Village of Hartland
210 Cottonwood Avenue
Hartland WI 53029
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JOINT ARCHITECTURAL BOARD/PLAN COMMISSION AGENDA
MONDAY, APRIL 21, 2025
6:30 PM
BOARD ROOM, MUNICIPAL BUILDING, 210 COTTONWOOD

Roll Call

Public Comments: Please be advised the Joint Architectural Board/Plan Commission will receive comments from the public related to any item(s) on the agenda for a three-minute time period per person, with time extensions per the Chairman's discretion.

1. Consideration of a motion to approve the Jt. Architectural Board/Plan Commission minutes for March 17, 2025.

2. Architectural Board review and consideration of an application for demolition of existing garage and construction of a new garage at 337 E. Capitol Drive.

3. Plan Commission and Architectural Board review and consideration of addition to Lake Country Lutheran, 401 Campus Drive.

4. Review of proposed PUD development amendment ("Project") whose approval is being sought by Three Leaf Development on property tax key HAV 0423981056 located on Campus Drive. The Plan Commission will review:

   a. Proposed amendment of preliminary site and building plans for senior living development (124 units from previous 120);
   b. Request by the developer to amend the PUD to waive all impact, sewer connection and Regional Sewer Availability Charge fees totaling approximately $695,546.

5. Announcements: The following individuals will be given an opportunity to make announcements at the meeting regarding (1) activities taken since the previous meeting on behalf of the community, (2) future municipal activities, and (3) communications received from citizens. It is not contemplated that these matters will be discussed or acted upon. The following individuals may provide announcements: Village President or individual Village Board members or Village Administrator or other Village Staff members.

6. Adjourn.

Ryan Bailey, Village Manager

A complete packet of meeting materials is normally available by 5:00pm on the Friday before the meeting on the Village website: www.villageofhartland.wi.gov (Government/Agendas and Minutes). Notice: Please note that upon reasonable notice, efforts will be made to accommodate the needs of disabled individuals through appropriate aids and services. For additional information or to request this service, contact Sandee Policello, Village Clerk, at 262-367-2714. The Municipal Building is handicap accessible. To participate in the Village of Hartland "Zoom" meeting with video, https://us02web.zoom.us/j/87216132094?pwd=RPalmOCD6q4TtZbfCVlYdsG0y4qkQc.1 The Meeting ID is 872 1613 2094, Passcode is 176960. To participate in the Village of Hartland "Zoom" meeting (audio only), please dial 1(312)626-6799.

JOINT ARCHITECTURAL BOARD/PLAN COMMISSION MINUTES
MONDAY MARCH 17, 2025
6:30 PM
BOARD ROOM
MUNICIPAL BUILDING, 210 COTTONWOOD AVE.

Present: Tim Hallquist, Jeff Bierman, Chip Schneeberger, David DeCourcy-Bower, and Ann Wallschlager.
Excused: Jeff Pfannerstill
Others Present: Ryan Bailey, Scott Hussinger, Deputy Clerk Bushey and Ryan Amtmann.
Call to Order- 6:30 pm

Roll Call taken. All present with Pfannerstill excused and one vacancy.

Public Comments: Please be advised the Joint Architectural Board/Plan Commission will receive comments from the public related to any item(s) on the agenda for a three-minute time period per person, with time extensions per the Chairman's discretion.

- No Comments

1. **Consideration of a motion to** nominate a Chairperson Pro-Tem for tonight's meeting in the absence of Chairperson Pfannerstill -

   Motion (Hallquist/Schneeberger) to nominate Hallquist as Chairman Pro-Tem for tonight's meeting. Carried. (5-0).

2. **Consideration of a motion to approve the Jt. Architectural Board/Plan Commission minutes of February 17, 2025 –**

   Motion (Wallschlager/Schneeberger) to approve the Jt. Architectural Board/Plan Commission minutes of February 17, 2025. Carried. (5-0).

3. **Architectural Board review and consideration of an application for signage for Body in Balance Physical Therapy, 557 Cottonwood Avenue -**
   Representative for Body in Balance Physical Therapy said the signage is to match the rest of the signs on the building. He said they are non-illuminated with a light above the sign. Building Inspector Hussinger said there is no issue with the signage.
   Motion (Wallschlager/Schneeberger) to approve the signage for Body in Balance Physical Therapy with (5-0).

4. **Architectural Board review and consideration of an application for signage for Sjoberg Tool and Manufacturing, 530 Progress Drive -**
   No one from Sjoberg was present. Hussinger said it meets all the Village's standards and is non-illuminated. It was stated an identical sign was installed at the Cardinal Lane location.

   Motion (Wallschlager/Schneeberger) to approve an application for signage for Sjoberg Tool and Manufacturing, 530 Progress Drive. Carried. (5-0).

5. **Plan Commission and Architectural Board conceptual review and consideration of commercial addition, T-Lon, 1110 Richards Road –**
Village Manager Bailey stated this is only a review and not an approval. He said the CSM needs to be done but the stormwater plan will be back in April.
A representative from MSI said it is an addition 1 to 2 buildings and with that they would combine the 2 lots. He said they would need to adjust grades when they combine the 2 lots and re-engineer the stormwater. The representative said they are not ready to build yet, so they don't want to combine the properties on CSM, and he said there was a misunderstanding regarding the CSM. Ryan Amtmann from Ruekert and Mielke said it looks pretty straightforward and doesn't see any issues. It was stated that they want to put on an addition and combine 2 lots and will need to adjust the grades as well as do a stormwater plan. Hussinger asked if they have enough onsite parking, and the representative said he believes so. Hussinger asked if there will be parking and lighting and the answer was yes to both parking and lighting. Brief discussion on lighting. Hussinger asked if they will be utilizing existing dumpsters and enclosures. The representative said there is a new dumpster in the back corner and Hussinger said we would want to see the plan for the enclosure. She said they are showing a masonry 3-sided enclosure.
There was brief discussion on building b, grade and fire trucks getting around the building.
DeCourcy-Bower brought up the subject of easements.

6. **Plan Commission and Architectural Board conceptual review and consideration of residential addition, 185 Warren Ave -**

Owner of 185 Warren Ave said they would like to put on a 600 sq ft addition. It is for a foyer, upstairs laundry room and four seasons room. Hallquist asked if it was in the back and she said yes. Hussinger said the addition complies with the village's regulations. Wallschlager asked if the garage is on the lot line and it was stated yes.

Motion (Wallschlager/Hallquist) to approve the conceptual review of residential addition at 185 Warren Ave. Carried. (5-0).

7. **Announcements –**
In-person absentee voting starts on Feb

8. **Adjourn**

Motion (Schneeberger/Wallschlager) to adjourn. Carried (5-0).
Adjourned at 6:49 pm.

Respectfully submitted by

Recording Secretary,
Deidre Bushéy, Deputy Clerk

DEPARTMENT OF BUILDING INSPECTION
APPLICATION FOR ARCHITECTURAL BOARD

Job Address					
Lot	Block	Subdivision		Key No. HAV	
Owner Todd Eckhart				Phone	
Address 337 E. Capitol dr		City hartland		State wi	Zip 53029
Contractor Todd Eckhart	Phone 262-333-9449		FAX	E-Mail Address	
Address 337 E. capitol dr		City Hartland		State Wi	Zip 53029

The Architectural Board meets on the THIRD MONDAY of the Month at 6:30 p.m. in the Board Room of the Hartland Municipal Building located at 210 Cottonwood Avenue in the Village of Hartland.

The DEADLINE for filing is TEN WORKING DAYS PRIOR TO THE MEETING DATE at 4:30 p.m. All of the following information must be received prior to the deadline in order to be placed on the agenda.

All applications for consideration by the Architectural Board are subject to the policies described in this document.

One & Two Family

- [x] One (1) bound set of construction plans, 1 set of 11 x 17 plans, application material and one (1) electronic copy of all submittals. Plans must be stamped "approved by the developer" if required.
- [ ] These plans may be reused to apply for the building permit. Building elevations are all that is necessary to obtain Architectural Board approval. Although it is recommended that complete construction plans along with other building permit application material be submitted in order to begin the permit process as soon as possible after the meeting.
- [ ] Elevations must show all sides of the structure and state the building materials and colors. Additions must be shown with the existing building.
- [ ] One (1) site plan. The site plan must be detailed and dimensioned and may also be reused to apply for the building permit. One set of site plans must be stamped “approved by the developer” (if applicable).
- [ ] One (1) plat of survey is required for new dwellings at the time of building permit application.

NOTE: Approval by the Architectural Board is not permission to begin construction; a building permit must first be obtained.

Date Applied:_____ Date of Meeting: _____ Item No. _____

GENERAL NOTES:

ALL WORK SHALL BE PERFORMED WITH ALL APPLICABLE WISCONSIN UNIFORM DWELLING CODE (CH. COMM. 20-25) AS WELL AS LOCAL CODES, NATIONAL CODES AND ORDINANCES AND ALL AUTHORITIES HAVING JURISDICTION.

