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LOCATION MAP

Owner:

SAINT ROSE OF LIMA FR. JOHN BEITANS - PASTOR FRANKLIN, IN 46131 1 14 LANCELOT DRIVE KELLY ENGLAND - PRINCIPAL (317) 738-3451

FRANKLIN CITY PLANNING

DEPARTMENT:
317-736-3631

FRANKLIN CITY ENGINEERING
DEPARTMENT:
317-736-3631

FRANKLIN CITY, SEWER:

DRAINAGE SOLUTIONS, INC.
FRANKLIN, INDIANA
(317) 346-4110

CENTURY LINK, TELEPHONE:

FRANKLIN CITY MS4: 317-736-3680

JOHNSON COUNTY SOIL AND
WATER DISTRICT:
317-346-6102

위된

VECTREN, GAS: 1-800-382-5544 1-800-227-1376

DUKE, ELECTRIC: 1-800-521-2232

Saint Rose Athletic Field

FINAL CONSTRUCTION PLANS FOR

Franklin, Indiana

SAINT ROSE OF LIMA 1 14 LANCELOT DRIVE FRANKLIN, IN 46131 PREPARED FOR:

PROPERTY DESCRIPTION: INSTRUMENT

A PART OF THE EAST HALF OF THE SOUTHWEST CHARTER OF SECTION I 15. TOWNSHIF 12 NORTH, RANGE 4 EAST OF THE SECOND PRINCIPAL MERIDIAN, IN THE CITY OF FRANKLIN, INDIANA, DESCRIBED AS FOLLOWS:

INING AT A POINT 661 (4) FEET SOUTH OF AND 13 RODS AND 15 INKS WEST OF THE NORTHEAST LIKE OF SAID HALF GUARTER SECTION; THENCE SOUTH 895.00 FEET; THENCE NORTHWESTERLY ON A FORLECTION OF 11 DEGREES 32 MINUTES 30 SECONDS A DISTANCE OF 970.00 FEET; THENCE PREASTERLY ON A RIGHT DEFLECTION OF 97 DEGREES 11 MINUTES 0 SECONDS 126.93 FEET; THENCE WESTERLY ON A RIGHT DEFLECTION OF 97 DEGREES 13 MINUTES 0 SECONDS 126.93 FEET; THENCE WESTERLY ON A RIGHT DEFLECTION OF 90 DEGREES 370.00 FEET; THENCE SOUTHEASTERLY ON A RIGHT DEFLECTION OF 90 DEGREES 370.00 FEET; THENCE SOUTHEASTERLY ON A RIGHT DEFLECTION OF 90 DEGREES 135.00 TEST; THENCE SOUTHEASTERLY ON A RIGHT DEFLECTION OF 90 DEGREES 135.00 TEST; THENCE SOUTHEASTERLY ON A RIGHT DEFLECTION OF 10 DEGREES 09 MINUTES 0 SECONDS 560.00 FEET TO THACE DE BEGINNING, CONTAINING 13 51 6 ACRES MORE OR LESS, SUBJECT TO A 20 FOOT MORE DEGREES 135.00 TEST TO THACE OF BEGINNING, CONTAINING 13 51 6 ACRES MORE OR LESS, SUBJECT TO A 20 FOOT MORE DEGREES 135.00 TEST NOT MORE DEGREES 155.00 TEST N

EXCEPT, A PART OF THE EAST HALF OF THE SOUTHWEST QUARTER OF SECTION 15, TOWNSHIP 12 NORTH-VANGE 4 EAST OF THE SECOND PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS:

MARKOMO AT A POINT ON THE EAST LINE OF SAID THAE CULTURE SECTION 1556.3 HERE SOUTH OF NORTHEAST CORNER THEREOF, SAID FONT BEING 375 ERT NORTH OF THE CENTREUME OF STATE TO 144; THENCE NORTH 60 DEGREES 27 MINUTES WEST 320.40 FEET TO THE FLACE OF BEGINNING HOW THIS DESCRIBED TO THE FLACE OF DEGRINNING NORTH 140 DEGREES. THENCE COMMUNITES SOURCE FIG. 64 DEGREES DE 27 MINUTES SOURCE NORTH 140 DEGREES 27 MINUTES SOURCE NORTH 140 DEGREES 27 MINUTES SOURCE NORTH 140 DEGREES 27 MINUTES SOURCE NORTH 140 DEGREE SOURCE NORTH 140 DEGREE SOURCE NORTH 140 DEGREES SOURCE NORTH 140 DEGREES SOURCE NORTH 140 DEGREE SOURCE SOUTH 31.55 FEET TO THE FLACE OF BEGINNING, CONTAINING 0.27 ACRES, ST. 368, 9 FEET, THENCE SOUTH 31.55 FEET TO THE FLACE OF BEGINNING, CONTAINING 0.27 ACRES, ST. 368, 9 FEET, THENCE SOUTH 31.55 FEET TO THE FLACE OF BEGINNING, CONTAINING 0.27 ACRES, ST. 368, 9 FEET, THENCE SOUTH 31.55 FEET TO THE FLACE OF BEGINNING, CONTAINING 0.27 ACRES, ST. 368, 9 FEET, THENCE SOUTH 31.55 FEET TO THE FLACE OF BEGINNING, CONTAINING 0.27 ACRES, ST. 368, 9 FEET, THENCE SOUTH 31.55 FEET TO THE FLACE OF BEGINNING, CONTAINING 0.27 ACRES, ST. 368, 9 FEET, THENCE SOUTH 31.55 FEET TO THE FLACE OF BEGINNING, CONTAINING 0.27 ACRES, ST. 368, 9 FEET, THENCE SOUTH 31.55 FEET TO THE FLACE OF BEGINNING, CONTAINING 0.27 ACRES, ST. 368, 9 FEET, THENCE SOUTH 31.55 FEET TO THE FLACE OF BEGINNING, CONTAINING 0.27 ACRES, ST. 368, 9 FEET, THENCE SOUTH 31.55 FEET TO THE FLACE OF BEGINNING, CONTAINING 0.27 ACRES, ST. 368, 9 FEET, THENCE SOUTH 31.55 FEET TO THE FLACE OF BEGINNING, CONTAINING 0.27 ACRES, ST. 368, 9 FEET, THENCE SOUTH 31.55 FEET TO THE FLACE OF BEGINNING, CONTAINING 0.27 ACRES, ST. 368, 9 FEET, THENCE SOUTH 31.55 FEET TO THE FLACE OF BEGINNING, CONTAINING 0.27 ACRES, ST. 368, 9 FEET, THENCE SOUTH 31.55 FEET TO THE FLACE OF BEGINNING DEGREES TO THE PACE OF BEGINNING THE THENCE SOUTH 31.55 FEET TO THE PACE OF BEGINNING THE THENCE SOUTH 31.55 FEET TO THE PACE OF BEGINNING THE THENCE SOUTH 31.55 FEET TO THE THENCE SOUTH 31.55 FEET TO THE PACE

D, A PART OF THE EAST HALF OF THE SOUTHWEST QUARTER OF SECTION: 15, TOWNSHIP 12 NORTH, NGE 4 EAST OF THE SECOND FRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS:

ROJECT SCOPE:

INDIANA-AMERICAN, WATER: 317-881-0270

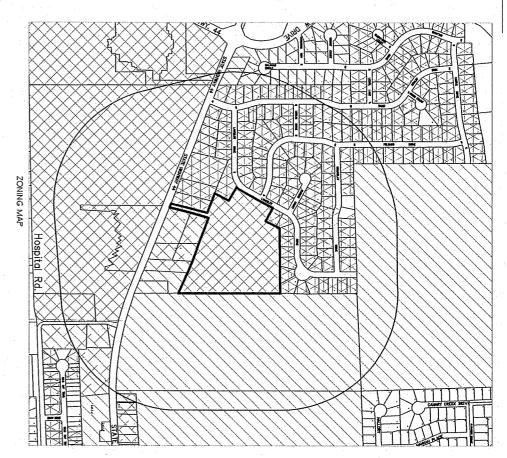
HE PROPOSED PROJECT WOULD REPLACE THE CURRENT FOOTBALL FIELD WITH A PERMANENT FIELD. THE ROPOSED INFROVEMENTS WOULD INCLUDE A GRADED FIELD (IMPROVED INMANAE), WITH GOALPOSTS, UNUFFACE DRAINAGE, IMPROVEMENTS, OUTDOORS CLASSROOM WITH RAIN GARDEN & UNDER-DRAIN, LACENENT OF CONCEPTE RUNNERS FOR PORTABLE BLEACHERS, ASPHALT WALKING PATH, AND COVERED ENTRYWAY.

PROJECT LOCATION:

THE PROJECT IS LOCATED ON THE NORTH SIDE OF JEFFERSON STREET, JUST WEST OF METHODIST DRIVE.

LATITUDE - 39 DEGREES 28 MINUTES 56 SECONDS LONGITUDE - -86 DEGREES 4 MINUTES 32 SECONDS

DEX C	DEX OF DRAWINGS			
EET O.	DESCRIPTION	REVISIONS	DATE	*. ·
_	COVER SHEET	REVISION PER CITY	6-8-12	
2	EXISTING CONDITIONS	REVISION PER CITY	6-8-12	
3	SITE PLAN	REVISION PER CITY	6-8-12	
4	FIELD DETAIL	REVISION PER CITY	6-8-12	
5	UNDERDRAIN	REVISION PER CITY	6-8-12	
6	FIELD DRAINAGE DETAIL	REVISION PER CITY	6-8-12	
7	EROSION CONTROL	REVISION PER CITY	6-8-12	
8	DETAILS & SWPP	REVISION PER CITY	6-8-12	-
9	RAIN GARDEN PLAN	REVISION PER CITY	6-8-12	
10	RAIN GARDEN DETAILS & FPM			
-	ENTRY DETAILS	REVISION PER CITY	6-8-12	







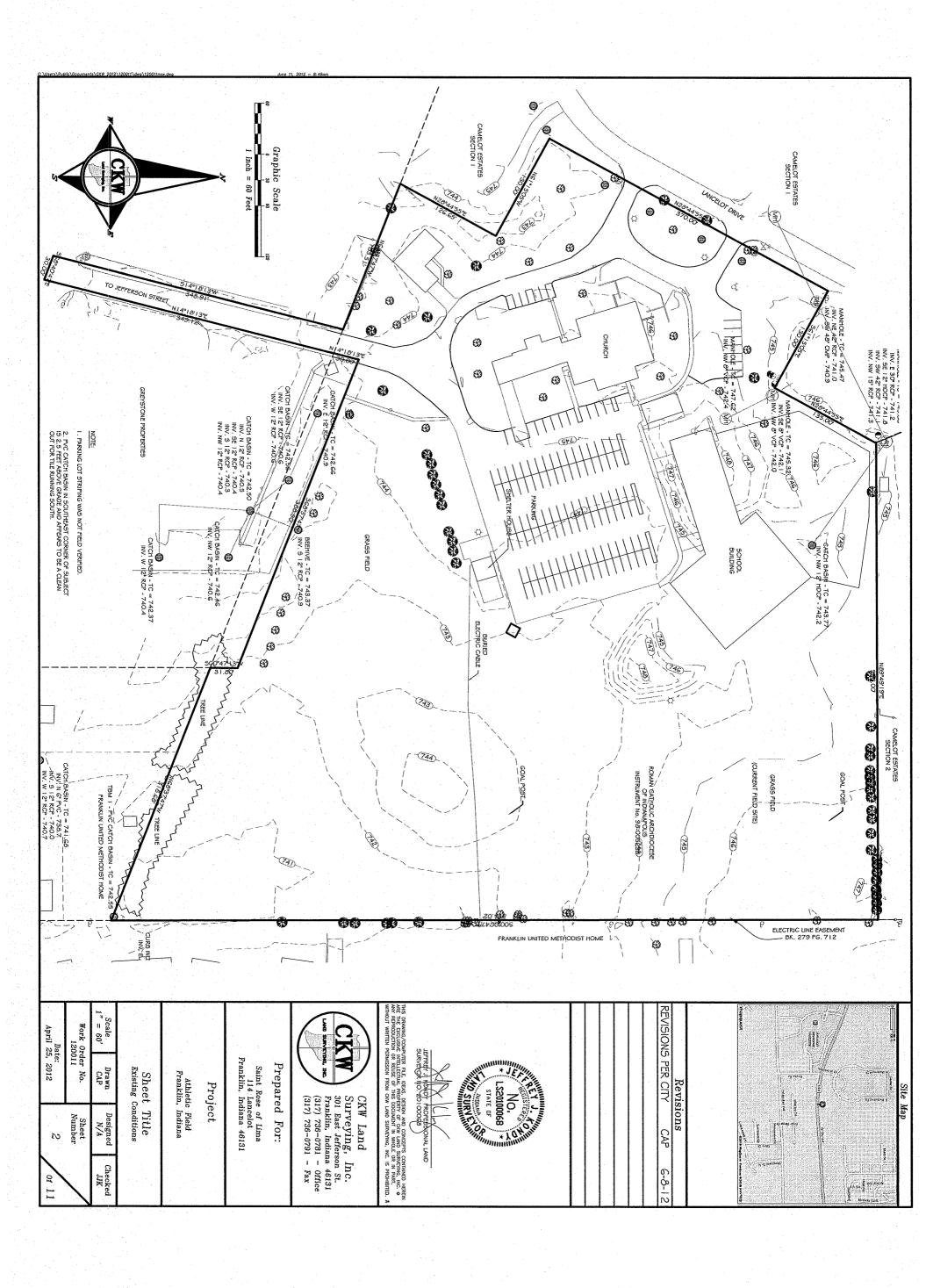


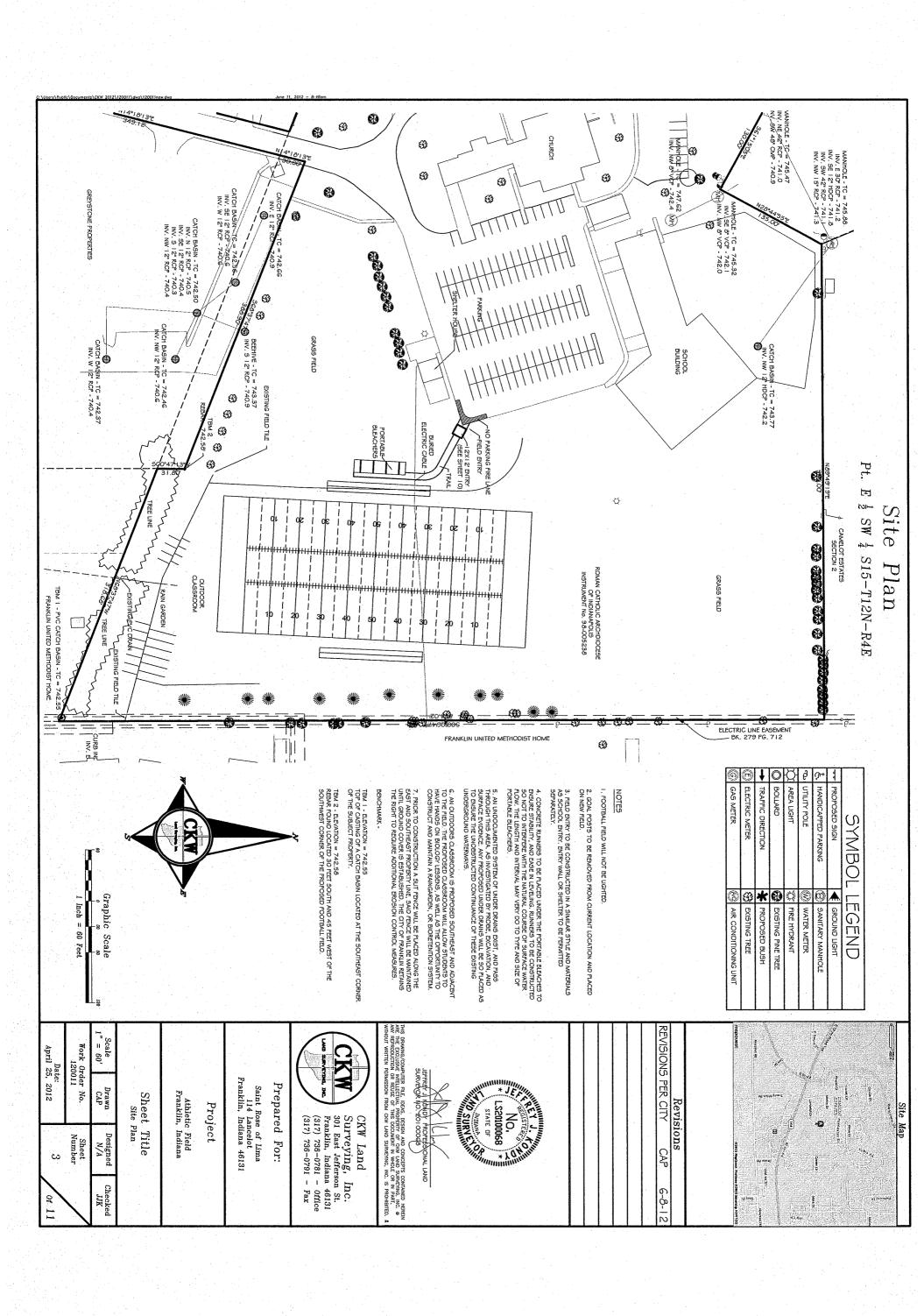
PLANS PREPARED BY:

