT AN APPROPRIATE FACILITY. RECORD OF THE SPILL SHALL BE RECORDED AND FILED WITH THE OWNER.

CONSTRUCTION TRASH WILL BE DISPOSED OF IN CONTRACTOR SUPPLIED TRASH BINS TO BE LOCATED ON SITE BY THE CONTRACTOR. THE SITE WILL BE INSPECTED AT THE END OF THE DAY FOR DEBRIS AND TRASH AROUND THE SITE. THIS WILL INCLUDE AND NOT EXCEPTION TO, CONCRETE FROM WASHOUT AREA, LUMBER SCRAPS, INSULATION REMNANTS, FLOOR COVERING TRIMMINGS, ADHESIVE MATERIALS, CLEANING SUPPLIES, CAULKING TRASH, ROOFING MATERIALS, SIDING MATERIALS, AND GENERAL MISCELLANEOUS BUILDING MATERIALS. THE SITE WILL BE CLEANED DAILY. VIOLATIONS WILL BE RECORDED FOR THE RECORDS.

THERE WILL BE NO CONCRETE WASHOUT AREA ON SITE.

4. EROSION CONTROL MONITORING AND MAINTENANCE

EROSION CONTROL, DURING AND AFTER CONSTRUCTION, FOR THIS PROJECT WILL CONSIST OF SILT FENCE, INLET AND OUTLET PROTECTION, TEMPORARY AND PERMANENT SEEDING PRACTICES WILL ALSO BE USED.

SILT FENCE WILL BE INSTALLED AS NECESSARY TO CONTROL SHEET FLOW AREAS AND THE BASE OF ALL SLOPES. ALL STORM RUNOFF WILL SHEET FLOW TO CATCH BASINS AND END SECTIONS WILL BE PROTECTED AS SHOWN ON GRADING PLANS. THESE DEVICES ARE TO BE INSPECTED WITHIN 24 HOURS AFTER A RAINFALL EVENT.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO MONITOR AND MAINTAIN ALL EROSION CONTROL DEVICES DURING ALL PHASES OF CONSTRUCTION AND IMMEDIATELY AFTER RAINFALL EVENT OF ½ INCH OR MORE. THE CONTRACTOR WILL CHECK ALL DEVICES DAILY TO ENSURE THEY ARE FUNCTIONING PROPERLY. IF ANY DEVICE FAILS, THE CONTRACTOR WILL RE-ESTABLISH THE DEVICE AT NO COST TO THE OWNER. ALL INSPECTIONS SHALL BE RECORDED AND FILED. THE INSPECTION FORM WILL INDICATE THE NAME OF THE INSPECTOR, DATE, AND TIME OF INSPECTION, TYPE OF ITEMS REVIEWED AND REPAIRS MADE. INSPECTIONS SHALL NOT SPAN MORE THAN ONE WEEK APART. ITEMS REVIEWED DURING THE INSPECTIONS SHOULD INCLUDE THOSE NOTED ON THIS SHEET AND SHOWN ON PLANS.

ALL WORK ON SITE SHALL BE LIMITED TO AREAS INSIDE THE CONSTRUCTION LIMITS AS SHOWN ON THE DRAWINGS UNLESS APPROVAL HAS BEEN GIVEN BY THE OWNER. CONTRACTOR SHALL MAINTAIN AT LEAST 5' BETWEEN ANY WORK AND ANY EXISTING FENCE LINE, STRUCTURE, OR PROPERTY LINE. CONTRACTOR SHALL USE EXISTING ROADS FOR ACCESS TO THE SITE WHERE POSSIBLE.

THE CONTRACTOR SHALL BE RESPONSIBLE TO MONITOR AND REPORT EXCESSIVE SEDIMENT WASH FROM THE SITE AT ALL TIMES ESPECIALLY, AFTER A SIGNIFICANT RAINFALL. IF ANY SEDIMENT WASH BEGINS OR BECOMES EVIDENT, THE CONTRACTOR SHALL MAKE CORRECTION TO THE SILT FENCE TO STOP FURTHER WASHOUT. IF SEEDING AND MULCHING FAILS TO STABILIZE ANY GRADE, THE CONTRACTOR SHALL MAKE NECESSARY ADJUSTMENTS TO USE OTHER CORRECTIVE ACTION BEFORE ANY ADDITIONAL WORK IS TO BE PERFORMED.

AFTER CONSTRUCTION IS COMPLETED, RECORDS OF INSPECTIONS SHALL BE DELIVERED TO THE OWNER AT THE END OF THE OPERATIONS.