ALL PLUMBING, MECHANICAL AND ELECTRICAL WORK IS FOR REFERENCE ONLY AND IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR, SUBCONTRACTOR TO MAKE SURE PLUMBING, MECHANICAL & ELECTRICAL WORK IS INSTALLED TO CODE.

ALTHOUGH EVERY EFFORT HAS BEEN MADE IN PREPARING THESE PLANS AND CHECKING THEM FOR ACCURACY, IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR, SUBCONTRACTOR OR SUPPLIER TO CONTACT GENERAL CONTRACTOR OR OWNER IF THERE ARE ANY CONCERNS OR DISCREPANCIES DURING THE CONSTRUCTION OF THESE PLANS.

LOADS

ROOF DESIGN: LIVE LOAD = 30 PSF (SNOW LOAD)
DEAD LOAD = 20 PSF
REFERENCE UDC SPS 321.02 MAP
& REVISE IF NECESSARY

*L/240 LIVE LOAD DEFLECTION

ROOFS SHALL WITHSTAND A PRESSURE OF AT LEAST 20#/ SQ. FT. ACTING UPWARD NORMAL TO THE ROOF SURFACE.

FLOOR DESIGN: LIVE LOAD = 40 PSF
DEAD LOAD = 12 PSF
+ (6 1/2 PSF ON 1ST FLOOR IF GYPCRETE)
*L/480 LIVE LOAD DEFLECTION

* ANY TILE AREAS SHALL BE DESIGNED FOR AN ADDITIONAL 10 PSF DEAD LOAD
L/360 TOTAL LOAD & T/600 LIVE LOAD

DESIGN FLOOR JOISTS TO CARRY WEIGHT OF COUNTERTOPS, STONE WALLS, & OR TILE SHOWERS.

CONCRETE, SOIL & BACKFILL

SOIL TEST ARE RECOMMENDED BEFORE ANY CONSTRUCTION BEGINS.

2,000 PSF SOIL BEARING CAPACITY USING 90 PCF FOR THE EQUIVALENT FLUID DENSITY, REBAR STRENGTH 60,000 PSI AND CONCRETE STRENGTH 4,000 PSI. FOR HORIZONTAL BAR SPACING USING A UNIFORM DISTANCE THAT MATCHES VERTICAL SPACING IS BEST.

AREAS WHERE CONCRETE SLABS BEAR ON THE TOP OF THE WALL SHOULD HAVE A MINIMAL DEPTH OF 4" OF BEARING.

THE WALLS ARE TO BE CURED & BRACED PRIOR TO BACKFILLING FULL HEIGHT OF WALL. BRACING CAN BE ACCOMPLISHED WITH EITHER OF THE FOLLOWING:
1. POURED AND CURED BASEMENT SLAB SUPPORTING THE BASE OF THE WALL.
2. EITHER COMPLETED FLOOR SYSTEM FOR THE FIRST FLOOR (FLOOR JOISTS WITH DECKING OR PRECAST PLANK) OR TEMPORARY BRACING AT 10' INTERVALS SUPPORTING THE TOP OF THE WALL.

REFERENCE FOUNDATION PLAN FOR CONCRETE & REBAR SPECIFICATIONS.

ADD FURRING STRIP IN CONCRETE IF MORE THAN 8" IS EXPOSED & SIDING WILL BE APPLIED.

ADJUST ALL BRICKLEDGE AND FOOTINGS WITH GRADE IF IT VARIES FROM PLANS.

STEEL

STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING LATEST EDITION:

A. AISC: SPECIFICATION FOR DESIGN, FABRICATION AND ERECTION OF STEEL FOR BUILDINGS.

B. AISC: CODE OF STANDARD PRACTICE FOR STEEL BUILDING AND BRIDGES.

C. AWS: D1.1 STRUCTURAL WELDING CODE - STEEL.

D. AISC: STRUCTURAL STEEL DETAILING MANUAL.

PROVIDE 2 MIL. THICKNESS RED OR GREY OXIDE PRIMER ON ALL STEEL SURFACES UNLESS NOTED.

ALL STEEL EXPOSED TO WEATHER SHALL BE HOT DIPPED GALVANIZED PER ASTM A123 AND FASTENERS HOT DIPPED GALVANIZED PER ASTM A153.

ANCHOR RODS SHALL BE PRESENT WITH TEMPLATES.

CONNECTIONS MAY BE BOLTED OR WIELDED AT THE FABRICATION OPTION: BOLTED CONNECTIONS SHALL BE AS FOLLOWS:

MINIMAL BOLT DIAMETER OF 3/4" UNLESS NOTED

HIGH STRENGTH BOLTS IN SINGLE OR DOUBLE SHEAR UNLESS NOTED.

SIMPLE SHEAR CONNECTIONS SHALL BE CAPABLE OF END ROTATION PER AISC REQUIREMENTS FOR UNRESTRAINED MEMBERS.

THE ERECTION OF ANY STRUCTURAL STEEL MEMBERS SHALL NOT COMMENCE UNTIL ALL THE SUPPORTING CONCRETE/MASONRY ELEMENTS HAVE ATTAINED AT LEAST 75% OF THEIR INTENDED MINIMAL COMPRESSIVE STRENGTH.

GRADE

EROSION CONTROL:
WHERE LAND DISTURBING CONSTRUCTION ACTIVITY IS TO OCCUR EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE EMPLOYED, AS NECESSARY, TO PREVENT OR REDUCE THE POTENTIAL DEPOSITION OF SOIL OR SEDIMENT TO WATERS OF THE STATE AND ADJACENT PROPERTIES.

GRADE:
SLOPE GRADE AWAY FROM DWELLING.

IF ACTUAL GRADE VARIES FROM ARCHITECTURAL PLANS, THE BUYER IS RESPONSIBLE FOR ALL COST INCREASES FROM ADDITIONAL HEIGHT OF FOUNDATION WALLS, FRAMED WALLS, EXTERIOR FACADE MATERIAL, OR ANY ADDITIONAL BUILDING MATERIALS & LABOR.

MISC.

RAILINGS:
INTERIOR AND EXTERIOR RAILINGS ARE FOR REFERENCE ONLY. CONTACT BUILDER FOR RAILING SPECIFICATIONS and RAIL/SPINDLE DESIGN AND PLACEMENT.

HORIZONTAL RAILING TO BE LOCATED AT LEAST 36" ABOVE TOP OF SURFACE (DECKING OR FINISHED FLOOR). RAILING MUST WITHSTAND 200 LB LOAD IN ANY DIRECTION. RAILING TO BE INSTALLED TO PREVENT PASSAGE OF OBJECTS OVER 4" DIA.

WALLS

SQUASH BLOCKING & STUD COLUMNS BELOW POINT LOADS ARE TO CONTINUE AND TRANSFER LOADS DOWN TO FOUNDATION AND FOOTINGS.

ENGINEERED GLU-LAM COLUMNS, LVL STUDS COLUMNS OR METAL SUPPORT COLUMNS ARE TO BE INCLUDED UNDER ALL POINT LOADS AS REQUIRED BY CALCULATED LOADS. SOME OF THESE LOADS WILL BE SUPPLIED BY TRUSS SUPPLIER AND OR LUMBERYARD AFTER FINAL ENGINEERING IS COMPLETE ON THEIR END. IT IS THE RESPONSIBILITY OF THE GENERAL TO ACQUIRE THESE LOADS & UPDATE DESIGN 4 STYLE LLC SO FINALIZED COLUMN DESIGN CAN BE INCLUDED ON PLANS.

ANY WALL OVER 10'-1 1/8" ARE TO BE L&L STUDS OR ENGINEERED TALL WALL. EXCEPT GARAGE WALLS UP TO 12'-0" BUT VARIED WITH LOADING.

UNLESS OTHERWISE NOTED ALL MEMBERS BEARING ON WOOD MUST BE 1 1/2" MIN.

UNLESS OTHERWISE NOTED ALL MEMBERS BEARING ON CONC. OR MASONRY MUST BE 3" MIN.

ALL FRAMING FOR STUD WALLS AND PLATES IS SPF #2 UNLESS NOTED.
ALL SPACING ON EXTERIOR WALLS IS 16" O.C. UNLESS NOTED.
ALL SPACING ON INTERIOR WALLS IS 16" O.C. UNLESS NOTED.
STUDS SHOULD NOT BE NOTCHED MORE THAN 1/3 OF DEPTH.