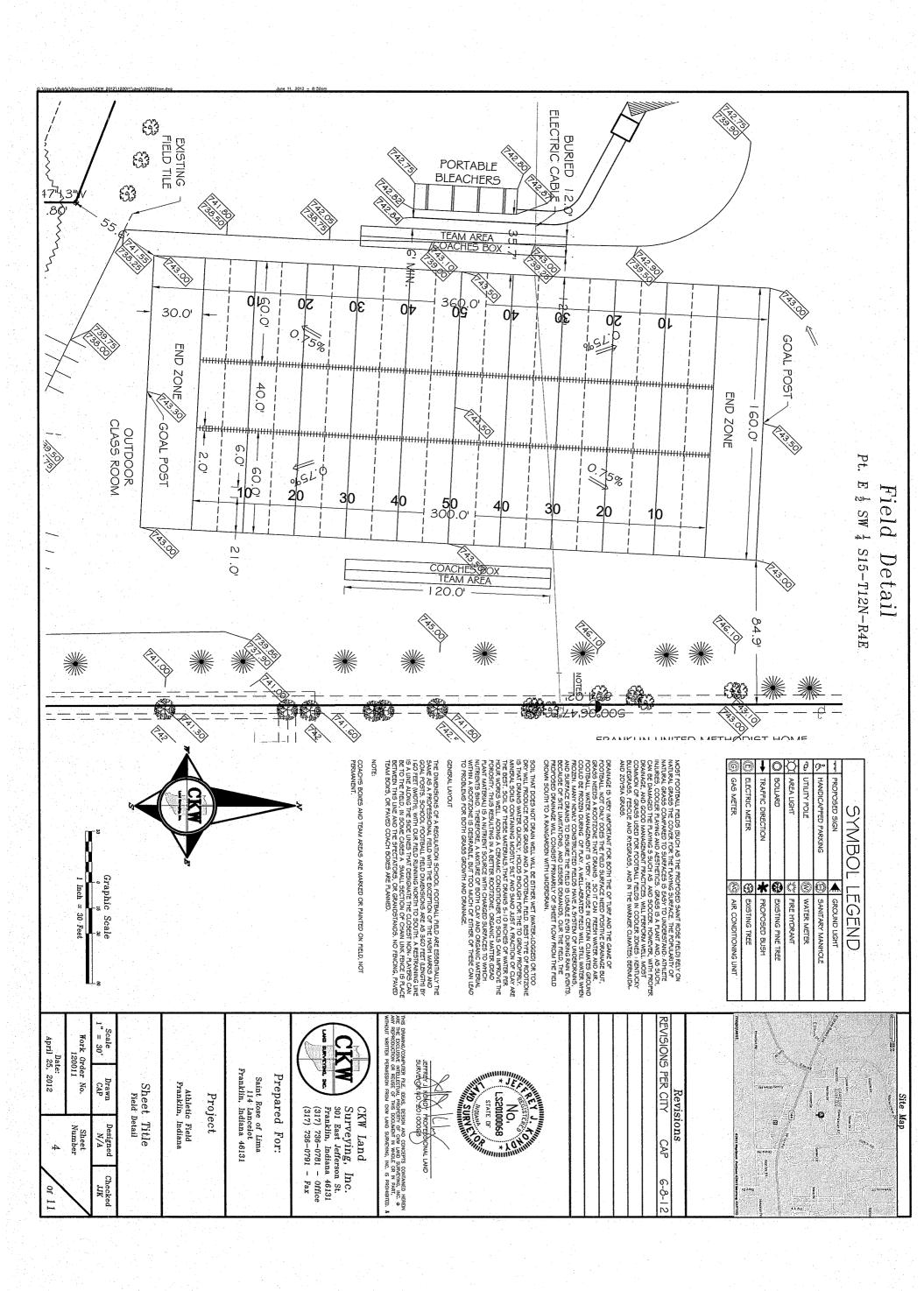
JEFFREY J.) HONDY PROFESSIONAL LYND SURVEYOR NO. 20100068

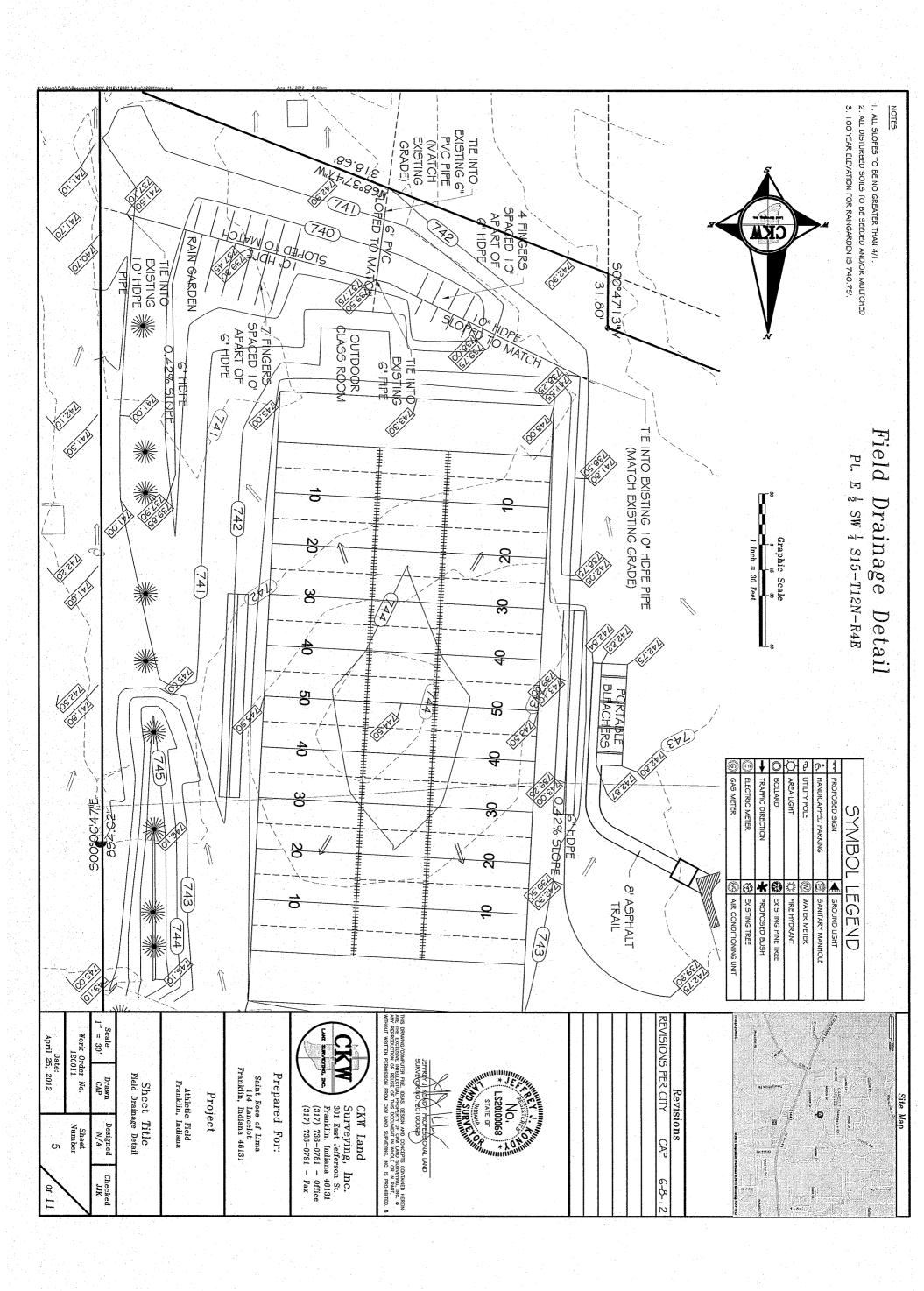
CKW Land Surveying, Inc. 301 East Jefferson St. Franklin, Indiana 46131 (317) 736-0781 - Office (317) 736-0791 - Fax

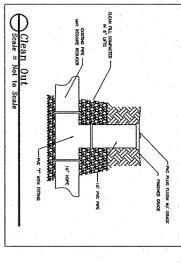
CKW Work Order Number: | 2001 | | Page | of | |











Field Drainage Detail

Pt. E $\frac{1}{2}$ SW $\frac{1}{4}$ S15-T12N-R4E



	8	
1 Inch = 30 Feet	Graphic Scale	
	8	

	SYMBOL		LEGEND
4	PROPOSED SIGN	lack	GROUND LIGHT
ን _ጐ	E HANDICAPPED PARKING	đ	SANITARY MANHOLE
ĝ	שי עזורונא הסרב	0	WATER METER
Q	AREA LIGHT	紫	紫 FIRE HYDRANT
0	BOLLARD	(3)	EXISTING PINE TREE
¥	TRAFFIC DIRECTION	*	PROPOSED BUSH
(ELECTRIC METER	63	(3) EXISTING TREE

GAS METER

(63	ملد	60	紫	(6		170
AIR CONDITIONING UNIT	EXISTING TREE	PROPOSED BUSH	EXISTING PINE TREE	FIRE HYDRANT	WATER METER	SANITARY MANHOLE	ROUND LIGHT	EGEND
mapquest		Tracket by	e de		£6.44	5 CON 16 C		

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_	WELLING THE STATE OF THE STATE	P	830 *	ĬĠ.	HOT	Million .

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UNDER DRAIN WITHIN FOND TO BE 6"
HDP SINGLE WALL PERF. W SOCK AND
IN GRAVEL, G" PERFORATED TO BE
CAPPED AT END CONNECTED TO 10"
HDP BY REDUCER TS, OFFSET.
CLEAN-OUT TO BE CONSTRUCTED
WITH PVC PIFE, PLUGGED AT TOP.
EXISTING AND PROPOSED
CONNECTIONS TO BE MADE WITH PVC
TS, DIMENSIONS AND CONNECTIONS
MAY VARY WITH CONNECTIONS

APPROXIMATE 950 IN FT OF 6"
SINGLE WALL HOP PERFORATED PIPE
WITH SOCK APPROXIMATELY 265 IN
FT OF 10" SINGLE WALL SOUD HOP
PIPE APPROXIMATELY 22, 6" CAPS
APPROXIMATELY 21 REDUCER TS (10
- 6) APPROXIMATELY 3, PVC
CLEANOUTS

CLEAN BEDDING AS DESCRIBED IN ASTM D2321-89 WITH A MINIMUM OF 4" BASE GRAVEL

Trench Detail (Type B)

TREE LINE

CAP

7

TYPE A

(ZA)

Saint Rose of Lima 114 Lancelot Franklin, Indiana 46131

O. WI

34//-

VI

Athletic Field Franklin, Indiana

Project

Sheet Title Field Drainage Detail

Scale I'' = 30'

Drawn CAP

Designed N/A

Checked JJK

Work Order No. 120011

Sheet Number

Date: April 25, 2012

6

of 11

ALL EXISTING UNDER DRAINS, AND TILES TO BE CONTINUED.

GRAVEL BACKFILL OR "L ROCK"

-6" HDPE PERF. W/ SOCK

FINISHED GRADE PROPERLY SEEDED AND MULCHED 6" ENGINEERED SOIL

PLOS.

SOME STOCK-PILING OF SOIL IS ANTICIPATED. SOME OF THE SOD, VEGETATED SOIL, OR YARD MAY BE MOVED AND MODIFIED DURING CONSTRUCTION, ANY SOIL NOT RE-USED IN THE FIELD WILL BE USED WITH THE BUILDING OF THE RAINGARDEN, OR BERM. ALL DISTURBED AREAS TO BE SEEDED & MICHER

GRAVEL BACKFILL OR "L ROCK"

6" HDPE PERF. W/ SOCK

BACKFILL

MIN. 2" TOPSOIL

FROPERLY SEEDED AND MULCHED

90°47" CHAROC

TYPE A

REVISIONS PER CITY

CAP

6-8-12

Revisions

1110

OC CAN

ALL PIPE TO BE SINGLE WALL HDP

CLEAN BEDDING AS DESCRIBED IN ASTM D2321-89
WITH A MINIMUM OF 4" BASE GRAVEL

Trench Detail (Type A)
Scale = Not to Scale

EXISTING PVC



#





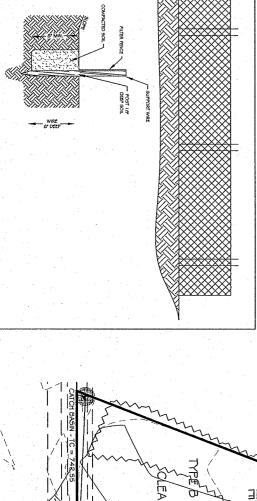
CKW Land Surveying, Inc.