5. POST CONSTRUCTION

POST CONSTRUCTION CONTAMINANTS MAY INCLUDE PETROLEUM PRODUCTS (FROM VEHICLES), SEDIMENT, AND NUTRIENTS IN THE STORMWATER.

POST CONSTRUCTION EROSION CONTROL FOR THIS PROJECT WILL CONSIST OF PERMANENT SEEDING.

MAINTENANCE GUIDELINES ARE DESCRIBED BELOW.

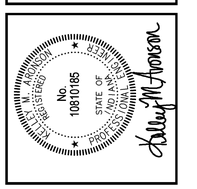
MEASURE	INSPECTION AND MAINTENANCE GUIDELINES
CONSTRUCTION ENTRANCE	NOT USED FOR THIS PROJECT. EXISTING ROADWAYS WILL SERVE AS SITE ACCESS. CONTRACTOR WILL MONITOR CONSTRUCTION TRAFFIC TO INSURE MUD AND SEDIMENT ISN'T CARRIED ONTO ADJACENT ROADS. CONTRACTOR SHALL USE A SINGLE ENTRANCE/EXIT TO THE SITE IF ALL POSSIBLE.
TEMPORARY SEEDING	INSPECT WITHIN 24 HOURS OF EACH RAIN EVENT AND AT LEAST ONCE EVERY SEVEN CALENDAR DAYS. CHECK FOR EROSION OR MOVEMENT OF MULCH AND REPAIR IMMEDIATELY AND MONITOR FOR EROSION DAMAGE AND ADEQUATE COVER (80% DENSITY); RESEED, FERTILIZE, AND APPLY MULCH WHERE NECESSARY.
PERMANENT SEEDING	INSPECT WITHIN 24 HOURS OF EACH RAIN EVENT AND AT LEAST ONCE EVERY SEVEN CALENDAR DAYS UNTIL THE VEGETATION IS SUCCESSFULLY ESTABLISHED CHECK FOR EROSION OR MOVEMENT OF MULCH REPAIR DAMAGED, BARE, GULLIED, OR SPARSELY VEGETATED AREAS, AND THEN FERTILIZE, RESEED, AND APPLY AND ANCHOR MULCH
OUTLET PROTECTION	INSPECT WITHIN 24 HOURS OF EACH RAIN EVENT AND AT LEAST ONCE EVERY SEVEN CALENDAR DAYS FOR STONE DISPLACEMENT, REPLACE STONES ENSURING PLACEMENT AT FINISHED GRADE. CHECK FOR EROSION OR SCOURING AROUND SIDES OF THE APRON AND REPAIR IN NECESSARY. CHECK FOR PIPE UNDERCUTTING AND REPAIR IF NECESSARY.
ROCK CHECK DAM	NOT USED FOR THIS PROJECT.
INLET PROTECTION	AS SHOWN ON GRADING PLANS AND DETAILS.
SEDIMENT BASIN	THE DETENTION BASIN/BIO-SWALE MAY SERVE THIS PURPOSE.
GRASS LINED CHANNEL	NOT USED FOR THIS PROJECT.
VEGETATIVE FILTER STRIP	NOT USED FOR THIS PROJECT.
VEGETATED SWALES	NOT USED FOR THIS PROJECT.
SILT FENCE	SILT FENCE WILL BE INSTALLED AS SHOWN ON PLANS AND WHERE NECESSARY TO PREVENT SEDIMENT WASH. INSPECT WITHIN 24 HOURS OF EACH RAIN EVENT AND AT LEAST ONCE EVERY SEVEN CALENDAR DAYS. IF ANY DEVICE IS 50% FULL, IT SHALL BE CLEANED AND RE-ESTABLISHED TO ITS ORIGINAL STATE.
DRY EXTENDED DETENTION BASIN	THE DETENTION BASIN/BIO-SWALE SHALL BE INSPECTED WEEKLY FOR ANY SEDIMENT BUILD UP. REMOVE AS NECESSARY.

RQAW
CONSULTING ENGINEERS & ARCHITECTS
RQAW Corporation
10401 N. Meridian St. Suite 401
Indianapolis, Indiana 46290
(317) 815-7200 FAX (317) 815-7201