WOOD FRAMED WALLS MUST COMPLY WITH WI DEPT OF COMMERCE, CHAPTER 21 COMM TABLE 21.25-A

DIMENSIONS MEASURE TO EXTERIOR OF SHEATHING ON EXTERIOR SIDE OF WALLS AND INTERIOR SIDE OF EXTERIOR STUD ON INTERIOR SIDE. ALL INTERIOR STUDS MEASURE TO THE ROUGH STUD

FRAMER TO INCLUDE BACKERS FOR CROWN MOLDING, WALL PANELING, DECORATIVE BEAMS/TRUSSES AND VERTICAL SIDING IF APPLICABLE.

FIRE BLOCKING:
INCLUDE FIRE BLOCKING @ FLOOR LEVELS, CONNECTIONS BETWEEN CONCEALED VERTICAL & HORIZONTAL SPACES. AT TOP & BOTTOM OF STAIRWAY STRINGERS

HEADERS

REFERENCE FLOOR PLANS FOR HEADER HEIGHTS

ALL HEADER ON EXTERIOR WALLS OR LOAD BEARING WALLS ARE NOTED ON PLAN. ALL HEADERS ARE DROPPED UNLESS NOTED OTHERWISE.

DOUBLE SHOULDER STUDS FOR HEADERS OVER 6' WIDE IN BEARING WALLS.

DOUBLE SHOULDER STUD FOR HEADERS OVER 6' WIDE.

ALL INTERIOR OPENINGS THAT HAVE DROPPED HEADERS ARE TO MATCH HEIGHT OF INTERIOR DOORS. ALL OPENINGS TO HAVE DRYWALL FINISH UNLESS NOTED TO BE CASED.

BUILDER MUST FOLLOW ALL INSTALLATION INSTRUCTIONS PROVIDED BY I-JOIST, LVL, FLOOR TRUSS, TALL WALL OR ROOF TRUSS MFG. REFER TO PRODUCT INSTALLATION GUIDE FOR ALL CONNECTION DETAILS.

ALL HOLES IN HANGERS, ANGLES, BRACKETS, CLIPS, AND TIE DOWNS MUST BE FILLED WITH THE APPROPRIATE FASTENERS PER THE MANUFACTURERS SPECS.

DECAY-RESISTANT MATERIAL

IF THIS PROJECT IS BEING BUILT IN AN AREA WHERE INSECTS SUCH AS TERMITES, BEETLES, OR CARPENTER ANTS ARE KNOWN TO EXIST, BUYER IS RESPONSIBLE TO DETERMINE IF ANY PROTECTIVE MEASURES ARE NEEDED AGAINST SUCH INSECTS.

NO RESPONSIBILITY WILL BE ASSUMED BY DESIGN 4 STYLE LLC FOR VARYING OR UNUSUAL SOIL CONDITIONS AFFECTING FOUNDATION DESIGN. OWNER OR BUILDER TO VERIFY SOIL BEARING CAPACITY AND GRADES AND SHALL INSTALL FOUNDATION IN COMPLIANCE WITH ALL GOVERNING CODES AND ORDINANCES.

ALL UNTREATED WOOD PRODUCTS MUST MAINTAIN A 8" MINIMUM ABOVE GRADE. EXCEPT SIDING MUST MAINTAIN A 6" MINIMUM ABOVE GRADE.

ALL P.T. MATERIAL SPECIFIED ON PLAN IS:
4X4 SYP #2 & BTR .4
6X6 SYP #2 & BTR .6

2X10 SYP #1 & BTR
2X12 SYP #1 & BTR

DECAY RESISTANT WOOD MUST BE USED ON ANY JOISTS LESS THAN 18" FROM EARTH, GIRDERS LESS THAN 12" FROM EARTH, SILL LESS THAN 8" FROM EARTH.

JOISTS SHALL NOT BE LESS THAN 18" FROM EARTH UNLESS PREVENTIVE DECAY MEASURES ARE TAKEN.

GIRDERS SHALL NOT BE LESS THAN 12" FROM EARTH UNLESS PRESERVATIVE DECAY MEASURES ARE TAKEN.

IF GRADE DROPS BELOW 8" OF THE TOP OF FOUNDATION, THE MASON IS TO PROVIDE FURRING STRIPS IN THE EXTERIOR SIDE OF THE FOUNDATION WALL FOR SIDING ATTACHMENT.

ROOF

ROOF FRAMING MEMBERS & TRUSS MATERIAL IS MADE FROM ENGINEERED GRADED LUMBER.

ROOF FRAMING MEMBERS SPANNING MORE THAN 6' MEASURED FROM THE OUTERMOST EDGE OF THE ROOF SHALL BE PERMANENTLY FASTENED TO THE TOP PLATE OF LOAD BEARING WALLS USING ENGENDERED CLIPS, STRAPS OR HANGERS.

ALL ROOF TRUSSES ARE TO BEAR ON EXTERIOR WALLS. (UNLESS NOTED)

TRUSS MEMBERS SHALL NOT BE CUT, BORED OR NOTCHED ONLY IF NOTCHING OR BORING OF ENGENDERED WOOD PRODUCTS SHALL BE DONE IN ACCORDANCE WITH THE MANUFACTURERs INSTRUCTIONS PROVIDED THOSE INSTRUCTIONS WERE DEVELOPED THROUGH STRUCTURAL ANALYSIS OR PRODUCT TESTING.

BUILDER TO FOLLOW TRUSS MANUFACTURERs TRUSS LAYOUT AND SPECIFICATIONS.

IF HEEL HEIGHT VARIES FROM THE ARCHITECTURAL PLANS, IT IS THE RESPONSIBILITY OF THE TRUSS MFG TO CONTACT DESIGN 4 STYLE LLC SO ANY ACCOMMODATIONS CAN BE MADE IN WINDOW SIZES OR ANY OTHER BUILDING MATERIALS & LABOR AFFECTED BY THIS CHANGE.

COVER ALL ROOF SHEATHING AS SOON AS POSSIBLE WITH ROOFING FELT OR SINGLE UNDERLAYMENT FOR PROTECTION AGAINST EXCESSIVE MOISTURE PRIOR TO ROOFING APPLICATION.

ANY GABLE ROOF OVERHANG OF MORE THAN 12" SHALL BE PROVIDED WITH LADDERS WHICH EXTEND INTO THE STRUCTURE MINIMAL DOUBLE THE DISTANCE OF THE OVERHANG. THE LADDERS SHALL BE FASTENED AT THE WALL. THE INTERIOR END OF EACH LADDER SHALL BE ATTACHED TO A RAFTER OR TRUSS WITH A HANGER. THE TOP CHORD OF THE TRUSS IS DROPPED FOR THIS EXTENSION BACK INTO ROOF.

MASONRY

COLD WEATHER WORK: WHEN AMBIENT AIR TEMPERATURE IS BELOW 40 DEG., F. THE COLD WEATHER CONSTRUCTION PROCEDURES UNDER ACI 530.1 SHALL BE FOLLOWED.

CORBELS ARE NOT TO EXCEED 1" AND SHALL BE CONSTRUCTED IN ACCORDANCE WITH ACI .30

TYPES OF MORTAR FOR VARIOUS KINDS OF MASONRY MUST FOLLOW WI DEPT OF COMMERCE, CHAPTER 21 COMM, TABLE 21.26-A

MASONRY OR BRICK VENEER SHALL BE ABOVE ABOVE FINAL EXTERIOR GRADE UNLESS THERE IS THROUGH-WALL FLASHING AT GRADE OR WITHIN 2 COURSES ABOVE GRADE.

VENEERS SHALL BE ANCHORED OR ADHERED IN ACCORDANCE WITH ACI 530 & ACI530.1

ANY WOOD FRAMED WALL WHERE BRICK IS LOCATED, A MIN. 1" AIRSPACE SHALL BE PROVIDED BETWEEN BRICK AND THE WALL SHEATHING UNLESS A MANUFACTURER OFFSET MATERIAL IS USED. ALSO, INSTALL 1 LAYER TAR PAPER AND 1 LAYER TYVEK OVER THE SHEATHING. (TYP.)

VENEER FLASHING SHALL CONSIST OF MATERIALS THAT ARE DURABLE AND PERMANENTLY UV-RESISTANT. FLASHING SHALL BE INSTALLED AT THE BOTTOM OF VENEER AND SHALL EXTEND OVER THE TOP OF THE FOUNDATION AND UP AT LEAST 8" AND BE EMBEDDED IN THE BACKING COURSE.

WEEPHOLES SHALL BE 3/8" MIN. DIA., LOCATED EVERY 2' AND NOT BE PLACED BELOW FINAL GRADE.