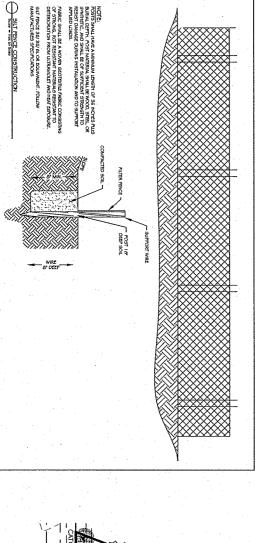
G" HDPE SINGLE WALL WITH SOCK OFFSET REDUCER "T" (TYP)

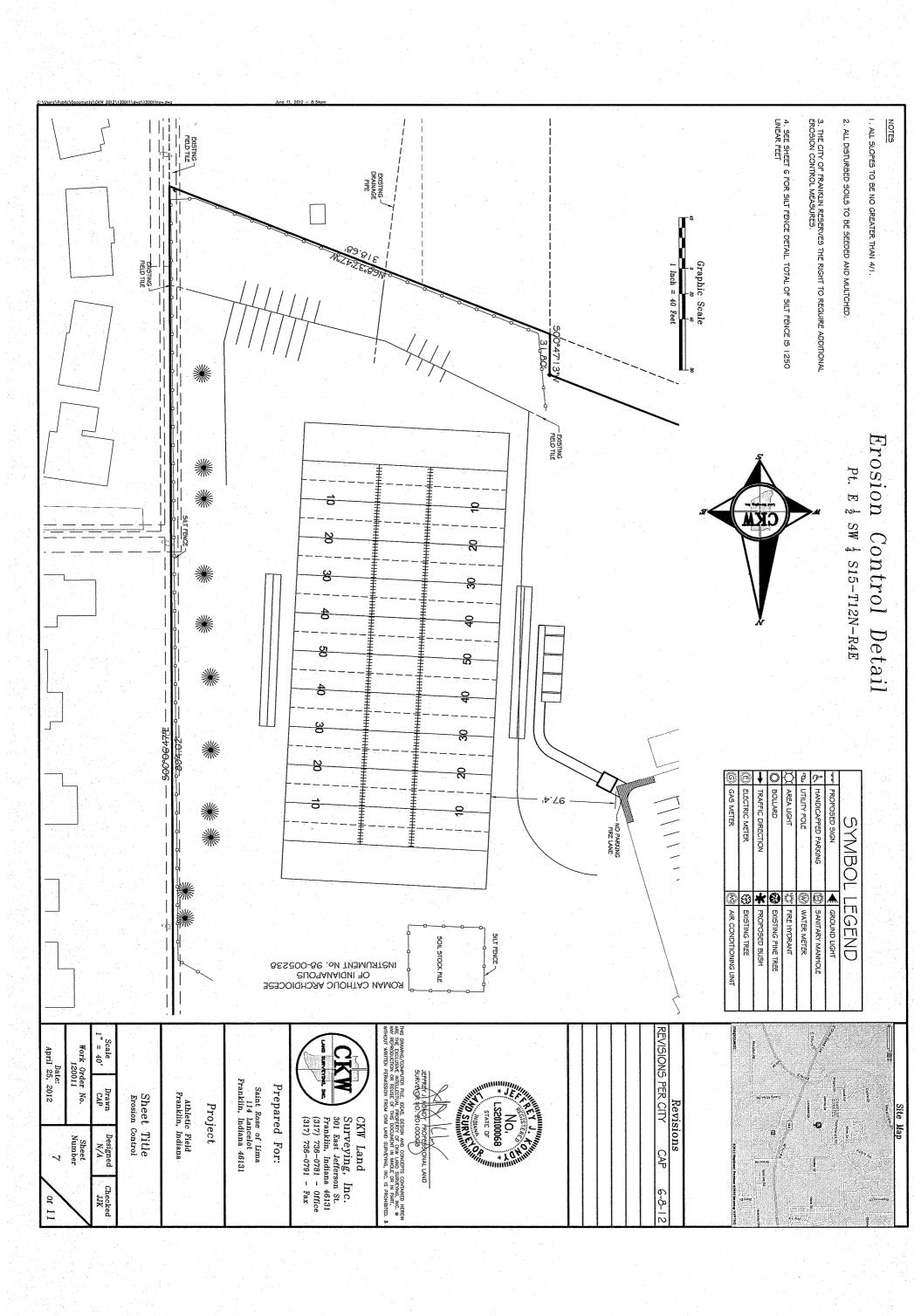


rel	P .
repared For:	301 East Jefferson St. Franklin, Indiana 46131 (317) 736-0781 - Office (317) 736-0791 - Fax



GLEANOUT





RECEIVING WATERS FOR THE STORMWATER DISCHARGE TO YOUNGS CREEK

THERE ARE NO LOCATIONS ON SITE WHERE SURFACE WATER MAY BE DISCHARGED INTO GROUND WATER. IDENTIFICATION OF ALL POTENTIAL DISCHARGES TO GROUND WATER

LOCATIONS AND APPROXIMATE BOUNDARIES OF ALL DISTUBED AREAS THE PROJECT SITE IS APPROXIMATELY 3.2 ACRE PARCEL, MOST ALL OF MAICH WILL BE DISTURBED BY CONSTRUCTION ACTIVITIES. TOTAL DISTURBED AREA IS LESS THAN 3.5 ACRES.

THE FOLLOWING POTENTIAL POLILITANT SOURCES MAY BE ASSOCIATED WITH CONSTRUCTION ACTIVITIES ON SITE.

1. MATERIAL STORAGE AREAS MARE SPECIFICALLY DESCRIBED BELOW)

2. CONSTRUCTION WASTE MATERIAL

3. FUEL STORAGE AREA AND FUELING STATIONS

4. PROPER OF THE DESCRIPTION OF POTENTIAL POLLUTANT SOURCES ASSOCIATED WITH CONSTRUCTION ACTIVITIES

OPOSED SOILS
EAKING VEHICLES AND EQUIPMENT
ANNIARY WASTE FROM TEMPORARY TOILET FACILITIES

WANDBLOWALDUST
SPACE SOIL TRACKING OFF SITE FROM CONSTRUCTION EQUIPMENT
RE FOLLOWING CONSTRUCTION MATERIALS WILL BE STAGED OR
FORED ON SITE AT VARIOUS POINTS DURING DEVELOPMENT OF THE
ORED ON SITE AT VARIOUS POINTS DURING DEVELOPMENT OF THE

1. STRUCTURAL FILL
2. ROAD BASE
3. PLASTIC DRAINAGE PIPE
3. PLASTIC DRAINAGE PIPE
4. WATER SERVICE PIPE AND APPURTENANCES
5. CONCERTE CHUNERES
6. CONCERTE CHUNERES
7. PRECAST CONCRETE MANHOLES

ENERAL GRADING

1. ALL WORK TO CONFORM TO STATE AND LOCAL REGULATIONS.
2. SITE GRADING SHALL NOT PROCEED LYNTL EROSION CONTROL.
MEGURES HAVE BEEN INSTALLED.
3. THE CONTRACTOR SHALL WERPY ALL DAMESHORS, PERTICAL AND
10 TRICONTRAL THE FEED PRICE TO STAKTING CONSTRUCTION. THE
10 CONTRACTOR SHALL RE RESPONSIBLE FOR ALL FIELD DAMESHOWS. IF
AND DOSCRETANCIES ARE FOUND IN THESE FLANS FROM THE ACTUAL
TIELD CONTRACTOR SHALL BOUNDAISH.
THE CONTRACTOR SHALL BOUNDAISH.

VERIEY COMER REQUIREMENTS BY UTIONY CONTRACTORS ANDOR UTION COMPANIES 30. AS NOT TO CAUSE DANAGE.

5. THE CONTRACTOR SHALL NOTIFY ALL UTIONY COMPANIES 72 HOURS BEFORE CONSTRUCTION IS TO SHAPT, TO VERIEY IF ANY UTIONITIES ARE RESENT ON SITE. ALL VERIEY-CANODS (JOCATION), BUTZ, AND DEPTH) SHALL BE MADE BY THE APPROPRIATE UTIONY COMPANIES, WHEN SECUNDATION OF ORCH ENSING UTIONES. THE CONTRACTOR MADE NOTIFY THE UTIONY COMPANIES, WHEN CONTRACTOR MADE NOTIFY THE UTIONY COMPANY CAN BE PRESENT TO INSTRUCT AND DESERVE DURING CONSTRUCTION.

6. TRENCHES FOR ALL STORM AREAN UNICES SHALL BE BACKFULLD COMPATIETY WITH SELECT GRANULAR MATERIAL IF WITHIN 5 FEET OF PANAMENT. DATEN.

IE EXCAVATING CONTRACTOR MUST TAKE PARTICULAR CARE WHEN
IE EXCAVATING LOUING EXISTING UTILLIT LINES AND EXLIPMENT.

FY COVER REQUIREMENTS BY UTILLIT CONTRACTORS AND/OR.

7. AFTER STRIPFING TOPSOIL MATERIAL, POOFROLL WITH A MEDIUM MISCHIF ROLLER TO DETERMINE LOCATIONS OF ANY POCKETS OF INVESTIGATE MATERIAL MITTENT POR SUBDORAUS AND/OR EDMOVAL OF ANY UNSUITABLE MATERIAL WITHIN THE PROPOSED "ARKING AREAS WILL BE DETERMINED AT THE TIME OF CONSTRUCTION."

I. INDEX SHOWING LOCATIONS OF REQUIRED PLAN ELEMENTS.

STORMWATER POLLUTION PREVENTION PLAN REVIEW ELEMENTS

A. SEE COVER SHEET (SHEET 1 OF 11).

13. 100 YEAR FLOODWAYS AND FRINGES.

A. SEE SHEET 9.

14. PRE # POST CONSTRUCTION (10YR).

5. ADJACENT LAND USE (UP STREAM).

5. LEGAL DESCRIPTION OF PROJECT SITE, AND LAT/LONG.

A. SEE COVER SHEET (SHEET 1).

S. LOCATION OF LOTS & IMPROVEMENTS.

A. SEE SHEET 3 AND SHEET 5.

8. SOILS, AND SOIL DESCRIPTIONS.

A. SEE SHEET 9 AND REPORT.

8. NOTATION OF STATE, OR FEDERAL WATER QUALITY PERMITS.

IUC 5 I 20204090030

19. DESCRIPTION OF PROPOSED STORMWATER SYSTEM.

A. SEE SHEET 5, SHEET 9, SHEET 10 ¢ DRAINAGE REPORT.

OFF-SITE CONSTRUCTION ACTIVITIES

A. NONE PROPOSED.

3. NARRATIVE DESCRIBING NATURE & PURPOSE OF PROJECT.

A. SEE SHEET

A. SEE SHEET 2.

4. VICINITY MAP & PROJECT LOCATION.

A: SEE COVER SHEET (SHEET 1).

16, LOCATION AND BOUNDARIES OF DISTURBED AREA.

A. SEE SHEET 2 & SHEET 5.

. EXISTING VEGETATIVE COVER.

A. SEE SHEET 2.

2. rlat showing building lot. Boundaries, and Roads.

8. PROVIDE POSITIVE DRAINAGE WITHOUT PONDING, IN ALL AREAS.
AFTER INSTALLATION, CONTRACTOR TO TEST FOR, AND CORRECT, IF
ANY, "SIKD BATH" CONDITIONS. ALL PROPOSED SPOT ELEVATIONS ARE THE FINAL PAVEMENT AND

WERTS AT PIPE OUTLETS ARE GIVEN AT END OF PIPE END OFRATE DETAILS TO DETERMINE SUBGRADE ELEVATIONS (GRADE ELEVATIONS) INDICATED. 16 RADE ELEVATIONS DIDICATED. 45 BENER MATERIALS AND INSTALLATION SHALL CONFORM EDINBURGH STANDARDS.

DEBRIS GUARD TO BE INSTALLED AT ALL OPEN ENDED INLETS, DUE TO SITE CONSTRAINTS, THE SITE MAY OR MAY NOT BALANCE. CONTRACTOR IS RESPONSIBLE FOR ALL EARTHWORK IMPORTS

STABLE CONSTRUCTION ENTRANCE LOCATIONS AND SPECIFICATIONS

SEDIMENT CONTROL MEASURES FOR SHEET FLOW AREAS EXISTING SITE, NO CONSTRUCTION ENTRANCE PLANNED.

SED AND MUCH OR IMPROSEEDING WILL PROTECT SHEET FLOW AREAS ONTSIDE OF THE FAVORABIL EXCISION COMTROL BLANKETS WILL BE INSTALLED ON SICPED AREAS WHERE THE SLOPE EXCEEDS 5.1 (FIOREZONTAL TO VERTICAL).

SILT FENCES WILL BE INSTALLED AT THE TOE OF SLOPES WHERE SEDIMENT MAY BE WASHED FROM THE SITE. RUNOFF CONTROL MEASURES

NUEL PROTECTION WILL NOT BE INSTALLED. THE CLOSEST WILET IS 200 TECT UPSTREAM FROM STIE. SUIT PRICE WILL BE INSTALLED ALONG SOUTH AND EAST SUIDES OF THE STIE, OR IN AREAS WHERE SEDIMENT COULD POTENTIALLY LEAVE THE STIE. STORMWATER COULD OUTLET INTO AN EXISTING SYSTEM WEST OF SITE. STORMWATER OUTLET PROTECTION SPECIFIACATIONS

FRANKLIN FIRE DEPARTMENT - (317) 736-3650 IDEM 24 HOUR EMERGENCY SFILL RESPONSE - 888-233-7745 JOHNSON COUNTY SOIL & WATER CONSERVATION DISTRICT - (317) MATERIAL HANDLING AND SPILL PREVENTION PLAN

NO SOLID BUILDING MATERIALS ARE FERMITTED TO BE DISCHARGED TO SURFACE WATERS OR BURIED ON SITE. ALL SOLID WASTE MATERIALS, INCLUDING DISFORDER MATERIALS WATCHING DISFORDER MATERIALS WATCHING THE CONSTRUCTION ACTIVITY. MIST BE COLLECTED WATCHINGES OR COSED DIMESTERS. THE COLLECTED WATCHINGES OR COSED DIMESTERS THE COLLECTED MATERIAL HAULDE TO A LANDFILL FEWNITED BY THE STATE AND/OR AFFORMATE LOCAL MANUFALTY TO ACCEPT THE WATER FOR DISFORDAL RECLAMATION OF SOME MATERIALS IS PRODURAGED IN: PULVERZED CONCERTE CAN BE USED AS PARKING OTD BASE STATE AND LOCAL MAS SHOULD BE AFFUED TO THE RECLAMATION OF ALL MATERIALS.

NOTER SOLID MASTE PROCEDURES. SOLID WASTE DISPOSAL FRANKLIN CITY ENGINEERS OFFICE - (317) 736-3631

WHENERE POSSIBLE, MINIAZETHE USE OF HAZAROOUS MATERIAS AND GENERATION OF HAZAROOUS WASTES. ALL HAZAROOUS WASTE MATERIALS WILL DE DISPOSED IN THE MANNES SPECIFIED OF PEDERAL STATE, OR LOCAL REGULATIONS OR BY THE MANUFACTURER. HAZARDOUS WASTE

AS MAY BE REQUIRED BY FEDERAL, STATE, OR LOCAL REGULATIONS, THE CONTRACTOR SHOULD HAVE A HAZARDOUS MATERIALS MANAGEMENT PLAN, AND/OR HAZARDOUS MATERIALS SPILL AND

USE CONTAINMENT BERMS IN FUELING AND MAINTENANCE AREAS AND WHERE POTENTIAL FOR SPILL IS HIGH.