sym	revisions	date

N

scale:
0
GRAPHIC SCALE



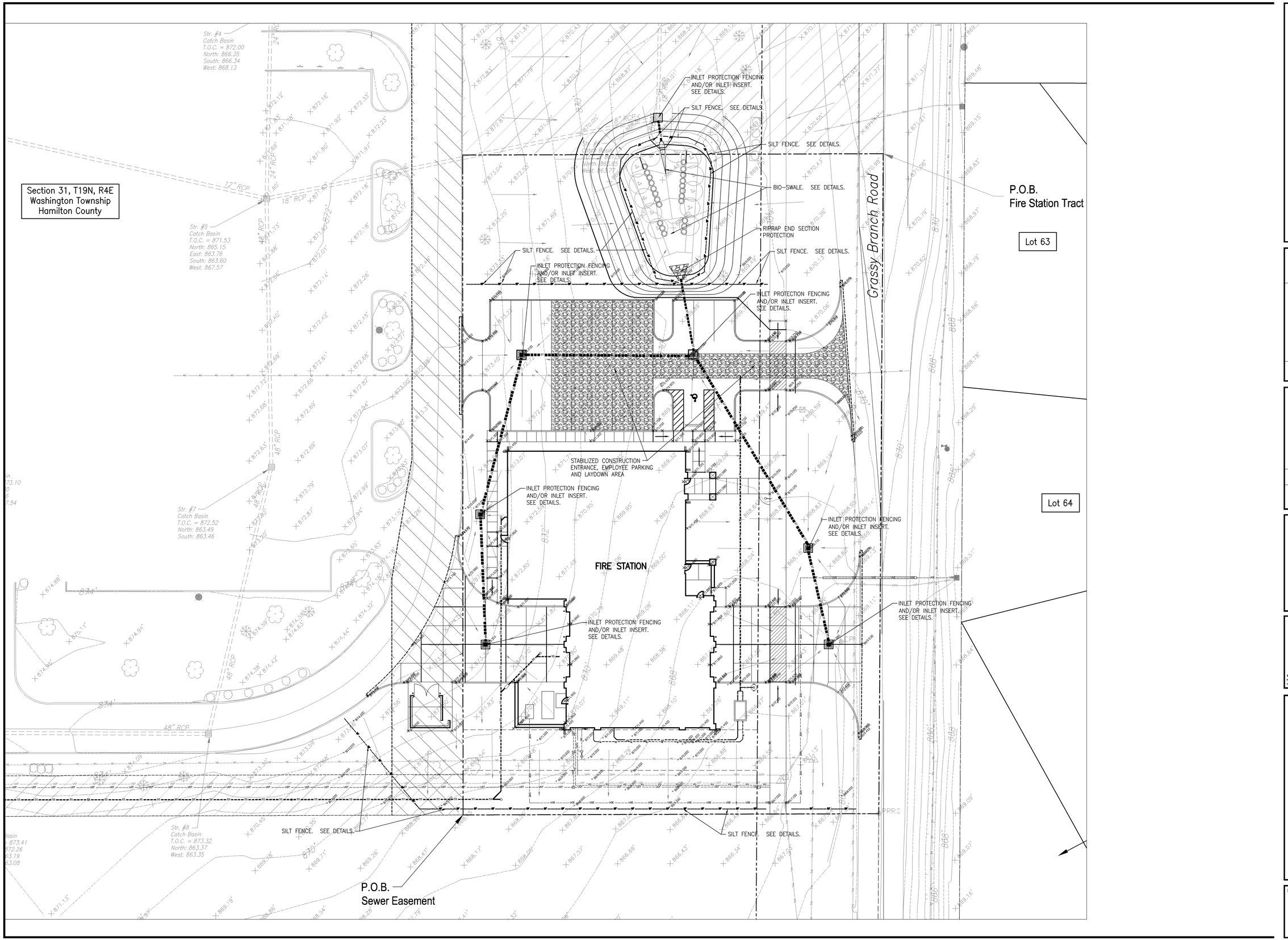
job#	
contract#	
designed:	ECR
drawn:	DRP
checked:	ECR
date:	4/27/10

EROSION CONTROL PLAN

FIRE STATION 83
WESTFIELS, INDIANA

Copyright © 2009 by RQAW Corporation. All rights reserved.

SHEET
C7.0
OF



RQAW
CONSULTING ENGINEERS & ARCHITECTS
RQAW Corporation
10401 N. Meridian St. Suite 400
Indianapolis, Indiana 46290
(317) 815-7200 FAX (317) 815-7201

sym	revisions	date

scale:
1" = 20'
0 20' 40'
GRAPHIC SCALE

STATE OF INDIANA
No. 10810185
REGISTERED PROFESSIONAL ENGINEER

job#	
contract#	
designed:	ECR
drawn:	DRP
checked:	KMA
date:	4/27/10

EROSION CONTROL PLAN

FIRE STATION 83
WESTFIELS, INDIANA

Copyright © 2009 by RQAW Corporation. All rights reserved.