1 CORRUGATED TIE EMBEDDED 2" IN JOINT REQUIRED ON EVERY 2 SQ. FT. OF VENEER

REPRESENTS MASONRY VENEER PRODUCT (UNLESS OTHERWISE SPECIFIED)

FIREPLACE, WOOD STOVE & GENERAL CHASE

ALL REFERENCE TO WOOD STOVE, FIREPLACE FLUE, HEARTH, CHIMNEY AND FOOTINGS FOR FIREPLACE ARE FOR SUGGESTED LOCATIONS ONLY. THE CONTRACTOR MUST MAKE SURE THAT WOOD STOVE, FIREPLACE STRUCTURE MEET OR EXCEEDS ALL APPLICABLE BUILDING CODES. NO BUILDING STRUCTURE SHALL REST ON OR BE WITHIN 2" OF WOOD STOVE, FIREPLACE STRUCTURES AND SUCH SPACE MUST BE FIRE STRIPPED WITH NON-COMBUSTIBLE MATERIALS. ALL STOVES AND PIPES MUST BE INSTALLED IN COMPLIANCE WITH MANUFACTURES SPECIFICATIONS.

DUE TO ANY DEVIATION OF THE PLANS, ALL CHIMNEY CHASES SHALL BE FRAMED 2' ABOVE ANY ROOF OR WALL WITHIN 10' OF THE TOP OF THE CHASE OR 3' ABOVE ADJACENT RIDGE LINE.

ANYTIME FIREPLACE IS WOOD BURNING, THE ENTIRE CHIMNEY CHASE MUST BE INSULATED TO PEAK TO PREVENT CONDENSATION AND BACKDRAFTS.

BUILDER SHALL BE RESPONSIBLE FOR PROPER INSTALLATION OF PROPER METAL FLASHING MATERIALS IN ALL LOCATIONS THAT REQUIRE THIS MATERIAL.

BUILDER TO VENT DRYER AND RANGE EXHAUST TO EXTERIOR.

ABBREVIATIONS

A.B.	ANCHOR BOLT	H.D.	HIGH DENSITY
AFF	ABOVE FINISH FLOOR	INSUL.	INSULATION
APPROX.	APPROXIMATELY	L.B.W.	LOAD BEARING WALL
BTR	BETTER	MFG	MANUFACTURER
CAB	CABINET	MIN.	MINIMAL
CANT'ED	CANTILEVER	O.C.	ON CENTER
CATH	CATHEDRAL	O.H.	OVERHEAD
CM	CEILING MOUNT	P.T.	PRESSURE TREATED
CV	CENTRAL VAC OUTLET	REQ'D	REQUIRED
CONC.	CONCRETE	R.O.	ROUGH OPENING
CONV.	CONVENTIONAL	R.S.	ROUGH SAWN
DB	DOORBELL	SH & PL	SHELF AND POLE
DIA.	DIAMETER	SQ	SQUARE
DIM	DIMMER	T.B.	TOWEL BAR
DF	DOUGLAS FIR	TEMP	TEMPERED GLASS
DRWRS	DRAWERS	T.P.	TOILET PAPER HOLDER
DW	DISHWASHER	T.R.	TOWEL RING
EXT.	EXTERIOR	TYP.	TYPICAL
F.G.	FIBERGLASS	V	VOLT
FND	FOUNDATION	VAN.	VANITY
FTG	FOOTING	V.B.	VAPOR BARRIER
G.B.	GRAB BAR	WD	WOOD
G.D.	GARBAGE DISPOSAL	WM	WALL MOUNT

BRACED WALL ENGINEERING

IF A TALL WALL IS CALLED OUT ON THE PLANS. IT IS THE RESPONSIBILITY OF THE TALL WALL SUPPLIER TO DESIGN THAT SECTION OF TALL WALL SECTION FOR BRACED WALL ENGINEERING.

24 CS WSP — NUMBER REPRESENTS: BRACING LENGTH

CS WSP REPRESENTS:
CONTINUOUS SHEATHED WOOD STRUCTURAL PANEL

MIN. BRACED MATERIAL THICKNESS OR SIZE:
3/8" FOR MAX. 16" O.C. STUD SPACING
7/16" FOR MAX. 24" O.C. STUD SPACING.

MIN. FASTENERS:
6d COMMON NAIL OR 8d BOX NAIL (2 1/2" LONG X 0.113" DIA.)
OR 7/16" CROWN 16 GAGE STAPLES, 1 1/4" LONG

MAX. SPACING: 6" EDGES, 12" FIELD (NAILS) 3" EDGES, 6" FIELD (STAPLES)

24 FF — NUMBER REPRESENTS: BRACING LENGTH

FP REPRESENTS:
PORTAL FRAME

MIN. BRACED MATERIAL THICKNESS OR SIZE:
7/16"

MIN. FASTENERS:
FASTEN SHEATHING TO HEADER WITH 8d COMMON OR GALVANIZED BOX NAILS IN 3" GRID PATTERN

HEADER TO JACK-STUD STRAP ON BOTH SIDES OF OPENING OPPOSITE SIDE OF SHEATHING: STRAP CAPACITY SHALL EQUAL 1,000 LBS OR 4,000 LBS. WHEN ONLY WALL IS PRESENT.

MIN. DBL STUD FRAMING COVERED WITH MIN. 7/16" WOOD STRUCTURAL PANEL SHEATHING WITH 8d COMMON OR GALVANIZED BOX NAILS AT 3" O.C. IN ALL FRAMING (STUDS, BLOCKING AND SILLS) TYP.

MAX. SPACING: 6" EDGES, 12" FIELD (NAILS) 3" EDGES, 6" FIELD (STAPLES)

96 GB — NUMBER REPRESENTS: BRACING LENGTH

GB REPRESENTS:
GYPSUM BOARD (INSTALLED BOTH SIDES OF WALL)

MIN. BRACED MATERIAL THICKNESS OR SIZE:
1/2" FOR MAXIMUM 24" O.C. STUD SPACING

MIN. FASTENERS:
5d COOLER NAILS, OR #6 SCREWS

WCPS0003725

SURVEYING ASSOCIATES, INC.

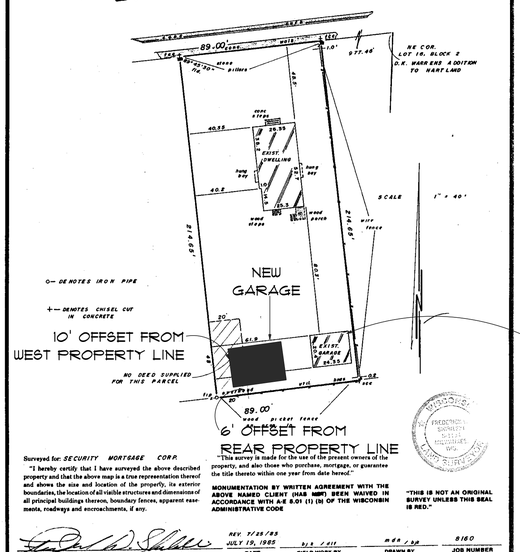
2819 SOUTH 43rd STREET
MILWAUKEE, WISCONSIN 53219

FREDERICK W. SHIBILSKI RLS
(414) 321-5851

PLAT OF SURVEY
-of-

LOT 4 also 23 feet wide off the east side of LOT 3 running north and south, all being in BLOCK 2 in D. K. 'WARREN'S ADDITION TO THE VILLAGE OF HARTLAND; also that certain piece or parcel of land, situate, lying and being in the northerly part of the northwest quarter of the northwest quarter of Section 2, town 7 north, range 18 east, in the Town of Delafield, Waukesha County, Wisconsin; Commencing at the southeast corner of said Lot 4, in Block 2, D. K. Warren's Addition to the Village of Hartland, and running south 48 feet; thence west 69 feet; thence north 48 feet; thence east 69 feet to the place of beginning.

Survey location: 337 E. Capitol Drive
Buyer: Martin & Susan Lescia



REMOVE THIS GARAGE

Surveyed for: SECURITY MORTGAGE CORP.

"I hereby certify that I have surveyed the above described property and that the above map is a true representation thereof and shows the size and location of the property, its exterior boundaries, the location of all visible structures and dimensions of all principal buildings thereon, boundary fences, apparent easements, roadways and encroachments, if any.

"This survey is made for the use of the present owners of the property, and also those who purchase, mortgage, or guarantee the title thereto within one year from date hereof."

MONUMENTATION BY WRITTEN AGREEMENT WITH THE ABOVE NAMED CLIENT (HAS NOT) BEEN WAIVED IN ACCORDANCE WITH A-E 8.01 (1) (b) OF THE WISCONSIN ADMINISTRATIVE CODE

"THIS IS NOT AN ORIGINAL SURVEY UNLESS THIS SEAL IS RED."