ROOPER HAZRIOUS WASTE PROCEDURES. THE LOCATION OF ANY HAZRIOUIS WASTE STORAGE AREAS SHOULD BE INDICATED ON THE STORMMATER POLUTION PREPENTION FLAN BY THE OPERATIOR FOLLOWING ON-SITE LOCATION OF THE FACILITY. FOREMAN OR SUPERVISOR SHOULD BE DESIGNATED IN WRITING TO VERSEE, ENFORCE AND INSTRUCT CONSTRUCTION WORKERS OR ROPER HAZARDOUS WASTE PROCEDURES. THE LOCATION OF ANY

DUST CONTROLOFF-SITE VEHICLE TRACKING

DURING CONSTRUCTION, WATER TRUCKS SHOULD BE USED, AS MEEDED, BY EACH CONTRACTOR OR SUBCONTRACTOR TO REDUCE DUST, ATTER CONSTRUCTION, THE SITE SHOULD BE STABILIZED TO

CONSTRUCTION TRAFFIC SHOULD ENTER AND ENT THE SITE AT A CONSTRUCTION ENTRANCE WITH A EXCIX PAD OR EQUINALENT CENCE. CONSTRUCTION ENTRANCE WITH A EXCIX PAD OR ON INMINIZE. THE AUGUNT OF SOIL AND MUD THAT IS TRACKED ONTO EXISTING STREETS. IF SEDIMENT EXCARS THE CONSTRUCTION SITE, OFF-SITE ACCUMULATIONS OF SEDIMENT MUST BE REMOVED AT A FREQUENCY SUFFICIENT TO MUNIMIZE OFFSITE MUFACTS.

SANITARYSEPTIC

Contractors and subcontractors must comply will all state and local santary serbe, portable tolet, or septic system regulations, santary factors spall de revoined at the site space of the contractor or subcontractor throughout CONSTRUCTION ACTIVITIES, THE SANITARY FACILITIES SHOULD BE INITIAZED BY ALL CONSTRUCTION PERSONNEL AND BE SERVICED TIMILIZED BY ALL CONSTRUCTION FERSONNEL AND BE SERVICED REGULARY. ALL DEPENSES ASSOCIATED WITH PROVIDING SANITARY FACILITIES ARE THE RESPONSIBILITY OF THE CONTRACTORS AND SUBCONTRACTORS. THE LOCATION OF ANY SANITARY FACILITIES SHOULD BE INDICATED ON THE STORMANTER POLITION PREVENTION PLAN BY THE OPERATOR FOLLOWING ON-SITE LOCATION OF SAID PLAN BY THE OPERATOR FOLLOWING ON-SITE LOCATION OF SAID

WATER SOURCE

WATER USED TO ESTABLISH AND MANITAN GRASS, TO CONTROL DUST, AND FOR OTHER CONSTRUCTION PURPOSES MUST ORIGINATE FROM A PUBLIC WATER SUPPLY OR PRIVATE WELL APPROVED BY THE STATE OR LOCAL HEALTH DEPARTMENT.

EQUIPMENT FUELING AND STORAGE AREAS

EQUIPMENT PUELING, MANTEMANCE, AND CLEANING SHOULD ONLY BE COMPLETED IN PROTECTED AREAS (BERMED AREA), LEKNING EQUIPMENT AND MANTEMANCE FULLOS WILL BE COLLECTED AND NOT ALLOWED TO DISCUSAGE ONTO SOIL WHERE THEY MAY BE WASHED AWAY DURING A RAIN EYENT.

HAZARDOUS MATERIAL STORAGE EQUIPMBNT WASHDOWN (EXCEPT FOR WHEEL WASHES) SHOULD TAKE PLACE WITHIN AN AREA SURROUND BY A BERM. THE USE OF DETERGENTS IS FROHIBITED.

CHEMICALS, PAMITS, SOLVENTS, FERTILIZES, AND OTHER TONG OR MAZENOUS MATERIALS SHOULD BE STORED IN THER CRICINAL CONTINUENS OF CORGIANAL CONTINUENS OF CORGIANAL CONTINUENS IN CORGIANAL CONTINUENS IN CORTINUENS). EXCEPT DIRECTS IN CLEARLY LABELD, WATERPROOF CONTINUENS, EXCEPT DIRECTS OF MESCHAID AREAS WITHIN COVERED STORAGE FACILITIES. RUNOFF CONTINUES SUCH MATERIALS SHALL BE COLLICITED, REMOVED FROM THE SITE, AND DEPOSED OF IN ACCORDANCE WITH THE FEDERAL, STATE, AND DEPOSED OF MESCANDANCE WITH THE FEDERAL, STATE, AND LOCAL REGULATIONS.

INSTRUTIONS SHALL BE CONDUCTED AND A WRITTEN REPORT REFECTION SHALL BE CONDUCTED AND A WRITTEN REPORT REFECTION FAMILIAR WITH THE USER'S WROPES STORM WATER CENERAL FRAMIT, THIS SWEPF, AND THE PROJECT.

INSTRUTION REPORTS SHALL BE COMPLETED INCLIDING SCOPE OF THE INSTRUTION, INMERS AND COLUMBETON OF THE INSTRUTION, INMERS AND COLUMBETON OF THE INSTRUTION, INMERS AND COLUMBETON OF THE INSTRUTION OF THE INSTRUTION OF THE INSTRUTION OF THE INSTRUTION REPORT SHOULD BOTHE WHETHER THE SITE WAS IN COMPLANCE OR DISTRIP NAW INCIDENTS OF HONCOMPLANCE, THE CONTRACTOR SHALL KEEP A COPY OF THE WREFECTION, THE RECOURTS ON SHEEP AND PERMANENT FOR A FEBOOD OF TWO TRUS FOLLOWING CONSTRUCTION. THE ON SHE REPORTS MAY BE RECOURSTED BY THE LOCAL SOUL AND WATER COMPSERVATION DISTRUT.

CONSTRUCTION ENTRANCE (IF NECESSARY)

LOCATIONS WHERE VEHICLES BUT THE SITE SHALL BE INSPECTED FOR ENDINGE OF OFF-SITE SEDIMENT TRACKING. EACH CONTRACTOR AND SUBCONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE CONSTRUCTION ERITAINCE AND OTHER.
CONTROLS AS DESCRIBED IN THIS SWPPP.

MATERIAL STORAGE INSPECTIONS (IF NECESSARY)

SEEDED AREAS WILL ER INSPECTED TO CONVERN THAT A HEALTHY
STAND OF VIGETATION IS MANTAMED. THE SITE HAS ACHIEVED THAN
STANDLASTIND ONCE ALL AREAS ARE COVERED WITH PAVEACH OR
BACKGROUND VIGETATION WITH AT LESST 70% OF THE
BACKGROUND VIGETATION ONLY MATTER, THE EDISATY OF 70% OR
GREATER MUST BE MANTAMED TO BE CONSIDERED AS FINALIZED.
THE OFERATORS OF THEIR REPRESENTATION WILL WAREARE FERTILIZE, AND
RESEED DISTURBED AREAS AS NEEDED TO ACHIEVE THIS GOAL. SOIL STABILIZATION INSPECTIONS NEPECTORS MUST ENUMBE AREA URD FOR STORAGE OF MATERIALS THAT ARE PROSED TO PRECIPITATION. THE PURPOSE IS TO BASINET THAT MATERIALS SEE PROJECTED AND/OR MATOMICED SO THAT FOLLITANTS CANNOT DESCHAREE FROM STORAGE AREAS, OFF-SITE MATERIAL STORAGE AREAS URD SOURCE FOR STORAGE AREAS OFF STORAGE AREAS OFF SOURCE FOR STORAGE AREAS OFF SOURCE OF THE PROJECT AND MUST BE ENVIRONMENDEN IN THE ROCION CONTROL PLANS AND THE SITE INSPECTION REPORTS.

EROSION AND SEDIMENT CONTROL INSPECTIONS

ALL CONTROLS SHOULD BE INSPECTED AT LEAST ONCE EVERY SEVEN

12. IDENTIFICATION OF POTENTIAL DISCHARGES OF GROUND WATER.

11. IDENTIFICATION OF RECEIVING WATERS. YOUNGS CREEK

O. LOCATION OF WETLANDS, LAKES, AND WATER COURSES.

A. NO WETLANDS ON OR NEAR SITE.

22. EXISTING SITE TOPOGRAPHY & DRAINAGE PATTERNS.

23. PROPOSED SITE TOPOGRAPHY & DRAINAGE PATTERNS.

A. SEE SHEET 5 AND SHEET 6.

SPECIFIC POINTS WHERE STORMWATER ISCHARGE WILL LEAVE SITE.

A. SEE SHEET 2 \$ SHEET 5.

PREVENTION PROGRAM IN PLACE, A FORBMAN OR SUPERVISOR SHOULD BE DESIGNATED IN WRITING TO OVERSEE, ENFORCE, AND INSTRUCT CONSTRUCTION WORKERS ON PROPER LACARDOUS MATERIALS STORAGE AND HANDLING PROCEDURES. THE LOCATION OF AMY PLACENOUS MATERIALS STORAGE AREAS SHOULD BE INDICATED ON THE STORAMATIER POLUTION PRESENTION PLAY BY THE OPERATOR FOLLOWING ON-SITE LOCATION OF THE STORAGE AREAS.

EROSION CONTROL

LAND ALTERATION WHICH STRIPS THE LAND OF VEGETATION, CLUDING REGRADING, SHALL BE DONE IN A WAY THAT WILL MINIMIZE CREATER

ONTRACTOR SHALL COMPLY WITH ALL STATE AND LOCAL BE CONSIDERED ALL INCLUSIVE AS THE
ALL NECESSARY PRECAUTIONS TO PREVENT

S. III DI OM STREL NO DE CONSIDERAD PEL MACISANE CO III.
CONTRACICOR STREL INCE ALL INCIDENTA PRECUDITOS TO PREVENT
ONL SEDMENT REAM LEXAND THE SITE.
S. SEDMENT REAM LEXAND THE SITE.
S. SEDMENT ADEM MATER SHALL BE CHANCED PER SECCIONA
SECURICO SA MEDED TO JAMMATE SEDMENTATION IN THE RECEDING
TECHNA. NO STORM WATER SHALL BE DECARAGED FROM THE SITE IN
MAMBER THAT CAUSES EXCOSON AT THE TOWN OF DECHARGE.
TO BE CARRED FROM THE SITE BY STORM WATER AUDOFE
DISPOSAL OF ALL WASTES AND UNUSED BUILDING MATERIALS 5.
SECONDOT, FROTER STREAM STORM WATER AUDOFE
DISPOSAL OF ALL WASTES AND UNUSED BUILDING MATERIALS 5.

7. SEDIMENT BEING TRACKED OWTO PUBLIC OR FRUNTE ROADWAYS
7. SEDIMENT BEING TRACKED OWTO PUBLIC OR FRUNTE ROADWAYS
5144L BE MININAZED, CERCING OF ACCUMULATED SEDIMENT SHALL BY
NOT INCLUDE FLUSHING WITH HAVER CLEWED SEDIMENT SHALL BE
RETURNED TO THE SHE FOR DISPOSAL.
6. SOIL WHICH HAS ACCUMULATED MERT TO BROSION CONTROL.
CEVICES SHALL BE COLLECTED AND RECONSTRUCTION OF SHEEM AND RECONSTRUCTION BE AVERE.
5. IF INSTALLAND OF STOKEN DERWINGE STORED SHOULD BE
MITERRUPTED BY WEATHER OR NIGHTFALL, THE PIET BIOS SHALL BE
CONCERD WITH HUTER FABRIC.
10. ALL BISTINGS STRUCTURES, FINCING, TREES AND ETC., WITHIN
CONSTRUCTION AREA SHALL BE ENJOYED AND DISPOSED OF OFF
SHEE BURNINGS BY NOT HULDING DAY SHE.
11. SOMEDLIE OF ENTHMOREA, ACTIVITIES.
1. THE DIRRATION OF TIME WHICH AN AREA REMAINS BEPOSED
5194L BE KEET TO A PROTECTICAL MININIAN, THE AREA SHALL BE
5194LURE KEET TO A PROTECTICAL MININIAN, THE AREA SHALL BE
5194LURE KEET TO A PROTECT BYFOSED AREA IF
MILICANNOS SHALL BE USED TO PROTECT BYFOSED AREA IF
FERMANCHY VEGETATION CANNOT BE SEEDED WITHIN 14 DAYS OR
THE ENGRIERS.

TOPSOIL REPLACEMENT SHALL TAKE PLACE FROM MARCH I TO OCTOBER 31. STOCKFILE TOPSOIL AT ALL OTHER TIMES OF THE YEAR, FERMANENT AND FINAL VICENTION AND STRUCTURAL EXOSION CONTROL DEVICES SHALL BE MISTIALED MITTIM SEVEN (7) DAYS AFTER FINAL GRADING OR AS SOON AS POSSIBLE.

MONITORING AND MAINTENANCE GUIDELINES FOR EACH PROPOSED STORMWATER QUALITY MEASURE INSPECTION SCHEDULEREPORTING

ALL MAPACTED AREAS, AS WELL AS ALL RECOION AND SERIMENT OWNTROL DEVICES. WILL BE INSPECTED RERY SERIE! (7) CAUMATER DAYS AND WITHIN 24 HOUNG AFTER A RAINFILL OF O.5 NOT ON GREATER, WIEDER SITES HAVE BERN FINAL OR TRAPOCARLY SHOULDED ON ON SITES WHERE RUIGHT SO WHUTER COMUNITIONS (2.G. SITE IS COVERED WITH SHOWN, IC. OR FEAZEM (SOON) DESTIS) SUCH WIEDERONS SHALL BE CONDUCTED AT LEAST ONCE EVERY LONGY. MATERIAL HANDLING AND SPILL PREVENTION

COMPLANCE OF THE SITE WITH THE GENERAL CONSTRUCTION FERMIT REMANS THE RESPONSIBILITY OF ALL OPERATIOS THAT HAVE SUBMITED AM, NOI WITH SUCH THAT AS THEY HAVE SUBMITED A NOTICE OF TERMINATION (NOT). THE FERMITEES AUTHORIZATION TO DESCHARGE UNDER THE EXERCAL CONSTRUCTION FERMIT TERMINATES AT MIDNIGHT OF THE DAY THE NOT IS SIGNED.

Prepared For:

ALL PERMITTEE MUST SUBMIT AN NOT WITHIN THIRTY (30) DAYS AFTER ONE OR MORE OF THE FOLLOWING CONDITIONS HAVE BEEN MET:

1. FINAL STABILIZATION HAS BEEN ACHEVED ON ALL PORTIONS OF THE STRE FOR MINICH THE FRAMITEE WAS RESPONSIBLE.

2. ANOTHER O'PERANDPERENTIFIEL HAS ASSUMED CONTROL OVER ALL AREAS OF THE SITE THAT HAVE NOT BEEN HAULLY STABILIZED.

3. IN RESIDENTIAL CONSTRUCTION OF PERANDNOS, TRANSCRAFY STABILIZATION HAS BEEN COMPLETED AND THE RESIDENCE HAS BEEN FRANSFERSED TO THE HOMEOWNER.