SHEET
C7.1
OF

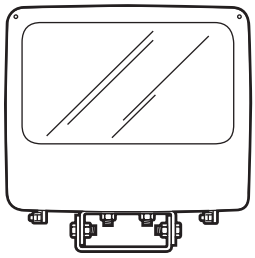
LITHONIA LIGHTING®

Catalog Number	
Notes	Type

CONTOUR SERIES

Floodlighting

TFL



METAL HALIDE
150W - 400W
HIGH PRESSURE SODIUM
70W - 400W
15' to 35' Mounting

FEATURES & SPECIFICATIONS

INTENDED USE — For recreation areas, parking lots, building facades and car lots.

CONSTRUCTION — Compact NEMA heavy-duty construction. Soft corner, die-cast aluminum housing and front cover. Front bezel is removable via position-oriented hinge-cam design and is fully sealed with one-piece bonded silicone gasket.

Lens: Thermal- and shock-resistant clear tempered glass.

FINISH — Standard finish is dark bronze (DDB) corrosion resistant polyester powder paint. Additional architectural colors are available; see www.lithonia.com/archcolors.

OPTICAL SYSTEM — Vertical (TA2) reflector: Anodized aluminum reflector provides twin beam light pattern with 2-position adjustable socket. Horizontal (RA2) reflector: Anodized specular aluminum reflector provides efficient rectangular beam pattern. Optic chamber is sealed to inhibit entrance of outside contaminants.

Lamp: RA2 requires a T-15, ED or BT-28 reduced jacket lamp.

ELECTRICAL SYSTEM — Ballast: High pressure sodium 70-150W are high reactance, high power factor. 200-400W are constant wattage autotransformer. Metal halide 150W is high reactance, high power factor and is standard with pulse-start ignitor technology ("SCWA" not required). Super CWA (pulse start ballast), 88% efficient and EISA legislation compliant, is required for metal halide 151-400W (SCWA option) for US shipments only. CSA, NOM or INTL required for probe start shipments outside of the US. Pulse-start ballast (SCWA) required for 200W, 320W, or 350W. Ballast is 100% factory-tested.

Socket: Porcelain, mogul-base socket with copper alloy, nickel-plated screw shell and center contact. UL listed 1500W, 600V.

INSTALLATION — Corrosion-resistant, heavy-duty painted steel mounting yoke. Above horizontal aiming capability standard. All external slotted hex-head screws are stainless steel.

LISTING — Listed and labeled to UL standards. Listed and labeled to CSA standards (see Options). NOM Certified (see Options). UL listed for 25°C ambient; 40°C for 250M and below. UL listed for wet locations. IP65 rated.

NOTE: Specifications subject to change without notice.

Specifications

Height: 16-1/8 (40.3)
Width: 15-3/4 (39.4)
Depth: 6-1/8 (16.5)
*Weight: 27 lbs (15.9 kg)
EPA: 1.3

*Weight as configured in example below.

All dimensions are inches (centimeters) unless otherwise specified.

ORDERING INFORMATION

For shortest lead times, configure product using **standard options (shown in bold).**
Example: TFL 400M RA2 TB SCWA LPI

TFL

Series
TFL

Wattage/source
Metal halide
150M
175M[15]
200M[1]
250M[15]
320M[1]
350M[1,15]
400M[15]
Ceramic metal halide
150MHC
High pressure sodium[2]
70S
100S
150S
200S
250S
400S

Distribution
Horizontal
RA2 7 x 6
Vertical
TA2 7 x 6
(max. 250W)

Voltage
120
208[3]
240[3]
277
347
480[3]
TB[4]
23050HZ[5]

Ballast
(blank) **Magnetic ballast**
CWI Constant wattage isolated

Pulse Start SCWA HID Ballast/Lamp Systems Ⓔ
SCWA Super CWA pulse start ballast

NOTE: For shipments to U.S. territories, SCWA must be specified to comply with EISA.

Options
Shipped installed in fixture
SF Single fuse (120, 277, 347V)
DF Double fuse (208, 240, 480V)
EC Emergency circuit[6]
QRS Quartz restrike system[6]
PER NEMA twist-lock receptacle[7]
IS Integral slipfitter
CF Charcoal filter
C62 2' 16-3 SEO cord prewired[8]
C42 2' 14-3 SEO cord prewired[8]
C22 2' 12-3 SEO cord prewired[8]
CSA Listed and labeled to comply with CSA Standards
NOM NOM Certified
INTL Available for MH probe start shipping outside the U.S.