WISCONSIN REGISTERED LAND SURVEYOR

REV. 7/28/25			
JULY 19, 1985	B/S 1-011	M.R.F./S.B.	8160
DATE	FIELD WORK BY	DRAWN BY	JOB NUMBER

FINAL PLANS

2025 COPYRIGHT
DESIGN 4 STYLE, LLC

Design 4 Style
ARCHITECTURE
P: 262.483.6845
E: LISA@DESIGN4STYLE.COM

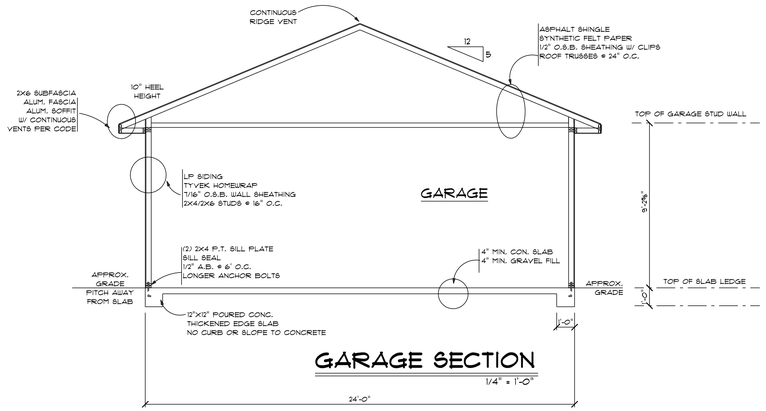
NOTICE TO CONTRACTORS & SUPPLIERS

ALTHOUGH EVERY EFFORT HAS BEEN MADE IN PREPARING THESE PLANS AND CHECKING THEM FOR ACCURACY, IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR, SUBCONTRACTOR OR SUPPLIER TO CONTACT GENERAL CONTRACTOR OR OWNER IF THERE ARE ANY CONCERNS OR DISCREPANCIES DURING THE CONSTRUCTION OF THESE PLANS.

FINAL PLAN
3.13.25

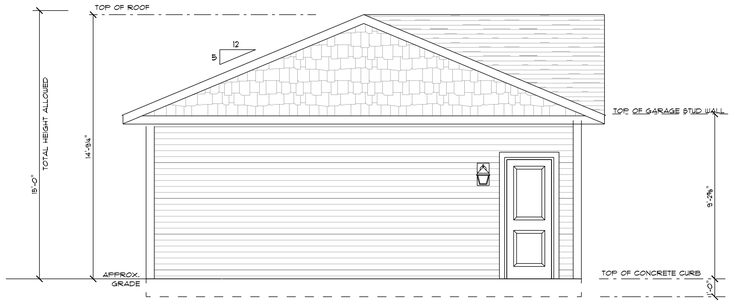
FUTURE RESIDENCE OF: (BUYER)
TODD ECKHART

ADDRESS:
337 E. CAPITAL DRIVE
HARTLAND, WI 53029



GARAGE SECTION

1/4" = 1'-0"



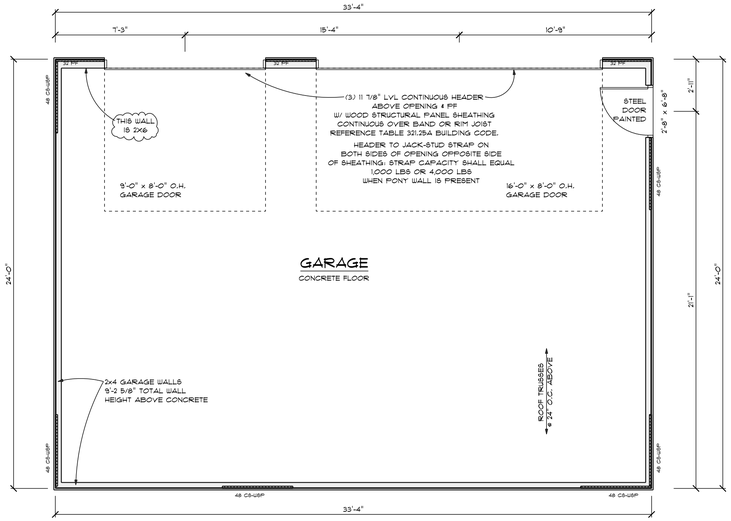
LEFT ELEVATION

1/4" = 1'-0"



FRONT ELEVATION

1/4" = 1'-0"



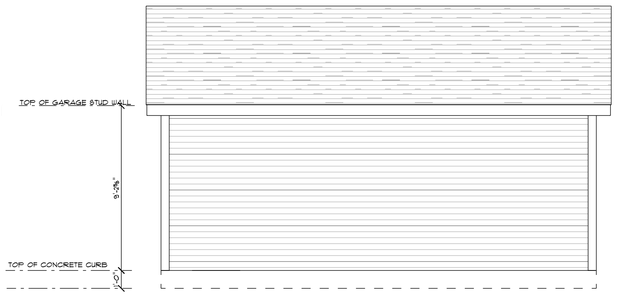
FLOOR PLAN

1/4" = 1'-0"



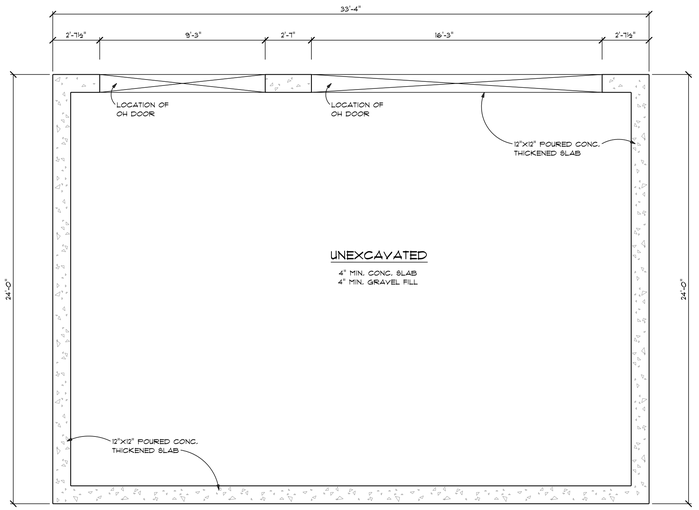
RIGHT ELEVATION

1/4" = 1'-0"



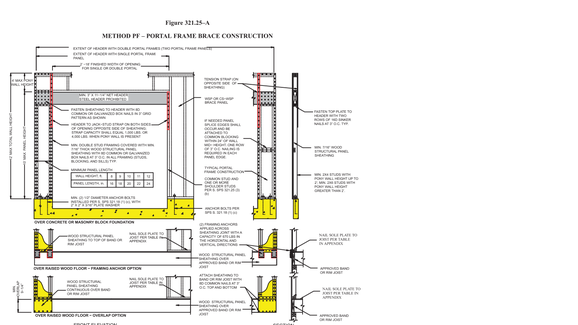
REAR ELEVATION

1/4" = 1'-0"



FOUNDATION PLAN

1/4" = 1'-0"



Published under s. 35.93, Wis. Stats., by the Legislative Reference Bureau.

45 SAFETY AND PROFESSIONAL SERVICES **SPS 321.25**

Figure 321.25–A

METHOD PF – PORTAL FRAME BRACE CONSTRUCTION

Note: Steel headers are permitted if designed by structural analysis.

Note: As shown in the above cross–section, 1/2–inch gypsum wallboard is not required on the interior side of the wall.

(c) *Bracing amount.* Bracing methods and materials complying with Table 321.25–G shall be applied to walls in accordance with all of the following requirements:

1. For the purpose of determining bracing amounts, the outermost extents of the building plan at each floor level shall be circumscribed with a rectangle to define the overall length of each building side as shown in Figure 321.25–B.

2. In no case may the amount of bracing be less than two braced wall panels on walls parallel to each rectangle side for each floor level of the building.

3. Where used, the number of intermittent brace panels applied to walls parallel to each rectangle side shall comply with Table 321.25–I.

4. Where used, the total length of continuous sheathed brace panels applied to walls parallel to each building side shall comply with Table 321.25–J.

5. The location of brace panels applied to walls parallel to each building side shall comply with Figure 321.25–C.

6. Balloon–frame walls may be no longer than 21 feet and shall have a maximum height of two floors unless constructed in accordance with an approved design. Wall framing shall be continuous from the lowest floor to the wall top plate at the roof. All edges of sheathing shall be supported on and fastened to blocking or framing. Braced wall panels may not be required on the balloon–frame wall portion provided the bracing amount and brace spacing requirement are satisfied for the building side. Where brace panels are located on the balloon–frame wall portion, they shall have a height–to–width ratio of not more than 2:1.

7. For a gable end wall, if the brace–panel height does not exceed 12 feet at the highest portion and if the 12½–foot and 21–foot spacing requirements in Figure 321.25–C are met, the wall is adequately braced. Where a brace panel exceeds 12 feet in height, it shall have a height–to–width ratio of not more than 2.5:1, and comply with Figure 21.25–C.