DESCRIPTION OF PROPOSED POST-CONSTRUCTION STORMWATER GUALITY MEASURES

(7) CALANDER DAYS AND FOLLOWING ANY STORM EVENT OF 0.5 INCH OR GREATER. THE FOLLOWING IS A LIST OF INSPECTION/MAINTENANCE PRACTICES THAT WILL BE USED FOR SFECIFIC CONTROLS:

GEOTEXTILES/EROSION CONTROL MATS: MISSING OR LOOSE ATTING MUST BE REPLACED OR RE-ANCHORED.

INSPECT FOR THIN OR BARE SPOTS CAUSED BY OMPOSITION OR WEATHER-RELATED EVENTS. MULCH IN AREA SHOULD BE REPLACED ON A REGULAR BASIS TO SHOULD BE REMOVED WHEN IT ALF THE HEIGHT OF THE FENCE. IF A LD BE REMOVED WHEN THE VOLUME

P. ACCUMULATED SILT SHALL BE REMOVED AND THE REGARDED TO ITS ORIGINAL UNAUSIONS AT SUCH STANDITY OF THE IMPOUNDMENT HAS BEEN REDUCED ITS ORIGINAL STORAGE CUPACITY. THE REMOVED BEE STOCKPIED OR REDISTRIBUTED IN AREAS THAT BECK STOCKPIED OR REDISTRIBUTED IN AREAS THAT

ASE PROTECTED FROM ERCOSION.

ASE PROTECTED FROM ERCOSION.

5. SULT PRICE: REMOVAL OF BUILT-UP SEDIMENT WILL OCCIR WHEN THE SERMANT REACHES ONE-THROW THE HEIGHT OF THE TEXC.

6. STRAULZED CONSTRUCTION ENTRANCE: PERIODIC REGARDING AND TOP DRESSING WITH ADDITIONAL STONES.

7. VEGETATION: PROTECT NEWLY SEEDED AREAG FROM EXCESSIVE BUILDED.

BUILDED HAVE ANTERIUS AND FERTILIZING SCHEDULE.

ESTABLISHING A WITERIUS AND FERTILIZING SCHEDULE.

BACOD HOUSEKEENING-LITTER, CONSTRUCTION DEBRES, AND CONSTRUCTION CHEMICALS PROSED TO STORMWATER SHALL BE PREVENTED FROM BECOMING A FOLLITIANT SONECE TOR STORMWATER OF CHEMICALS THROUGH SCREENING OF OUTFALLS AND DAILY FICKLIF OF THE PROPERTY OF THE

REVISIONS PER CITY

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evisions

IN THE PORT THAT SEDMENT ESCAPES THE CONSTRUCTION STIF.
OFF-SITE ACCUMULATIONS OF SEDMENT MUST BE REMOVED, AT,
OFF-SITE ACCUMULATIONS OF SEDMENT MUST BE REMOVED. AND EXAMPLE
OFF THIS MAY BE THE SITUATION MIRRIE SEDMENT HAS WISHED INTO
THE STREET AND COLUD BE CARRENT DHTO THE STREAM SENER BY THE
THE STREET AND COLUD BE CARRENT HOUTO THE STREAM SENER BY THE
REPORT RAWIFFLL AND/OR POSE A SHFETY HAZARD TO USERS OF FUBLIC
REPORTS.

MODIFICATIONS/REVISIONS TO SWPPP

AGED ON INSPECTION RESULTS, ANY NECESSARY MODIFICATION TO THIS SWIPP SHALL BE INFLABRIED WITHIN SERVEN CALIBOAR DAYS IF THE INSPECTION. A MODIFICATION IS NECESSARY IF A CONTRICT. THE INSPECTION AND ADMINISTRATION OF THE NECESSARY OF ROVINCE NECESSARY FOLLOWING CONTROL. ALL REFISIONS SHALL BE RECORDED THE ACTUAL TO ART ON THE AND AND AND THE NEW PROPERTION OF REVISIONS SHALL BE RECORDED IN A RECORD OF REVISIONS WITHIN SEVEN CALANDER DAYS OF THE NEW PROPERTION OF REVISIONS WITHIN SEVEN CALANDER DAYS OF THE

IT IS THE RESPONSIBILITY OF THE OPERATOR TO MAINTAIN EFFECTIVE POLUTIANT DISCHARGE CONTROLS. PRISIQUE STE CONDITIONS OR CONTROLS. PRISIQUE STE CONDITIONS OR CONTROLS. PRISIQUE STEE CONDITIONS OR PRISIQUE STEEM MAKE IN NECESSARY TO INSTALL MORE CONTROLS THAN WERE ORIGINALLY FLANED. FOR REMAPE, LOCALIED CONCENTRATIONS OF SHEPACE EMOFT OR REMAPE LOCALIED CONCENTRATIONS OF SHEPACE MOTE ON MUSUALLY STEEM AREAS COULD REQUIRE ADDITIONAL SUIT BARBER OR OTHER STRUCTURAL CONTROLS WILL BE A CONTRUMN OF CONTRACTORS DISCONTRACTORS SHEED SHEED FOR AND INSTALLING ADDITIONAL CONTROLS SHEED SHEED ON THE STALLING ON THE SHEPP MAST REMAIN ALERT TO THE MEEDS TO TRENDED CHAPTER TO THE MEEDS TO TRENDED CHAPTER AND STALLING THE WITENDED GOALS.

SURNERS SURNER

DISCHARGE OF HAZARDOUS SUBSTANCES OR OIL MITO STORM WATER IS SUBJECT TO REPORTING REQUIRINGS. IN THE EVENT OF A SPILL OF A HAZARDOUS SUBSTANCE. THE OPERATOR IS REQUIRED TO NOTIFY THE NATIONAL RESPONSE CENTER (1 -800-424-8502) AND THE OFFERANCE STALL SUBMET A WITTER DESCRIPTION OF THE RELEASE (MCLUDING THE TYPE AND ANOUNT OF MATERIAL RELEASED. THE DATE OF THE RELEASE, THE CROWNER OF THE RELEASE TO RETACT THE STEED OF THE RELEASE. THE CROWNER OF THE RELEASE TO RETACT THE RELEASE TO RETACT THE RELEASE TO RETACT THE RELEASE OF TH

WING/COMPUTER FILE. IDEAS, DESIGN AND CONCEPTS CONTAINED HEREIN EXCLUSIVE RIFELECTIME. PROPERTY OF CAW LAND SURPCING, INC. DECOLUSIVE OF MAN EXCLUSIVE OF MAN EXCLUSIVE OF MAN EXCLUSIVE OF MAN EXCLUSIVE OF MAN EXPENSION FROM CAW LAND SURVEYING, INC. IS PROHIBITED.

CKW Land
Surveying, Inc.
301 East Jefferson St.
Franklin, Indiana 46131
(317) 736-0781 - Office
(317) 736-0791 - Fax

SURVEYOR NO. 20100098

THE ROOF DRAINS FROM THE BUILDING WILL NOT BE DIRECTED BY UNDERSEGUIND FINING TO STORM, SENERS, TOPSOIL WILL BE FLACED IN FIELD AREAS AND TREAS SENERGE WITH GRASS AND GRAVED AT THE FLACETS SLOPE POSSIBLE TO MANIATE OVERLAND FLOW VELOCITY. IN NO CASES WILL JAWA AREAS EXCEED 4:1 SLOPE. AN EXTENSIVE LANDSCAPE FLAN HAS BEEN PUT TOGETHER NICLIDING THE USE OF GREENSPACE ON-SITE, AND RANGARDENS, THE GRASSY REEAS MILL PROVIDE ADDITIONAL AREAS FOR STORMMATER TO MPILIPATE.

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Checker JJK	

Work Order No. 120011 Date: April 25, 2012 Sheet Number of 11 Ď.

SAINT ROSE RAINGARDEN

LOCATED ON THE SOUTH SIDE OF THE PROPOSED FOOTBALL FIELD, JUST NORTHWEST AND ADJACENT TO THE UNITED METHODIST COMMUNITY. THIS RAINGARGEM, WHEN PLLY DEVELOPED, WOULD BE APPROXIMATELY 12,000 SQ FT AND IS LOCATED ENTRELY WITHIN THE 740 CONTOUR (6,000 SQ FT AND IS LOCATED ENTRELY WITHIN THE 740 CONTOUR (6,000 SQ FT AND IS LOCATED ENTRELY WITHIN THE 740 CONTOUR (6,000 SQ FT AND IS LOCATED ENTRELY WILL TAKE THACE OVER A PERIOD OF TIME. ALL OTHER ELEMENTS SUCH AS GRADING, UNDERDRAINS, AND SOIL AMENDMENT WILL SEE CONNETET, AND IN PLACE WITH THE CONSTRUCTION OF THE FOOTBALL FIELD. THE UNDERLYING SOILS HERE CONSIST OF A DECONSTON SILTY CLEY LOWAY, AND CROSSY, BECALJSE THIS AREA IS POST DEVELOPED THE SURFACE OR TOP SOIL IS A MORE COMPLEX MIXTURE, AND HAS BEEN A GRASSY FIELD FOR ALL EAST THE FAST GO TEASE. THIS BASE SOIL IS CLASSIFIED AS WET SOIL, WITH MODERATE FEAT GO TEASE. THIS DASE SOIL SO CONTENT: BECAUSE OF TIS BASE SOIL MAKELUP IT IS RECOMMENDED THAT THE RAINGARDEN BED CONSIST OF NO LESS THAN 6-3 INCHES OF BURGLEFERD SOIL. AS IN ALL NEW PLANTING BEDS A MODEST FERTILIZATION (STARTER) IS RECOMMENDED.

SIZE: 200 SQ FT - 6,000 SQ FT @ 6-8 INCH DEPTH, PITCHED TO DRAIN

JICH: 3.4 INCH DEPTH, CEDAR-PINE, MEDIUM TO FINE. RECOMMENDED WATING TYPES: TUPTED HAIR CRASS OR DWARF FOUNTAIN, BLUE FLAG, WINING TYPES: TUPTED HAIR CRASS OR DWARF FOUNTAIN, BLUE FLAG; PERD SUSAN, HOSTA THE PERDANK TUPSOCK, DAYLLY, OR HYBRID, BLACK PETD SUSAN, HOSTA THE PLANTAITON OR ADDITION OF A ROCK, STONE, OR OTHER BOARDER ALONG E OUTSIDE EDGE OF THE RANKGARDENS IS AN OPTION, FOR EASE OF LACED INITENANCE, OR PETSONAL EXPRESSION. SAID BOARDER SHOULD BE FLACED INITENANCE, OR PETSONAL EXPRESSION. SAID BOARDER SHOULD BE FLACED SHOWN THE ROUND, OR PLACED SO TO COMPLEMENT THE OVERALL DESIGN.

GOLDEN ALEANDERS (IZIA-, ALPEA)
GOLDEN ALEANDERS (IZIA-, ALPEA)
GOLDEN ALEXANDERS IS A SHORT-LIVED PRERINIAL MITH BRANCHING, ERECT,
REDDISH STEMS. THE LOWER LEAVES ARE DIVIDED INTO THREES TWICE WHILE THE
UPPER LEAVES ARE NOTICED NOWER SEPALS, ELOW FLOWERS LESS TRANSHAM I/A INTO
LONG, EACH TIMY AEL DIVIDED NOWER SEPALS, ENCRYPTALS, AND STEMANISH SEPARATE
CLUSTERS OF TIMY, YELLOW FLOWERS GATHER INTO A LARGE, FLAT-TOPPED
FLOWER HEAD, THE MIDDLE FLOWER OF EACH UMBEL BEING STAKLESS DRY
FLOWER HEAD, THE MIDDLE FLOWER OF EACH UMBEL BEING STAKLESS DRY
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FLOWER HEAD, THE MIDDLE FLOWER OF EACH END THE MIDDLE FLOWER BEING FLOWER BEING STAKLESS. DRY
FLOWER HEAD, THE MIDDLE FLOWER OF EACH END THE MIDDLE FLOWER BEING FLOWER

VIEW ATTRACTIVE AND FUNCTIONAL NATIVE PLANT FOR STORM WATER
PELCATIONS, IT THRIVES WITH ALTERNATING CYCLES OF WET AND DRY, MAKING
IDEAL FOR VEGETATED SWALES AND INFILITATION BASING, NATIVE TO MUCH OF
IE MID-ATLANTIC AND MIOWEST, EMORYI WAS FIRST SEPRARATED FROM SIMILAR
FEGIES OF CARES WE POTAMISTS IN THE EARLY PART OF THE 20TH CENTURY.

WISH REEREN SHOOTS APPEAR IN LATE MARCH IN ZONE G, RAPIDLY ELONGATING
O'ATTRACTIVE, BRIGHT GREEN FOLIAGE THAT REACHES 24 TO 30 INCHES BY LATE
AY, AN INCONSPICUOUS INFLOESCENIC APPEARS IN MIDD MAY AT THE SAME
EIGHT AS THE LEAVES. THE FOLIAGE ERMANUS UPRIGHT AND ATTRACTIVE
REQUEROUT THE GROWING SEASON UNLESS BATTERED BY SEVEREE STORMS OR
REDICT HOUSE AND FORM BY EXPRESSION OF SELECTIVE
REQUEROUT THE GROWING SEASON UNLESS BATTERED BY SEVEREE STORMS OR
REDICT HOUSE AND FORM BY EXPRESSION OF SELECTIVE
REQUEROUT THE GROWING SEASON UNLESS BATTERED BY SEVEREE STORMS OR
REDICT HOUSE FOR THE FOLIAGE ERMANUS UPRIGHT AND ATTRACTIVE
REPOLICE FROM THE BASE OF THE PLANT. THE FOLIAGE
BY EINCH HOUSE FROM THE BASE OF THE PLANT, THE FOLIAGE
BY EINCH HOUSE FROM THE BASE OF THE BANKS OF
VEES AND STREAMS. IT ALSO OCCUSES ON SAND AND GRAVEL BASE IN
FIREAMS. THESE HABITATS ARE INVARIABLE FLOODED DURING HIGH WATER
REAKS. THESE HABITATS ARE INVARIABLE FLOODED DURING HIGH WATER
REAKS. THESE HABITATS ARE INVARIABLE FLOODED DURING HIGH WATER
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REAKS. THESE HABITATS ARE INVARIABLE FLOODED DURING HIGH WATER
WATER BY THE BUD OF THE FIRST GROWING SEASON. THIS HABIT MAKES IT IDEAL
WORN MAY BE UTILIZED AS A DESCREAK LONGER RETINION OF NOUS. FROMING AN
ONE STORE HABITATED AS A SECREMAND RETIRED FOR THE SET SECOND FREVENTION AND MAINTENANCE REDUCTION
ONE STORE SOUTH OF THE FIRST GROWING SEASON. THIS HABIT MAKES IT DEAL
WORN MAY BE UTILIZED AS A DESCREAM FROM RETIRED FOR

SWEET BLACK-EYED SUSAN (RUDBECKIA- SUBTOMENTOSA)