Shipped separately[9]
WG Wire guard
UV Upper visor
FV Full visor
VG Vandal guard
PE1 NEMA twist-lock photocontrol (120, 208, 240V)
PE3 NeMA twist-lock photocontrol (347V)
PE4 NEMA twist-lock photocontrol (480V)
PE7 NEMA twist-lock photocontrol (277V)
SC Shorting cap for PER option

Lamp[12]
LPI Lamp included
L/LP Less lamp

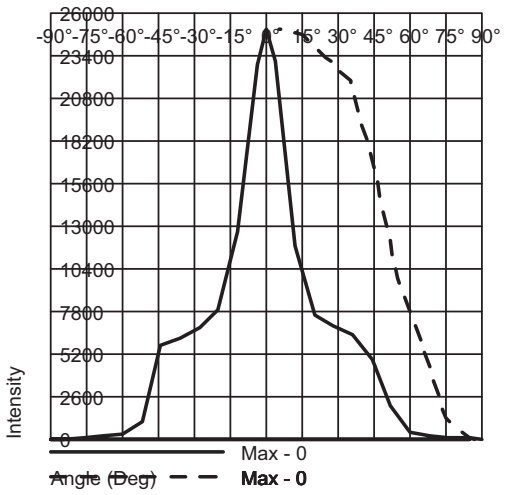
Finish[10]
(blank) **Dark bronze**
DNA Natural aluminum
DBL Black
DWH White
DMB Medium bronze
CR Enhanced corrosion-resistant
CRT Non-stick protective coating[11]

Accessories:[13]
Order as separate catalog number.
FTS Tenon slipfitter (2-3/8" to 2-7/8" OD Tenon)[8]
FCRA Cross-arm adaptor (horizontal)[8]
FCRA45 Cross-arm adaptor (45° mount)[8]
FPMB Pipe mounting bracket[8]
FWPB Wood pole bracket[8]
FRWB Radius wall bracket[8]
FSAB Steel angle bracket[8]
FSPB Steel square pole bracket
TFLWG Wire guard
TFLVG Vandal guard
TFLUV Upper visor
TFLFV Full visor

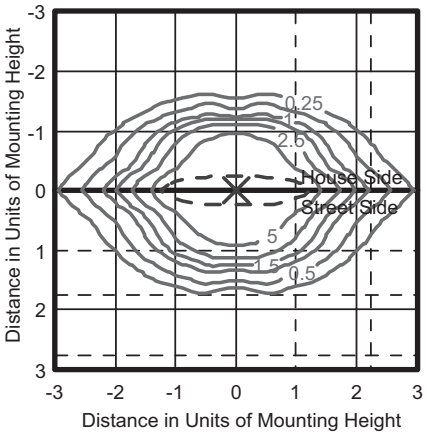
NOTES:
1 Must order SCWA.
2 Not available with SCWA.
3 Must specify CWI for use in Canada.
4 Multi-tap ballast (120, 208, 240, 277V; 120, 277, 347V in Canada).
5 Consult factory for available wattage.
6 Maximum allowable wattage lamp included.
7 Photocell not included.
8 Yoke mount only.
9 May be ordered as an accessory.
10 See www.lithonia.com/archcolors for additional color options.
11 Black finish only.
12 Must specify.
13 Must specify finish (n/a with TFLWG or TFLVG).
14 Requires IS or FTS.
15 These wattages do not comply with California Title 20 regulations.

TFL Floodlight

TFL 400M RA2, 400W pulse start metal halide lamp, 38,000 rated lumens, test no. 19205P



Mounting Height = 20 ft.
Classification: Unclassified (Type I, Very Short), Cutoff



Maximum Intensity
1/2 Maximum Intensity

ELECTRICAL CHARACTERISTICS

Wattage/ballast	Primary voltage	Line current (Amps) Start/Operating	Primary dropout voltage	Input watts	Power factor (%)	Regulation Line V = Lamp lumens
	120	3.50/4.00	60			
400CWA	208	2.00/2.30	104			
Peak-lead	240	1.75/2.00	120	458	90+	±10% = ±10%
Autotransformer	277	1.50/1.75	138			
	347	1.20/1.40	174			
	480	.90/1.00	240			

Tested to current IES and NEMA standards under stabilized laboratory conditions. Various operating factors can cause differences between laboratory data and actual field measurements. Dimensions and specifications on this sheet are based on the most current available data and are subject to change without notice.

NOTES:

1. Photometric data for other distributions can be accessed from the Lithonia Lighting website. (www.lithonia.com)

LITHONIA LIGHTING®
An Acuity Brands Company

Sheet #: TFL-M-S

©1989-2010 Acuity Brands Lighting, Inc. All rights reserved. Rev. 2/28/10

Lithonia Lighting
Outdoor
One Lithonia Way, Conyers, GA 30012
Phone: 770-922-9000 Fax: 770-918-1209
www.lithonia.com