FINAL PLANS

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DESIGN 4 STYLE, LLC

Design 4 Style
ARCHITECTURE
P: 262.483.6845
E: LISA@DESIGN4STYLE.COM

NOTICE TO CONTRACTORS & SUPPLIERS

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FINAL PLAN 3.13.25

FUTURE RESIDENCE OF: (BUYER)
TODD ECKHART

ADDRESS:
331 E. CAPITAL DRIVE
HARTLAND, WI 53029

WILLIAM & CORTNEY SULLIVAN
351 E CAPITOL DR
HARTLAND, WI 53029

TODD A ECKHART
337 E CAPITOL DR
HARTLAND, WI 53029-2107

ALAN & MARCI STOFFER
338 E CAPITOL DR
HARTLAND, WI 53029-2102

ANTHONY KARABON & PATRICIA ZADRA
414 PARK CT
HARTLAND, WI 53029-3000

CARL & CHRISTINE A CLEMENTI
407 E CAPITOL DR
HARTLAND, WI 53029-2201

CHARLES B & MARGARET M CYBRY LIVING TRUST
426 PARK CT
HARTLAND, WI 53029-3000

CHARLES & CONSTANCE O'CONNOR
331 E CAPITOL DR
HARTLAND, WI 53029-2107

CLEMENTI & DERKS L.L.C.
409 E CAPITOL DR
HARTLAND, WI 53029-2201

DANIELLE VICKERS SAVICK
128 MAPLE AVE
HARTLAND, WI 53029-2111

DAVID & KARIE MANTEY
422 PARK CT
HARTLAND, WI 53029-3000

DEBRA L MORRIS
146 MAPLE AVE
HARTLAND, WI 53029

EDWARD LENTZ JR & CAROLYN LENTZ
327 LAWN ST
HARTLAND, WI 53029

JAN E DASSOW
116 MAPLE AVE
HARTLAND, WI 53029-2111

JEAN BERENDES
345 E CAPITOL DR
HARTLAND, WI 53029

JEANINE & THOMAS WHELAN
416 E CAPITOL DR
HARTLAND, WI 53029-2202

JENNY & CHRISTOPHER ERATO
415 E CAPITOL DR
HARTLAND, WI 53029-2201

JILL SWEARINGEN & CHAD ALBRECHT
400 E CAPITOL DR
HARTLAND, WI 53029-2202

JOAN DECKER-NOLD
120 MAPLE AVE
HARTLAND, WI 53029

JULIA MARY QUINETTE
8975 223RD CT
SALEM, WI 53168-8832

KEVIN & LINDA LINDNER
120 NIXON AVE
HARTLAND, WI 53029

LEE & TINA BROMBERGER
140 MAPLE AVE
HARTLAND, WI 53029

MARK & KELLY FINE
418 PARK CT
HARTLAND, WI 53029-3000

RESTATED HELMUT & ROBERTA KEIDL
1009 ADMIRALTY PARADE
NAPLES, FL 34102-7856

SCOTT & SUSAN CURLER
134 MAPLE AVE
HARTLAND, WI 53029-2111

RUDHRA LLC
4730 ELMBROOK WAY
BROOKFIELD, WI 53005-1345

STEEPLE VIEW APARTMENTS LLC
C/O ACQUEST PROPERTY GROUP LLC
2395 W WASHINGTON ST SUITE 201
WEST BEND, WI 53095-2147

STEPHAN J HOPPE, JANICE M HOPPE, REVOCABLE TRUST
430 PARK CT
HARTLAND, WI 53029-3000

TERRY L STELPFLUG AND AMY M STELPFLUG
W289N4795 WILD ROSE CT
HARTLAND, WI 53029

THOMAS C COONS
2005 TREVILIAN WAY
LOUISVILLE, KY 40205-2141

THOMAS D REIMER
324 E CAPITOL DR
HARTLAND, WI 53029-2102

APPLICATION FOR PLAN COMMISSION

REVIEW FEE DUE AT TIME OF APPLICATION - $300

INITIAL CONCEPTUAL REVIEW - (NO FEE)

Project Description and Narrative: (attach additional sheet if necessary) Proposed 2-story addition on the west side of the existing Lake Country Lutheran High School gym. First floor will have the Athletic Performance & Training Center while the second floor will have the new education spaces. Each floor will be approximately: 13,832 sq ft. Total Building Square Feet: 27,664			
Proposed Use Athletic Performance & Training Center / Education			
Project Location 401 Campus Drive			
Project Name Lake Country Lutheran High School			
Owner	Phone		
Address	City	State	Zip
Engineer/Architect Groth Design Group	Phone	FAX	
Address	City	State	Zip
Contact Person Jackie Wolke	Phone 262-377-8001	FAX	E-mail jwolke@gmail.com

The Plan Commission meets on the third Monday of the Month at 6:30 PM in the Village Board Room of the Hartland Municipal Building located at 210 Cottonwood Avenue, Hartland.

The deadline for filing is a minimum of fifteen (15) working days before the meeting.

All of the requested information must be received prior to the deadline in order to be placed on the agenda. Village Plan Review Staff has been directed to delay placement on the Plan Commission Agenda based on incomplete submittals.

One (1) set of bound application materials and one (1) electronic copy of all materials must be submitted.

Applications that include site plans must depict the following existing and proposed information:

- Complete dimensions (lot, building, setbacks, parking, drives, etc.)
- Scale and north arrow
- All structures (include building elevations and height)
- Drainage and grades (include design calculations for drainage)
- Storm Water Management Plan
- Utilities and easements (sewer, water, storm etc.)
- Calculation of lot coverage
- Parking stalls (stalls to be minimum 180 s.f., driving lanes minimum 24 ft. wide and 30 ft. maximum at street right-of-way, asphalt to be minimum 3 ft. from lot lines)
- Grading and erosion control
- Landscaping, including a Tree Protection Plan
- Exterior lighting details
- Exterior HVAC equipment location
- Dumpster location (screening required)
- Street right-of-way
- Miscellaneous, 100 year floodplain, wetland boundary, environmental corridor

Additional information may be requested by the Plan Commission or Staff.

All applications for consideration by the Plan Commission are subject to the policies described in this document.

Hartland Plan Commission
Application Review Policies

All applicants and applications are subject to the following policies in order to be considered by the Plan Commission.

1. The deadline for filing any application is a minimum of fifteen (15) working days before the meeting.
2. All applicants are encouraged to communicate with or meet with either the Building and Zoning Official or the Village Administrator prior to submission of an application.
3. All requested or required information, including the application and appropriate fees, must be received prior to the deadline in order to be placed on the agenda. Village Staff has been directed to delay placement on the Plan Commission Agenda based on incomplete submittals.
4. One (1) sets of bound site plans or application materials and one (1) electronic copy (PDF) of all application materials must be submitted by the deadline.
5. Applications that include site plans must depict the following existing and proposed information plus other information as appropriate or as requested:
    a. Complete dimensions (lot, building, setbacks, parking, drives, etc.)
    b. Scale and north arrow
    c. All structures (include building elevations and height)
    d. Drainage and grades (include design calculations for drainage)
    e. Storm Water Management Plan
    f. Utilities and easements (sewer, water, storm etc.)
    g. Calculation of lot coverage
    h. Parking stalls (stalls to be minimum 180 s.f., driving lanes minimum 24 ft. wide and 30 ft. maximum at street right-of-way, asphalt to be minimum 3 ft. from lot lines)
    i. Grading and erosion control
    j. Landscaping, including a Tree Protection Plan
    k. Exterior lighting details
    l. Exterior HVAC equipment location
    m. Dumpster location (screening required)
    n. Street right-of-way
    o. Miscellaneous items including, but not limited to, 100 year floodplain, wetland boundary, environmental corridor
6. Additional information may be requested by the Plan Commission or Staff.
7. The Applicant must complete and submit the required Professional Services Reimbursement Form along with any required deposit at the time of application.
8. **The Applicant or a representative of Applicant able to make representations on behalf of the Applicant shall attend the meeting at which the matter will be discussed. Failure to have representation will result in tabling of the request to the next meeting.**

RE: Lake Country Lutheran - Plan Commission & ARB Submittal

RA Ryan Amtmann <ramtmann@ruekert-mielke.com>
To Sandee Policello; Scott Hussinger; Ryan Bailey; Tom Jenson

Reply | Reply All | Forward

Mon 4/14/2025 5:18 PM

Follow up. Start by Wednesday, April 16, 2025. Due by Wednesday, April 16, 2025.
You replied to this message on 4/16/2025 10:23 AM.
This message is part of a tracked conversation. Click here to find all related messages or to open the original flagged message.