SWEET BLACK-EYED SUSAN, OR SWEET CONEFLOWER, RECEIVES ITS COMMON NAMES PROW THE FLOWERS SWEET AUBIES SCENT. SWEET CONFLOWER HAS NUMBEROUS 3 INCH FLOWERS SWEET AUBIES SCENT. SWEET CONFLOWER HAS NUMBEROUS 3 INCH FLOWERS CONSISTING OF YELLOW FETALS AROUND DOME-SHAPE CENTRAL DISKS THAT FROWDE NECTAE FOR BUTTEFUE AND SEED FOR GOLDFINCHES, INSIST SHAPE OF YELLOW FLANT LOOKS EXCELLENT IN THE MIDDLE OR BACK BORDER OF A BUTTEFUT GARDEN WITH ECHNACTAE LARGE ELACK-EYED SUSAN, THIS WASTEN BLOWERS ROOTS, AND FRASTENON (FOXIGOVE BEAROTTONGUE), RUDBECKIA SUBTOMENTOAS SED SCHWALTOWER CANS LEEF ANTIE WILDTOWER CARDENS, MEADOWS, AND IN FORMAL FLOWERBEDS. SWEET BLACK-EYED SUSAN IS A LONG LIVED FEEDNIAL, NATIVE RUDBECKIA SUSTOMENTOAS SEED GERMINATION IS IMPROVED AFTER A PRETEXATMENT OF 3 TO 6 WEEKS OF COOL MOIST STRATIFICATION OR WIEN FLANTED OUTSIEL IN THE AFLALOR WINTER. THIS SWEETLY SCENTED FLOWER, OCCURS NATURALLY IN LOW MEADOWS, OPEN SLOPES, STREAM BANKS, AND FRANKES FROM INDIANA, MISCONSIN, JOWA, AND KANSAS, SOUTH TO LOUISIANA AND TEXAS. STETEACEAE (ASTER FAMILY) RAIRIES FROM INDIANA, WISCONSIN, ION ND TEXAS. ASTERACEAE (ASTER FAMILY)

BUJE FLAG HAS ALSO BEEN KNOWN AS THE LIVER LILY, BECAUSE ITS DREID AND POWDERED RETIZONES WERE TRADITIONALLY BELEVED TO BE AN EXCLLENT REMEDY FOR INVESTIGES OF THE BLOOD AND DISEASES OF THE LIVER. ITS MANY OTHER USES IN FOLK MEDICINE INCLUDED THE TREATMENT OF SKIN DISEASES, RELBUNKATION, AND EVEN IN OOUR, HOWEVER, RRZEDD BUJE FLAG NORE THAN AMERICAN INDIANS, SOME OF WHOM REGARDED IT AS A VIRTUAL PANACEA, ONE OF THEIR USES FOR IT, NOT ADDITED BY THE WHITE MAN, WAS AS A FOULTICE FOR TREATING SORES AND, CERTAIN TRIBES ARE SALD TO HAVE PLANTED BLUE FLAG NEAR THEIR VILLAGES TO ENSURE A CONVENIENT SUFFLY. UE FLAG (IRIA- VIRGINICA SHREVEL)

SO CALLED THE WILD RES, THIS FLANT FREDOMINATES THROUGHOUT MUCH OF EL WEST, IN A PEREAWCET IL LOOKS A LOT LIKE YOUR COMMON IRISLANG, OF EL WEST, IN A PEREAWCET IL LOOKS A LOT LIKE YOUR COMMON IRISLANG, OR BLUISH-FURPLE JOOTH SFEAR-SHAFED LEAVES MUST DADORNED MITH A LIGHT OR BLUISH-FURPLE OWER, JUST A LAN DIZET HAN YOUR, GAEDEN VARIETIES, BLUE FLAG B

RIES VIRGINICA (COMMON RIES)

BUIE PLAG AND OTHER RIESS OFTEN ARE FRENNIAL PLANTS THAT ARE FOUND IN

SHALLOW WATER ALONG SHORELINES, IN WETLANDS, AND OTHER SUITABLE AREAS,

STEMS GROW IN CLUSTERS FROM THE BASE, USUALLY SINGLE OR

COUBLE-BRANCIFIC AND CAN BE FROM LESS THAN A FOOT TALL TO OVER 3 FEET.

LEAVES ARE SWORD-LIKE OR BLADE-LIKE, FLOWERS ARE ON AN ELONGATED STEM

THAT USUALLY RIESS ABOVE THE LEAVES, SUI-FFELADE INSU-LIKE FLOWERS

HAT USUALLY RIESS ABOVE THE LEAVES, SUI-FFELADE INSU-LIKE FLOWERS

FLOWERS AND 3 SEFEN-S) CAN BE BUILSH-PURPLE TO VIOLET IN BUIL

FLACTUALLY 3 FETALS MID 3 SEFEN-S) CAN BE BUILSH-PURPLE TO VIOLET IN BUIL

FLACTUALLY 3 FETALS MID 3 SEFEN-S) CAN BE BUILSH-PURPLE TO VIOLET IN SO IN MYBRID

STECIES, FLOWERS ARE FRAGRANT, IRISES HAVE SHALLOW ROOTS AND CAN

STRATEGICALLY PLACED TREES CAN INCREASE HOME ENERGY EFFICIENCY. TREES ALSO REDUCE STORMWATER RUN-OFF.

DAVILIE'S ARE FLANTS. THE NAME HEMEROCALLIS COMES FROM THE "HIMEPA DAVILLIE'S ARE FLANTS. THE NAME HEMEROCALLIS COMES FROM THE "HIMEPA PARMED BY AND KANDS (KALOS) "BEAUTIFUL". THE FLOWERS OF MOST FREEDES OFEN AT SUNRISE AND WITHER AT SUNRISE, FROM STEEDED SHE NIGHT-BLOOMING. THERE ARE OVER 60,000 REGISTERED. ONLY A FEW CULTIVASS ARE SCENTED, SCENTED CULTIVASS (MYCEROLO) ARE APPEANING MORE FREQUENTLY IN NORTHERS HE WISDIDIATION HOWEVER. SOME DULTIVASS REBLOOM LATER IN THE SEASON, PARTICULARLY IT THEIR EDUCATION ESPERIOS MAIL WHITE FORTON BETWEEN THE LEAVES AND THE ROOTS, THE CROWN, AND THE ROOTS. THE CROWN OF A DAVILLY STHE SMALL WHITE PORTON BETWEEN THE LEAVES AND THE ROOTS, AND SUNRISH WITH LEAVES AND THE PARENT FLANT. SOME DAVILLES STOW ELONGATED WIDDIALS FOR NOOTS WHITE PORTON BETWEEN THE LEAVES AND THE ROOTS MORE OF THE PARENT FLANT. SOME DAVILLES STOW ELONGATED MORE THE PART OF THE PARENT FLANT. SOME DAVILLES STOW ELONGATED HOW PART OF THE PARENT FLANT. SOME DAVILLES STOW ELONGATED HOW PART OF THE PART OF THE PART WORTH A NOTHER SOME THE NAME OF THE PART OF THE PAR

OTHER GRASSES THAT WOULD WORK WITH THIS SITE ARE.

TUPTED HAIR GRASS (DESCHANDERS A CAESSITIOSA), HOSTAG (AS MANY AS 45-60 INFERENT SPECIE), DWARF FOUNTAIN, SHOWN BLACK-FC SUSAN (RUDBECKIA SPECIOSA), SHINING ASTER (ASTER FRANDS), MORNING LIGHT, LINE PIGLAUD ASTER (ASTER MOLE-ANGLIAS), MOUNTAIN MINT (PYCHANTHEMIAN RIGHIANUM), PALM SEDGE, AND DENSE BLAZING STAR (LIATRIS SPICATA) OR SIMILAR.

PROPOSED AND RECOMMENDED TREE TYPES

EASTERN WHITE FINE
INF. ALL MEMBERS OF THE GROUP. SÜBGENUS, THE (NEEDLES) ARE IN
INF. ALL MEMBERS OF THE GROUP. SÜBGENUS, THE (NEEDLES) ARE IN
FASCICLES (BUNDLES) OF FIVE (RARELY 3 OR A), WITH A SHEATH, THEY ARE
FLEXIBLE, BUNDH-GREEN, FINELY SERRATED, AND 2-5 IN LONG, AND PERSIST FOR
THE ARE SLENDER, &-16 CM (3-4 IN) LONG (RARELY LONGER THAN THAT), AND 4-5
OM (1 5-2 IN) BROAD WHEN OFFEN, AND HAVE SCALES WITH A ROUNDED AFEX AND
SUGHITLY REFLEXED TH. MANTHEE TREES CAM EASILY BE 200 TO 250 YEARS OLD.
SOME WHITE FINES LIVE OVER 400 YEARS.

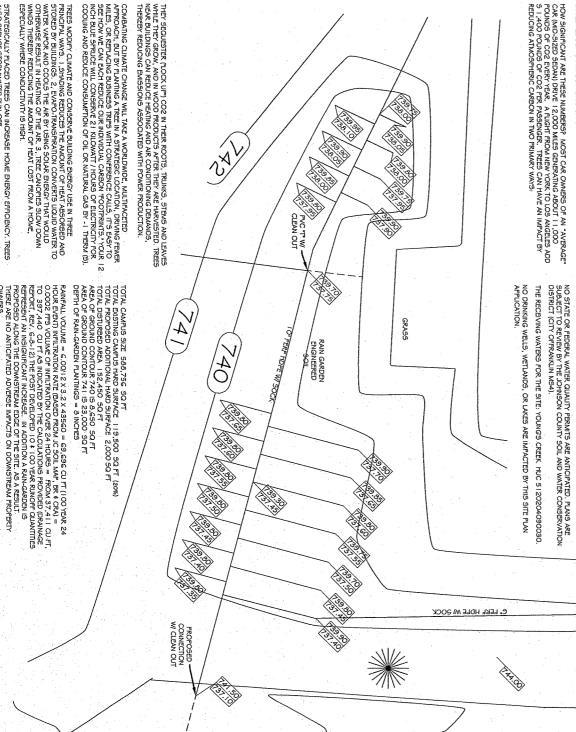
Pine, fir, and spruce trees can be classified as evergreen trees, and have more than just landscape, obscreening benefits, a two inch diameter tree can divert upto 205 gallons of storm water annually, while reducing atmospheric carbine by 9 finds.

AMONG THE EARLY SPRING-PLOWERING TREES THE DOGWOOD, CORNUS FLORIDA,
IS REGARDED BY MOST NORTH CARCULINIANS AS UNRIVARED IN BEAUTY. IT GROWS
IS TO 25 FEET (MAY REACH 30 TO 40 FEET IN WOODED AREAS) IN HEIGHT AND IS
GENERALLY WIDER THAN TALL. THIS DECIDIOUS ORNAMENTAL TREE OFFERS
LANDSCAPE INTEREST FOR ALL SEASONS, BEGINNING WITH ITS FLORAL DISPLAY IN
LATE MARCH THAT LAST 2 TO 4 WEEGS FOLLOWED BY DEET, GREEN FOLLOWE HID
ON LAYERED BRANCHES IN THE SUMMER, WITH FALL COMES A REBULLANT SHOW OF
SCARLET TO REDDISH FURFLE FOLLAGE AND BRIGHT RED FRUIT (DRUPES) BONE IN
SMALL CLUSTESS, THE FRUIT OFTEN LASTS INTO DECEMBER OR LIVILL IT IS
DEVOLURED BY BIRDS. THE MITERESTING BARK TOYLURE AND BRANCHES HELP
CREATE AN EXCELLENT WINTER SILHOUETTE.

RANKED AMERICAS MOST POPULAR DOGWOOD TREE AND HAS LONG BEEN CONSIDERED A SOIL IMPROVER. THE FLOWERING DOGWOOD TREE GROWS WILL IN DIVERSE SOILS AND IS SYRREMELY VALUABLE FOR VARIOUS WILDITE BECAUSE THE FRUIT, FLOWERS, TWIGS, SEEDS, BARK, AND LEAVES ARE UTILIZED AS FOOD. CULTIVARS INCLUDE: CHEROKEE CHIEF. CHEROKEE DAYBREAK, CHEROKEE FRINCESS. PIRST LADY. AMONG OTHERS. DOGWOODS MAKE EXCILLENT UNDERSTORY TREES IN A SEMI-SHADED AREA AND CAN BE USED IN FOUNDATION FLAMINGS. THEY ARE OFTEN USED AS A BACKDROF FOR RHODODENDRONS, AZALES, OR OTHER SPRING-FLOWERING STRUBS. DOGWOODS ARE EXCELLENT FOR SPRING-FLOWERING STRUBS. DOGWOODS ARE EXCELLENT FOR SPRING-FLOWERING STRUBS.

OTHER TREES THAT WOULD WORK WITH THIS SITE ARE.
RED BUD (CERCIS CANADENSIS), RED OAK (QUERCUS RUBRA), EUROPEAN
HORNBEAM, AND
WHITE BIRCH (BETULA PAPYRIFERA), OR SIMILAR.

OUR SITE IS ENTRELY WITHIN ZONEX, AS PLOTS BY MAP SCALE ON THE TENA FLOOD INSURANCE RATE MAP FOR THE CITY OF FRANKLIN (180114), JOHNSON COUNTY, INDIANA, MAP NO. 18081-C 0227 D, DATED AUGUST 2, 2007 (RAIN-GARDEN 100 YEAR ELEV. 740.25).



THE RIVER BIRCH HAS DARK GREEN SUMMER FOLIAGE AND TURNS A GOLDEN YELLOW IN THE FALL. BEST ADAPTED TO MOIST, ACID SOILS, BUT WILL SURVICE: DRY SOILS, NOT BOTHERED BY THE BROWZE BIRCH BOERR, NATIVE, GRACEFUL BRANCHING, EASY TO TRANSPLANT; BEST NOT TO FRUNE IN SPRING - SAP BLEEDS' AND IS HEAT TOLERANT. THIS DECIDIOUS TREE CAN WITHSTAND STRENGED PRENOSO OF FLOODING. THE WARE BIRCH TREES ACE BROTHFUL IN THE SUMMER AND WINTER, ARE WIDELY ADAPTABLE, AND HEAT TOLERANT. RIVER BIRCH
THE RIVER BIRCH TREE, BETULA NIGRA, IS A VERY HANDSOME TREE FOR ESTATES,
THE RIVER BIRCH TREE, BETULA NIGRA, IS A VERY HANDSOME TREE FOR ESTATES,
PARKS, GOLF COURSES AND ANY OTHER LAKES, IT DISPLAYS A LIGHT
PARKS, GOLF COURSES AND ANY OTHER WAS THAT FELS AND FLAKES TO GIVE THAT
REDDISH RROWN CINNAMON BARK THAT FELS AND FLAKES TO GIVE THAT
BEAUTIFUL LOOK THAT THE BERCH FAMILY IS NOTED FOR. FLANT AS A SPECIMEN,
OR AS A WANDSREAK, FLANT 20' APART IN THE ROW, IT IS EXCELLENT IN WET SOIL.