I had just a few comments regarding the LCL expansion project. Does anyone have anything to add?
Ryan

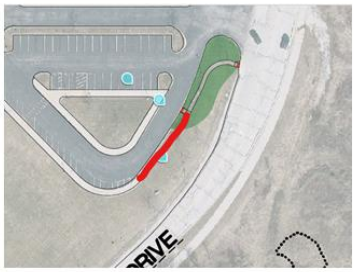
Village Engineer Comments

Stormwater Management Plan

1. Ryan A requested the LCL engineering team to update its stormwater management plan letter report dated March 24, 2025, to include TSS and Phosphorus modeling results for the entire LCL site. The LCL engineering team will be making these updates.

Site Plan

1. Is there a reason not to extend the sidewalk as shown in red to eliminate 2 crossings of traffic lanes for pedestrians?
2. Do the number of ADA stalls comply with that which is necessary for the expanded use?



Sound Stormwater Design LLC

March 24, 2025

Mr. Ryan Bailey
Village Manager
Village of Hartland
210 Cottonwood Avenue
Hartland, Wisconsin 53029

SUBJECT: Lake Country Lutheran High School
Stormwater Summary Letter

Dear Ryan:

Lake Country Lutheran High School is planning to construct a building addition and two parking lot expansions at its existing campus, located at 401 Campus Drive in the Village of Hartland, Waukesha County, Wisconsin. The purpose of this letter is to summarize the stormwater-related impacts of these additions and to demonstrate that the proposed development will remain in compliance with the Village of Hartland and the Wisconsin Department of Natural Resources (WDNR) stormwater management requirements.

Several Stormwater Management Reports (SWMP) have been prepared for the Lake Country Lutheran High School campus, beginning with the initial development plan in February 2005 and most recently updated in a letter dated May 22, 2020. These previous reports accounted for future building and parking lot expansions by incorporating impervious placeholders surrounding the original school development. Please refer to Proposed Hydrology Exhibit H-2 for further details.

The proposed additions outlined in this stormwater summary letter will affect Area G, which is the primary subarea tributary to Pond 1. According to the February 2005 report, Area G was designed with an anticipated impervious buildout of 14.63 acres. Current conditions, based on survey data and aerial photography, indicate that the total impervious area (including the water surface of Pond 1) amounts to about 10.42 acres. The planned building and parking lot additions will include approximately 1.75 acres of additional impervious surface area, bringing the total impervious area for Area G to 12.17 acres.

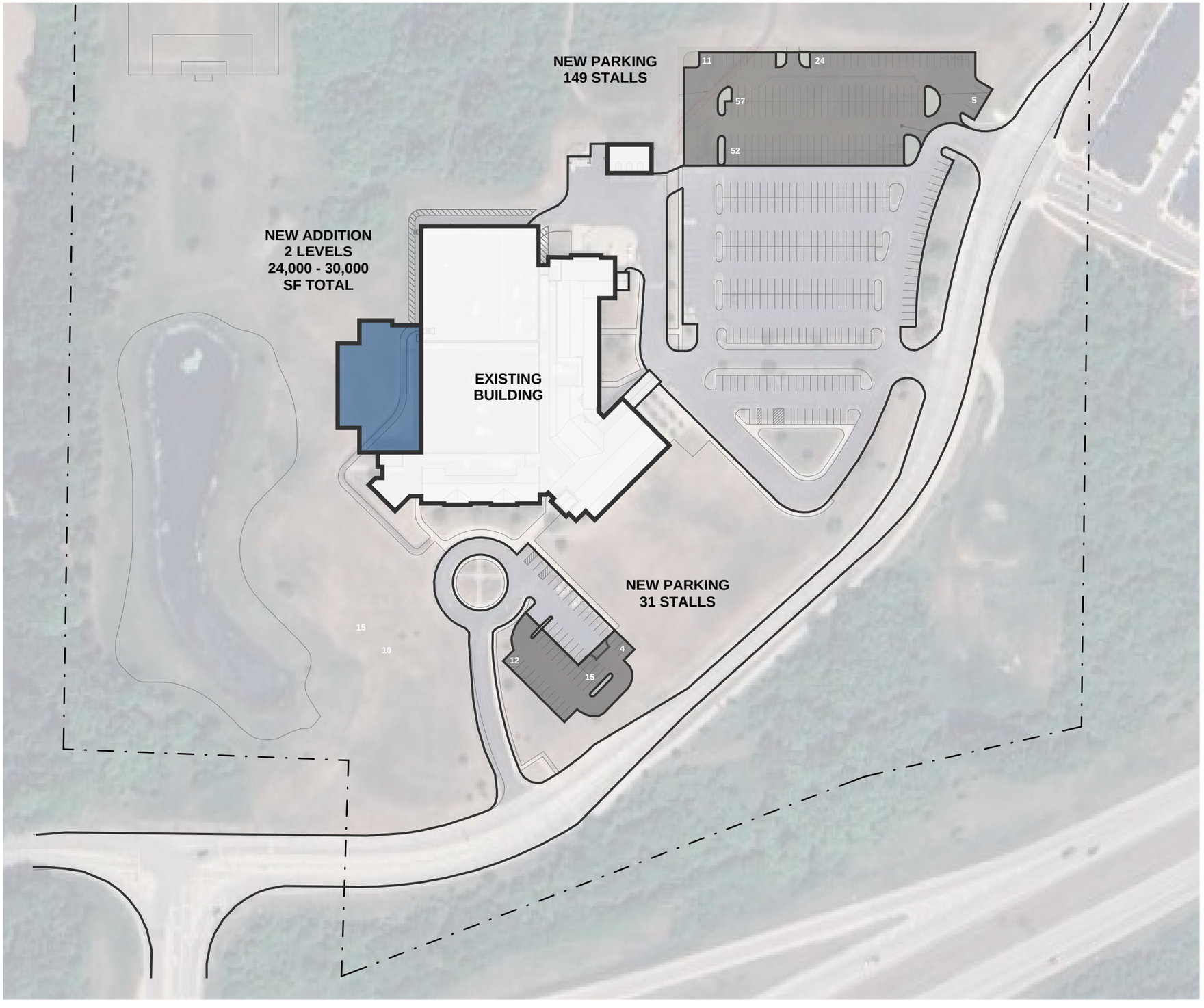
Since the added impervious area remains within the originally designed capacity of Pond 1, no additional stormwater management features are required. The Lake Country Lutheran High School campus will continue to maintain compliance with the stormwater management requirements set forth by the Village of Hartland and the WDNR. Should you have any questions, please feel free to contact me at (414) 687-1938.

Sincerely,

Jayme Sisel, P.E.

2025-002

2025 Proposed Site Improvements



SITE PLAN - AREA OF WORK
NTS

LAKE COUNTRY LUTHERAN HS ADDITION - Hartland, WI

Site Paving

02.07.2025

GROTH Design Group

2008 Proposed Hydrology Exhibit

J:\JSD Projects\04C1648F LCLHS\dwg\04C1648 Proposed Hydrology.dwg, Proposed Hydrology, 7/30/2008 3:30:39 PM, pmartens

AREA A
23.96 AC
CN=88
TC=23.6 MIN

AREA B
16.22 AC
CN=67
TC=48.6 MIN

AREA C
4.29 AC
CN=78
TC=42.8 MIN

AREA D
1.80 AC
CN=55
TC=42.4 MIN

AREA E
3.85 AC
CN=66
TC=25.8

AREA F
15.06 AC
CN=61
TC=37.7 MIN

AREA G
17.71 AC
CN=88
TC=23.6 MIN

AREA H
0.54 AC
CN=63
TC=4.6 MIN

AREA J
0.33 AC
CN=74
TC=3.7 MIN

AREA K
0.37 AC
CN=84
TC=12.2 MIN

WisDOT INTERSECTION
SEE WISDOT PLAN

POND 1
CROSS SECTION

B-1 B-2 B-3 B-4 B-5 B-6 B-7 B-8 B-9 B-10 B-11 B-12

WILLOW DRIVE
SAUKVILLE DRIVE
STH 16
STH 83

PROPOSED SUBAREA BOUNDARY
PROPOSED Tc FLOW PATH
EXISTING SOILS BOUNDARY

CALL DIGGERS HOTLINE
1-800-242-8511
TOLL FREE
MILW. AREA 259-1181

SCALE IN FEET
100' 0 100'

SOIL BORING CROSS SECTION OF POND
(APPROXIMATE BORING LOG FROM NEAREST BORING)

JSD Professional Services, Inc.
Engineers • Surveyors • Planners
• PLANNING & DEVELOPMENT
• SITE/CIVIL SITE ENGINEERING
• TRANSPORTATION ENGINEERING
• WATER RESOURCES
• LANDSCAPE ARCHITECTURE
• CONSTRUCTION SERVICES
• SURVEYING & MAPPING

MILWAUKEE REGIONAL OFFICE
N22 W22931 Nancys Court Suite 3
Waukesha, Wisconsin 53186
(262) 513-0666

MADISON REGIONAL OFFICE
161 Horizon Drive
Suite 101
Verona, Wisconsin 53593
(608) 848-5060

PREPARED FOR:

PROJECT
LAKE COUNTRY LUTHERAN HIGH SCHOOL
HARTLAND, WI

ITEM		DATE
Design:	JNP	06-19-08
Drawn:	JNP	06-19-08
Approved:	PSM	06-19-08
SUBMITTED FOR APPROVAL		07-28-08

SEAL/SIGNATURE

ALTHOUGH EVERY EFFORT HAS BEEN MADE IN PREPARING THESE PLANS AND CHECKING THEM FOR ACCURACY, THE CONTRACTOR AND SUBCONTRACTORS MUST CHECK ALL DETAIL AND DIMENSIONS OF THEIR TRADE AND BE RESPONSIBLE FOR THE SAME.