D Johnson Research Hospital

revisions per city CAP 6-8-12

NO. STATE OF MINIMAL O



THIS DRAWING/COMPUTER FILE, IDEAS, DESIGN AND CONCEPTS CONTAINED HEREN AGE THE EXCLUSIVE WIELLECTUM, PROPERTY OF CAN UND SURVENICA, INC. OF ANY REPRODUCTION, OR REUSE OF THIS OCCURENT IN WIGLE OR IN PART, WITHOUT WRITTEN PERMISSION FROM CAW LAND SURVEYING, INC. IS PROHIBITED. 8



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Project

Prepared For:

Athletic Field Franklin, Indiana

Scale " = 10' Work Order No. 120011 Drawn CAP Sheet Title Rain Garden Plan Designed N/A Sheet Number Checked JJK

Date: April 25, 2012

of 11

Pt. Rain H $\frac{1}{2}$ SW $\frac{1}{4}$ S15-T12N-R4E Gardens

A RANGARDEN IS A SHALLOW DEPRESSION IN YOUR YARD THAT IS PLANTED WITH ANALYZE WEITHOLOGY, AND TREES, A RAIN MATURE WEITHOLOGY, AND TREES, A RAIN GARDEN TAKES ADWANTAGE OF RAINFALL AND STORKMARTER RUNOFF IN ITS DESIGN AND FLATT SELECTION, WHILE ASSCRIBING WATER, REDUCING RUNOFF, PROTECTION OF MATERIAL CHAPTER TO THE SEARCH ON AND FLATT SELECTION, WHILE ASSCRIBING WATER REDUCING RUNOFF, PROTECTION OF AND FROM THE SEARCH ON AND FLATT SELECTION OF THE SEARCH ON THE SEARCH OF THE SEARCH OF THE SEARCH OF THE SEARCH OF THE STORKMARTER AND FLATT SEARCH OF THE STORKMARTER AND FLATT SEARCH OF THE STORKMARTER AND THE SEARCH OF THE STORKMARTER AND THE SHAPE AND SHAPE AND SHAPE TO SHAPE STORKMARTER AND THE SHAPE TORS BIRDS AND DUTTEFFULS. IT MAY BE A FORMAL LANDSCAFE AND MAY BE INCORPORATED INTO A LAKENGE GARDEN, AND SHAPE AND SHAPE AND SHAPE AND SHAPE THE AND AND SHAPE AND SH

VITHE SURFACE OF THE GARDEN A NUMBER OF PROCESSES ARE OCCURRING INMINIC THE MORROLOGIC ACTION OF A HEALTHY FOREST. SOILS ARE ENGREESED PROCESSES THE FLANTS SELECTED FOR THE RAIN GARDEN. THE GARDEN IS A SMALL TENTION CELL IN MORROL STREAMMERT. IS CLEAMED AND REDUCED IN VOLUME OF INTEREST HE RAIN GARDEN, NITROCEN AND PROSENCUS LEVELS AND OVERALL SIT LOADS IN THE FORSOMMATER ARE REDUCED TO THE ACTION OF THE FLANTS ARE REPORTED TO THE ACTION OF THE FLANTS ARE ARE APPORTED THE ACTION OF THE FLANTS ARE ARE APPORTED THE ACTION OF THE FLANTS AND AREA WILL A POSITIVE COMMUNICATIVE EFFECT ON BOTH THE VOLUME AND QUALITY OF WATER RIN OFF.

TWO TWO TO BASIC TYPES OF RAIN GARDENS ARE USED TO IMPROVE BOTH TYPES OF RAIN GARDENS ARE USED TO IMPROVE SHALLY, REDUCE RUNOFF VOLUMES AND GENERALLY FROUITATE CARMED WATER, WHICH THE OF GARDEN IS SELECTED TO BE BUILT IS VOLUMES OF WATER TO BE TREATED, ENSTING SOIL CONDITIONS, AND BUDGET FOR THE PROJECT.

SOME CASES WHERE INFILITATION IS NOT DESIRED. THE UNDERGRAIN SYSTEM CAN THE RECESS WATER WITO A CONVENTIONAL STORM SHOWER PIFE SYSTEM, CASES REER INFILITATION INFOLID NOT BE DESIRABLE WOULD BE IF THE BOTTOM OF THE RIDEN HAS LESS THAN AF OF CLEARANCE TO THE SEASONAL MEAN HIGH WATER FROM THE IF THE ADJACTICT SOILS ARE CONTAMINATED AND THE CLEARED WATER FROM THE RIDEN WOULD BECCAME RECONTAMINATED BY COMING IN CONTACT WITH THE JACHET WATER SOILS.

CARDING ARE DESIGNED TO BE DRAWED WITHIN FOUR HOURS AFTR A 1 F. RAIN THIN THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE USE OF THE DESIGNED TO DRAIN WITHIN 2 NUTS OF THE DESIGNED TO DRAIN WITHIN 2 NUTS OF THE CARDINA ROUTE. THE PANTS ELECTED FOR THE WATER ANAY FROM THE GARDEN, AS A RESULT, THE PANTS ELECTED FOR THE EXTENSION CELL MEED TO BE ABLE TO WITHSTAND BOTH THE ENTREMES OF TODING AND PROPERTY OF THE UPPER EDECS OF THE GARDEN ARE OFTEN TO BE ABLE TO WITHSTAND BOTH THE WITHOUTE OF THE DESIGNED AND THE PROPERTY OF THE PROPERTY OF THE WITH FLANTS LORGE IN THE COLUMNA ROCKE IN THE LORGE PROPERTY OF INTERPRETABLE OF THE WATER OUTDING AND THE PROPERTY OF THE WATER OUTDING AND THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PARTY OF THE T

RAIN GARDENS WITH NO UNDERDRAIN THRICALLY HOLD MOISTURE LONGER. PARTICULARY IN THE LONGER AREAS OF THE GARDEN. PLAITS SELECTIO: JOR MIG GARDEN SHOULD BE AREL TO TOCERATE MUNDATION FOR A MORE SETMENDE FERIOD OF TIME. HOWEVER, AS IN THE CASE OF THE INDEEDRAINED RAIN GARDEN, THE RUSERFACE IS DEVANED WITHIN FOUR HOUSE, ALTHOLOICH THE SOUL MAY GE SATURANTED. AS IN THE BIORETHATON CELL, SOILS ARE AMBINDED WITH A VERY PORCOLS FLAMING. NASIDELY TO A DEPTH OF 2°. AND IDEALLY TO A DEPTH OF 2°. IT HE LOWER NECESSARY IT SO TO HAVE PURITS ADAPTED TO PROLOXED PERIODS OF WITH THE MORE SIMILATED TO BE MAN GARDEN, THE FLAMITS ON THE UNDERDRAINED RAIN GARDEN, THE FLAMITS ON THE UNDERDRAINED RAIN GARDEN, THE FLAMITS ON THE LOWER FACEAS.

IN BOTH THES OF GARDENS, THE GROUND IS EXCAVATED AND THE PLANTING MEDIA IS INFORMED TO THE SITE. THE INFORTED FLANTING MEDIA SHOULD BE CLEAN AND WEED SEED FREE. A LINER MAY OR MAY NOT BE USED, DEFENDING ON THE LOCAL CONDITIONS.

IN BOTH THE UNDER-DRAINED AND THE GARDEN 15 GREATER WHEN YOU LARGER, PLANTS, SOME PLANTS US' THEY ARE INSTALLED SMALL AND H THEY GROW. , and belf-contained rain gardens, the success of in you start with healthy and smaller, rather than 15 Lifted are successful in Rain gardens only when and have a chance to adapt to the conditions as

ID TO HAVE A COMPETITIVE ADVANTAGE IN A CLEANING AND FILIRATION BENEFITS TO THE ARE POPULATED WITH HATTIVES OR NATIVE ARE POPULATED TO A LOCALITY, BUT OTHER

MOST OF THE EVANPLES OF RAIN GARDENS THAT ARE AVAILABLE TO REVIEW ARE FOPULATED WITH EITHER HERBACEOUS PREENINALS, WOODY SHRUBS OR TREES, THIS DOCS NOT MEN THAT ANNULAS ARE NOT A FORSIBLE CHOICE FOR SUCH GARDENS, RATHER IT MEANS THAT THE GARDENS CONSTRUCTED HAVE BEEN DESIGNED FOR HABITAT AND LOW MANITEMANIC GOALS ARTHER THAN PIETY SEASONAL ASTRETICS AND COLOR EFFECTS. THE NICERTON OF SOME ANNUALS, AS WELL AS ART ROOK TORMONOUS, STAILARY) CAN ADD TO THE MUCHOMENT OF A WATER GARDEN BUT SOULD BE CONSIDERED A HIGHER MAINTENANCE VERSION OF A RAIN GARDEN. ION-INVASIVE BUT ABLE TO GROW IN CHOICES.

DESIGN OF A WATER CARDEN, OR BIORETENTION SYSTEMS IS SOMEWHAT FEURIEL META, AND SHAFE OF THE SYSTEM CAN BE VARIED TO ACCOMMODATE SHIE CONDITIONS AND CONSTRAINTS, GENERAL DISIDELINES FOR GENERAL DESIGN ACE: 굺

WATER GARDEN DESIGN

SITE REQUIREMENTS. DETERMINE THE WATER QUALITY AND QUANTITY REQUIREMENTS FOR THE SITE INJUDIDING ANY MUNICIPAL REQUIREMENTS). THE LOCATION KEEDS TO BE NEAR THE POINT OF WATER KINDEY, E. BE MINDFULL OF STRUCTURES, AND SEPTIC FILEDS (10 FOOT NWAY IS A GOOD RULE). IS THE SITE SUNNY, OR SHADY.

POUNT PER DEVENT PROM YOUR SURVEYOR, OR ENGINEERS CALCILATIONS, ITS GENERALLY RECOMMENDED THAT A RANGASEDE HOUD IN HOT OF WATER, OR KUNOFF DEFITI THAT WOULD SOME, OR PERCOLATE INTO THE GROUND WITHIN 24 HOURS.

FOR EXAMPLE, TAKE A 1,000 SQUARE-FOOT ROOF PANEL WITH TWO DOWNSPOUTS, ONL OF WHICH IS CONNECTED TO YOUR RAN GARDEN, DIVIDE 1,000 SQUARE TERM FOOTAGE) BY THO THE HUNBER OF DOWNSPOUTS COUNTED TO YOUR RAN GARDEN) AND THEN DIVIDE BY THREE TO DISCOVER YOU SHOULD HAVE A 167 SQUARE FOOT RAN GARDEN TO TREAT THE STORMWATER FROM ONE OF THE TWO DOWNSPOUTS CHANNELED TO YOUR RAN GARDEN.

ONCE THE SIZE IS DETERMINED, SITE YOUR GARDEN AT LEAST 10 FEET AWAY FROM ITS FOUNDATION. USE A KOZE OR, GARDEN HOSE TO TEST DIFFERENT SHAFES FOR YOUR GARDENS FOOTFAINT, WITHIN THE FOOTFAINT OF THE RAN GARDEN, CERETA SUGHT DEFRESSION BY EXCANTING SIX TO 12 INCHES OF SOIL. THIS ALSO HELES BY REMOVING EMSTRIAN YEARTHON, THIS SOIL ON BE ADDED INTO A SHALLOW BERM ON THE DOWN SIDE OF THE GARDEN.

SURFACE STORAGE (PONDING AREA)
SURFACE STORAGE (PONDING AREA)
SURFACE STORAGE (PROVIDES TEMPORARY) STORAGE OF STORMWATER RUNOFF
BEFORE INFLIKTATION, EITLATION, L'MAPCRATION, AND UPTAKE (RAPOTRAMSPIRATION)
CAN OCCUR, WITHIN THE BIORETENTION SYSTEM, PONDING TIME PROVIDES WATER
CANATY BENEFITS BY ALLONING LAKEGE DEBREA AND SEDMENT TO SETLE OUT OF THE
WATER, PONDING DESIGN DEFITS ARE DIRECTLY RELATED TO THE ENGINEERED SOIL MAY
DESIGN CONTROL AND ARE GENERALLY UNITED TO A RANGE OF CHOPERED SOIL MAY
DESIGN CONTROL AND ARE GENERALLY UNITED TO A RANGE OF CHOPER TO REDUCE THORAGINE COURSING OF UNDERLYING SOILS, MINIMIZE FACILITY
DRAINAGE TIME, AND PREVENT STANDING WATER.

THE HOOSIER HEARTLAND ROAD COUNCIL OFFER SIZING INFORMATION CALCULATION METHODS THROUGH THEIR WEB SITE (WWW.HHR.CD.ORG). Ā

SOIL REQUIREMENTS.

INVESTIGATE THE FEASIBILITY OF WATER INFILTRATION: IN THE AREA PROPOSED FOR INVESTIGATION WOULD BE THE COUNTY SOIL SURVEY, INFILTRATION IS THE PROCESS OF WATER ENTERING THE SOIL. THE RATE AT WHICH IT ENTERS THE SOIL IS THE INFILTRATION RATE. URBAN SOILS ARE OFTEN Example of a bioretention system with varied plant materials

Figure 7.19:

INDIANA WILDLIFE FEDERATION... WWW.INDIANAWILDLIFE.ORG
INDIANA DEPARTMENT OF NATURAL RECOURSES,: //I. GOV/DWR HOOSIER HEARTLAND RC4D COUNCIL WWW.HHRCD.ORG

Sheet flow ____

— Surface storage

Optional underdrain -determined on a site by site basis

V CONSTRUCTION WITHIN URBAN AREAS

V CONSTRUCTION WITHIN URBAN AREA THAT IS IN A CSO SEWER-SHED MAY HA

V DOPLICIPMENT IN AN URBAN AREA THAT IS IN A CSO SEWER-SHED MAY

RAMMATER FEES AND TAXES BASED ON THE VOLUME AND CULATY OF STORMAN

RAMMATER FEES AND TAXES BASED ON THE TRACKY

TOFF, RAIN GARDENS CAME BE INTERCATED INTO STRETSCAPES, TREE PLANTING

THE PROPERTY OF THE PLANTING THE PROPERTY OF T

THE ENGINEERED SOIL MIX PROVIDES A NEDDIM SUTFABLE FOR FAMT GROWTH, THIS DESIGNED MEDIA ACTS AS A PHYSICAL MILTER DETIVED INTEGRACE AND DESIGNED MEDIA ACTS AS A PHYSICAL MILTER DETIVED IN FROVIDES ADDITIONAL STOKAGE AND THE NATIVE SOIL OF SUBDRAMAGE SYSTEM. IF PROVIDES ADDITIONAL STOKAGE AND THE NATIVE SOIL OF SUBDRAMAGE SYSTEM STOKAGE AREA IS A FLACE FOR BIOLOGICAL AND CHEMICAL POLITIANT TREATMENT STOKAGE AREA IS A FLACE FOR BIOLOGICAL AND CHEMICAL POLITIANT STOKAGE AREA IS A FLACE FOR SOIL DEPTH AND BIORETENTION SURFACE AREA.

SOIL AMENDRAM'S CAN BE A SUBSTANTAL FORTION OF A RAIN GARDEN BUDGET. BEPENDING ON THE MIX USED THE GARDEN WILL BE EITHER ENTENERLY WELL BERANED, BERNEY WITH FERCODS OF FLOODING OR GENERALLY DAMF WITH FERCODS OF FLOODING. THIS MIKTURE WILL CREATE A VERY WELL DRAINED, FARRY LOW MUTRISHT MIX FOR A RAIN GARDEN:

FEMELIFACTION IS LIMITED OR NOT FEMSIBLE. CONSIDER AN UNDERGRANDED DIORETHNICH MERCH IF MELIFACTION IS STEMA OR AN ALITEMANT LOCATION FOR THE DIORETHNICHA MERCH IF MELIFACTION IS FEMSIBLE, DETERMANCE THE SATURATED VERTICAL MINITARTION ROBER TO PROTECT THE SOLLEMAN SHOPE FOR MOST BIORETHNICHAS FERRICAL THE SOLLEMANT STEMAN THAT PROVIDED FOR AND PROLOGIES THE LIFE OF THE SYSTEM BY REDUCING SEDIMENT AND OTHER FOLLEMAN SHOPE TO UN WITH LOCATION, SIZING, AND PROPER INLET AND OUT-LETTING OF YOUR UNDERGRANME.

IT IS RECOMMENDED THAT RUNOFF IS CONVEYED TO BIORETENTION AREAS VIA SHEET FLOW OVER A VEGETATED OR GRAVEL FILTER LEVEL SPREADER STRIP, OR YARD, THIS IS NOT ALMYSTS POSSIBLE DUE TO SHIT CONSTRAINED.
MUNICIPAL REGULATIONS, OR SPACE UMITATIONS.

MOST METORIANI DISCONNECT YOUR DOWNSTOUTS FROM OUR SEMER SEITEM AND CHANNEL STORMMET TO RANG AREDRIS AND FROM BARKELS. PURI IF YOUR SEYCE IS UNITED YOU CAN EMPERT FOR A RANG AREDRIS AND ARE IMPROVE OUR RECKLA MANAGEMENT OF STORMMATE, HE SMALLEST HEASTAKES AND UP AND THE IMPROVE OUR AREDRIS MANAGEMENT OF STORMMATER, SEMENDESE, EVERY DROP MATTERS, DEEK DOOF DOWNSTERS, A SURVEYOR OR BUSINESS. OR BUSINEER CAN ASSIST YOU WITH LOCATION. SIZING, AND GENERAL INLET DESIGN

PLANTING REQUIREMENTS-

IATIVE AND ORNAMENTAL VEGETATION

RAIN GARDRIS, AND BIORETENTION SYSTEM PLANTINGS SHOULD BE ABLE TO MINISTRAID BOTH WIT AND DRY SOIL CONDITIONS, MATURE PLANTS ARE PREFEREND. THE USE OF EXOTIC; OR HYRRID SPECIES CAN ADD INTEREST TO YOUR DESIGN, BUT MILL OFTEN RECLURE MORE MANITEMENT. ON TOTENMENTER AND STORMWATER FOLLITANTS THROUGH SOIL REMOVES WATER HERCUGH EVAPORTRAMSPRATICS AND STORMWATER FOLLITANTS THROUGH NOT DESIGNATION OF A MINISTRAIN OF A FAMOLYS WATER THROUGH EVAPORTRAMSPRATION FAMOLY TO RECLURE THE MANUTE OF THE RECOVER WATER THROUGH SOIT DEVICE/PREMIT OF HAM IN RECOVER A WATER THROUGH SOIT DEVICE/PREMIT OF HAM IN RECOVER A WELL AS DESCOURAGE WEED TO NISCET AND DISEASE HEREDAY, AND THESE IS RECOMMENDED TO CAPATE A MINISTRAIN OF THE AND STEASES AND THE AS WELL AS DESCOURAGE WEED TO RECOVER CRASSESS. SHRUDS, AND THESE IS RECOMMENDED TO CREATE A MINISTRAIN OF THE AND TEDERAL WAS TRESSED AND THE AND THE ADDRESS SHRUDS, AND THESE IS RECOMMENDED TO CREATE A MINISTRAIN OF THE AND TEDERAL WAS TRESSED AND THE AND THE OFFICES OF THE ADDRESS SHRUDS, AND THESE IS RECOMMENDED TO CREATE A MINISTRAIN OF THE SAND STREEDS AND THE ADDRESS SHRUDS, AND THESE IS RECOMMENDED TO CREATE A MINISTRAIN OF THE AND THE ADDRESS SHRUDS, AND THESE IS RECOMMENDED TO CREATE A MINISTRAIN OF THE AND THE ADDRESS SHRUDS. THE ADDRESS SHRUDS AND THE ADDRESS SHRUDS, AND THESE IS A RECOMMENDED TO CREATE A MINISTRAIN OF THE SAND SOIL THE SAND SOIL THE ADDRESS SHRUDS. THE ADDRESS SHRUDS AND THE ADDRESS SHRUDS AND THE ADDRESS SHRUDS. THE ADDRESS SHRUDS AND THE ADDRESS SHRUDS AND THE ADDRESS SHRUDS AND THE ADDRESS SHRUDS. THE ADDRESS SHRUDS AND THE ADD

* CENTERS, DIVIDE 167 (THE LANTS, IF YOUR SOIL IS ARE FLOOTAGE FIGURE AND OUR RAN GARDEN'S SOIL IF YOUR AREA IS VERY LARGE, IOLOSWALE, REFLACT SONE OR COASIONALLY WET SOIL:

CLAYER OR MULCH PROVIDES A MEDIUM FOR BICLOGICAL GROWTH.

COSTION OF ORGANIC MATERIAL ADSORPTION, AND BINDING OF HEAVY

THE MULCH LYERS CAN ALSO SERVE AS A STOKE THAT ABSORDS INVERS

STOKENS AND RETURN WATER FOR PLANT GROWTH DURING FOR PENDODS. THE

STOKENS AND RETURN WATER FOR PLANT GROWTH DURING FOR PENDODS HAS BRIDDED HASDINGOD MULCH DE UTILIZED TO MINIMIZE

JERODED THAT SHEEDED HASDINGOD MULCH DE UTILIZED TO MINIMIZE

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15% BY VOLUME DOUBLE SHREDDED HARDWOOD MULCH 50% BY VOLUME WASHED SHARP SAND - ASTMC-33 30% BY VOLUME TOPSOIL 5% BY VOLUME FEATMOSS

THE VIRGINIA DEPARTMENT OF FORESTRY RECOMMENDS HOMEOWNERS USE: 50% SAID, 25% TOPSOIL AND 25% COMPOST OR LEAF LITTER (WWW.DOF.VIRGINIA.GOV).

IT IS IMPORTANT TO NOTE THAT THE SAND USED IN A RAIN GARDEN SHOULD AUMANS BE A COURSES, SHARP SAND, IT SHOULD REVIRE BE A COURTEACTOR BUILDING SAND. IN AREAG OF HIGH SUMMER SOIL HEAT, THE COURDEST OR FERT MOSS COMPOSITION MILL DECOMPOSE RAPBLY. THE DOUBLE SHEEDED HARDWOOD MULCH WILL DECOMPOSE RAPBLY. HANAFTAN HE DESIRED COARSE MAD WELL DRAINED. STRUCTURE LONGER THAN SOME OTHER AMERIUMENTS. IN ALL CASES, THE QUALITY OF MATERIALS MATTERS, TOPSOIL SHOULD BE WEED FREE AND HIGH IN ORGANIC CONTENT AND LESS THAN 10% CAY.

BMP, MAINTENANCE MEASURES SHOULD INCLUDE:
INSPECTION OF THE RAIN GARDEN IS REQUIRED AFTER EACH MAJOR RAIN (MORE THAN
I' OF RAINFALL OR AT LEAST 4 TIMES FER YEAR DURING THE GROWING SEASON
(MARCH NOVEMBER), DURING INSPECTION THE FOLLOWING SHOULD GE NOTED ON
THE INSPECTION FORM ATTACHED:

TRASH. DEERIS AND SOIL ACCUMULATION O REMOVE ALL TRASH AND DEERIS AND SOIL ACCUMULATION OR REMOVE ALL TRASH AND DEERIS AND SOIL ACCORDANCE WITH CHYR REGULATIONS.

AND WEEDING-GEROLAL IN THE FEST FEW MONTHS AFTER FLANTING UNTIL MATURING PLANTS BEGIN TO ROOM THE WEEDS OUT HAVE WEED TO ENSURE THAT THE SOIL IN THE RAW AREDIN ODES NOT GET COMPACTE MUD TO MINIMAZE DESTURBANCE TO PLANTS, WATCH FOR INVASIVE, OVERLY-COMPETITIVE WEED SPECIES RICCS PLANTS DATABASE HAVEDNATORY TO DISCOURAGE THEIR ESTABLISHMENT, WEED AFTER WATERING OF AFTER A RAW EVENT FOR MINIMAL DISTURBANCE AND EXCELL FRENCH OR AFTER A RAW EVENT FOR MINIMAL DISTURBANCE AND EXCELL FRENCH OR AFTER A RAW EVENT FOR MINIMAL DISTURBANCE AND EXCELL FRENCH OR AFTER A RAW EVENT FOR MINIMAL DISTURBANCE AND EXCELL FRENCH OR AFTER A RAW EVENT FOR MINIMAL DISTURBANCE AND EXCELL FRENCH OR AFTER A RAW EVENT FOR WITHER MIRRESTO SOILS. MULCH-S. USE THAT AND AND EXCELL FRENCH OR WITH A MIRREST, MUDIE COVER, AND DISCOURSE CAN BE LETT FOR WITHER MIRREST, MUDIE COVER, AND SEED FADO EXCHANGE FRANCE SHOULD BE OUT BACK AFTER SRING BECOMED AS A MONTH OF THE MINIMAL REMOVED ON THE RE

REVEGETATING—REMOVE OR REPLACE PLANT MATERIAL THAT IS NOT THRIVING INDIANA MATIVE PLANTS & MUDT-LOWRES SOCIETY. WAWN, IMPAIRS, DRZD.

SEDMENT—SEDMENT ACCUMULATION WITHIN THE GARBEN IS A SIGN OF SUCCESS. REMOVE SOIL ACCUMULATION AND USE CHASTE IN OTHER AREAS OR DISPOSE IN ACCUMULATION AND USE CHASTE IN OTHER AREAS OR DISPOSE IN ACCUMULATION AND USE CHASTE AND AREAS OR DISPOSE IN ACCUMULATION AND USE CHASTE IN OTHER AREAS OR DISPOSE OF AVAILABLE FOR WATER STORAGE PRIOR TO OVERFLOW INTO THE OUTLET STRUCTURE. OR CONTINUING THROUGH ITS INJURAL COURSE. ENSURE THAT THE DESIGNED DEPTH IS MAINTANED.

A MAINTENANCE INSPECTION EASE OF MAINTENANCE.

CONVENTIONAL STORMWATER PO PART OF A TREATMENT TRANIL STORMWATER ON THE SURROUND PART OF THE OVERALL STORMWATER SUBMITTED PRIOR TO CONSTRUCT 869A

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Abhunga Marabas Hospara

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RAIN OIT A OIT A OIT A OIT A OIT A

Revisions

NEW DEVELOPMENT IN A SUBURBAW AREA THAT IS IN A CSO SEWER-SHED OR IN AN EARLA WITH SETTIO, SYSTEMAS MAY HAVE STORMWATER FRES AND TAKES BASED ON IT WISHING AND LIVE MY THAT STORMWATER RESPONDED IN THE CONVERSION OF EMSTATED BY THE CONVERSION OF EMSTATED MAD USE INTO A MORE DEVLOPEDBUILT UPON STATE, RAIN GARDENS AND EMPACT OF STORMWATER ON THE SURROUNDING INFRASTRUCTIVE. THE RAIN GARDEN GONCERT CAM DE INTERCAPED INTO STREETS-OFFSTREES, ROOSDIDE SWALES AND ENTRY FRATURES, THEY CAM SERVE TO REDUCE OR EMMANATE THE NEED TOX CONVENTIONAL STORMWATER MANAGEMENT FAN USE CALCULATED AND SUBMITTED OPENING MEMBERS AS PAST OF THE OVERALL STORMWATER MANAGEMENT FAN USE AS CALCULATED AND SUBMITTED PRIOR TO CONSTRUCTION AS PART OF THE FERMITTING PROCESS.

RETROPIT WITHIN SUBURBAN AREAS
IN AREAS WHERE INCREASED DEVELOMENT OR EMERINATION FRODENHALS, RAN GARGIN RETROPITS ARE AUTHORITH FOR THOSE PROBLEMS. THEY ARE ATTRACTIVE. THE SAN GARDIN FACILITY MEANS THAT IT IS THEIR FACILITY OF CONTINUES STORMMETRE RUN SCALE OF THE THEIRAL FLAN GARDIN IS ABLE HOMEOWHERS AND A MUNICIPALITY MAY GRANT INFRASTRUCTURE" INSTALLATION. BERT OR EXISTING DOPULDPHISH HAS CREATED OPTIS ARE AN IDEAL TOOL TO USE TO MITIGATE OFFICIALY LOW MAINTENANCE AND USE THE SHALL AND REPORTE NUMBER OF THE SHALL AND REPORTE NUMBER OF THE SHALL AND REPORTED THE SHALL TO ADDED THE SHALL TO ADDED THE SHALL TO ADDED THE SHALL THE SHALL TO ADDED THE SHALL THE S

MARK THE UNITIES BEFORE YOU DIG (1-800-385-5544), FLAN AND DESIGN) GARDEN, LAY OUT, CR. MARK YOUR GARDEN ON THE GROUND. GATHER YEAR CHARLES, FLANTINGS, AND DEGIN, IT IS RECOMMENDED THAT YOU PUGS, AND FUNTS RISTEAD OF SEEDS. EITHER WAY CONSULT YOUR NUSSERY FOR PROPER FLANTING RECUIREMENTS, AND CARE, YOUR GARDEN REQUIRE WATERIAN, WEEDING AND CHERAL MANTENANCE MICRO GATEN UNTIL PURSULT WATERIANCE MICRO WEEDING AND CHERAL MANTENANCE MICRO OFTEN UNTIL PURSULT WATERIANCE MICRO WEEDING AND CHERAL MANTENANCE MICRO WITH UNTIL PURSULT WATERIANCE MICRO WEEDING AND CHERAL MANTENANCE MICRO WITH UNTIL PURSULT WATERIANCE MICRO WEEDING AND CHERAL MANTENANCE MICRO WITH UNTIL PURSULT WATERIANCE MICRO WEEDING AND CHERAL MANTENANCE MICRO WITH UNTIL PURSULT WATERIANCE MICRO WATERIANCE MICRO WEEDING AND CHERAL MANTENANCE MICRO WITH UNTIL PURSULT WATERIANCE MICRO WATERIANCE MICRO WATERIANCE MICRO WATERIANCE WATERIANCE MICRO WATERIANCE WATERIAN WILL WILL

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THE ADDITION OF ANNUALS, ORNAMBITAL GRASSES, HOSTAS, TREES, SHRUBS, AND OTHER FERSONAL ELEMENTS CAN ADD TO THE BASE OF MANITEMA STONE, OR ROCK BOARDER CAN ALSO AND TO THE BASE OF MANITEMA ENLOWMENT, AND AID IN THE WATER'S ENERGY DISSIPATION. NO A

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Prepared For:

Project

Athletic Field Franklin, Indiana

Saint Rose of Lima 114 Lancelot Franklin, Indiana 46131

Sheet Title

Ann	⊌ Worl	Scale I" = 10'	2.
Date: April 25, 2012	Work Order No. 120011	0' Drawn CAP	Rain Gar
10	Sheet Number	Designed N/A	Rain Garden Details
or 1.1		Checked JJK	