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SHEET TITLE
PROPOSED HYDROLOGY EXHIBIT

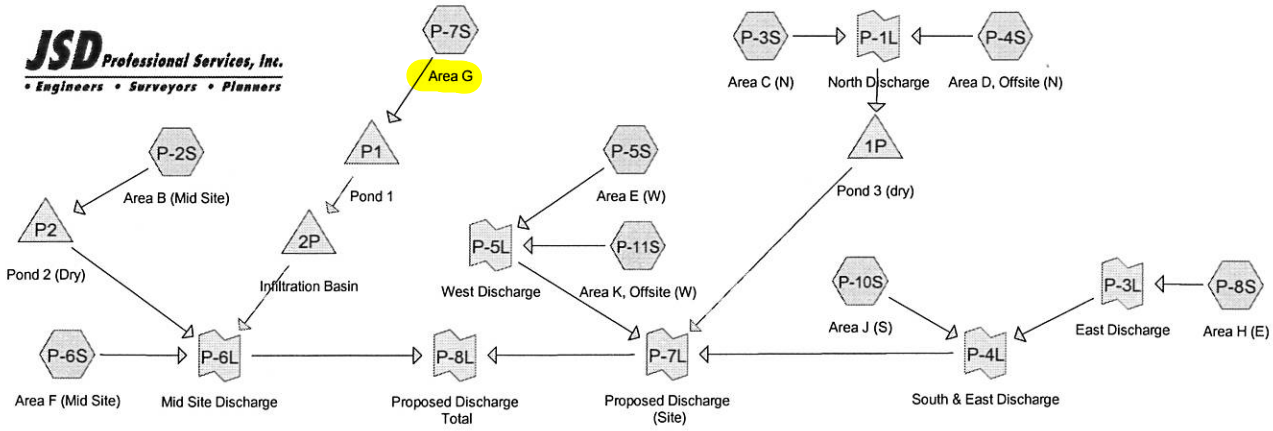
SHEET NUMBER
H-2

JSD PROJECT NUMBER
04C1648

SCALE
1"=100'

2008 Proposed Hydrologic Analysis

JSD Professional Services, Inc.
• Engineers • Surveyors • Planners



Subcat Reach Pond Link

Drainage Diagram for 04C1648 - Proposed (06-19-08)
Prepared by Jenkins Survey and Design, Printed 7/29/2008
HydroCAD® 8.50 s/n 002918 © 2007 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
1.920	55	Woods, Good, HSG B (P-4S,P-8S)
7.650	58	Woods/grass comb., Good, HSG B (P-6S)
18.910	61	>75% Grass cover, Good, HSG B (P-2S,P-3S,P-5S,P-6S,P-7S,P-8S)
4.340	72	Woods/grass comb., Good, HSG C (P-6S,P-8S)
15.620	74	>75% Grass cover, Good, HSG C (P-10S,P-11S,P-2S,P-5S,P-7S)
17.980	98	(P-11S,P-2S,P-3S,P-6S,P-7S)
66.420		**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Goup	Subcatchment Numbers
0.000	HSG A	
28.480	HSG B	P-2S, P-3S, P-4S, P-5S, P-6S, P-7S, P-8S
19.960	HSG C	P-10S, P-11S, P-2S, P-5S, P-6S, P-7S, P-8S
0.000	HSG D	
17.980	Other	P-11S, P-2S, P-3S, P-6S, P-7S
66.420		**TOTAL AREA**

Time span=5.00-36.00 hrs, dt=0.05 hrs, 621 points
Runoff by SCS TR-20 method, UH=SCS
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment P-10S: Area J (S) Runoff Area=0.330 ac 0.00% Impervious Runoff Depth=0.65"
Flow Length=52' Tc=3.7 min CN=74 Runoff=0.39 cfs 0.018 af

Subcatchment P-11S: Area K, Offsite (W) Runoff Area=0.370 ac 40.54% Impervious Runoff Depth=1.17"
Flow Length=80' Slope=0.0250 '/' Tc=12.2 min CN=84 Runoff=0.61 cfs 0.036 af

Subcatchment P-2S: Area B (Mid Site) Runoff Area=16.220 ac 6.17% Impervious Runoff Depth=0.39"
Flow Length=1,009' Tc=48.6 min CN=67 Runoff=2.60 cfs 0.522 af

Subcatchment P-3S: Area C (N) Runoff Area=4.290 ac 39.63% Impervious Runoff Depth=0.74"
Flow Length=412' Slope=0.0160 '/' Tc=42.8 min CN=76 Runoff=1.91 cfs 0.264 af

Subcatchment P-4S: Area D, Offsite (N) Runoff Area=1.800 ac 0.00% Impervious Runoff Depth=0.10"
Flow Length=150' Slope=0.0432 '/' Tc=42.4 min CN=55 Runoff=0.02 cfs 0.014 af

Subcatchment P-5S: Area E (W) Runoff Area=3.850 ac 0.00% Impervious Runoff Depth=0.35"
Flow Length=180' Slope=0.0194 '/' Tc=25.8 min CN=66 Runoff=0.83 cfs 0.114 af

Subcatchment P-6S: Area F (Mid Site) Runoff Area=15.060 ac 3.32% Impervious Runoff Depth=0.30"
Flow Length=493' Tc=37.7 min CN=64 Runoff=1.83 cfs 0.371 af

Subcatchment P-7S: Area G Runoff Area=23.960 ac 61.06% Impervious Runoff Depth=1.44"
Flow Length=1,120' Tc=23.6 min CN=88 Runoff=34.75 cfs 2.878 af

Subcatchment P-8S: Area H (E) Runoff Area=0.540 ac 0.00% Impervious Runoff Depth=0.27"
Flow Length=34' Slope=0.2400 '/' Tc=4.6 min CN=63 Runoff=0.18 cfs 0.012 af

Pond 1P: Pond 3 (dry) Peak Elev=993.26' Storage=2,133 cf Inflow=1.92 cfs 0.278 af
Discarded=0.15 cfs 0.071 af Primary=0.98 cfs 0.207 af Secondary=0.00 cfs 0.000 af Outflow=1.13 cfs 0.278 af

Pond 2P: Infiltration Basin Peak Elev=998.20' Storage=17,300 cf Inflow=2.69 cfs 2.516 af
Discarded=0.81 cfs 1.488 af Primary=1.75 cfs 0.903 af Secondary=0.00 cfs 0.000 af Outflow=2.55 cfs 2.391 af

Pond P1: Pond 1 Peak Elev=998.21' Storage=72,015 cf Inflow=34.75 cfs 2.878 af
12.0" x 80.0' Culvert Outflow=2.69 cfs 2.516 af

Pond P2: Pond 2 (Dry) Peak Elev=1,002.08' Storage=744 cf Inflow=2.60 cfs 0.522 af
15.0" x 30.0' Culvert Outflow=2.57 cfs 0.522 af

Link P-1L: North Discharge Inflow=1.92 cfs 0.278 af
Primary=1.92 cfs 0.278 af

Link P-3L: East Discharge Inflow=0.18 cfs 0.012 af
Primary=0.18 cfs 0.012 af

Link P-4L: South & East Discharge Inflow=0.55 cfs 0.030 af
Primary=0.55 cfs 0.030 af

Link P-5L: West Discharge
Inflow=1.05 cfs 0.150 af
Primary=1.05 cfs 0.150 af

Link P-6L: Mid Site Discharge
Inflow=4.23 cfs 1.795 af
Primary=4.23 cfs 1.795 af

Link P-7L: Proposed Discharge (Site)
Inflow=1.63 cfs 0.387 af
Primary=1.63 cfs 0.387 af

Link P-8L: Proposed Discharge Total
Inflow=5.71 cfs 2.182 af
Primary=5.71 cfs 2.182 af

Total Runoff Area = 66.420 ac Runoff Volume = 4.228 af Average Runoff Depth = 0.76"
72.93% Pervious = 48.440 ac 27.07% Impervious = 17.980 ac

Summary for Subcatchment P-10S: Area J (S)

[49] Hint: Tc<2dt may require smaller dt

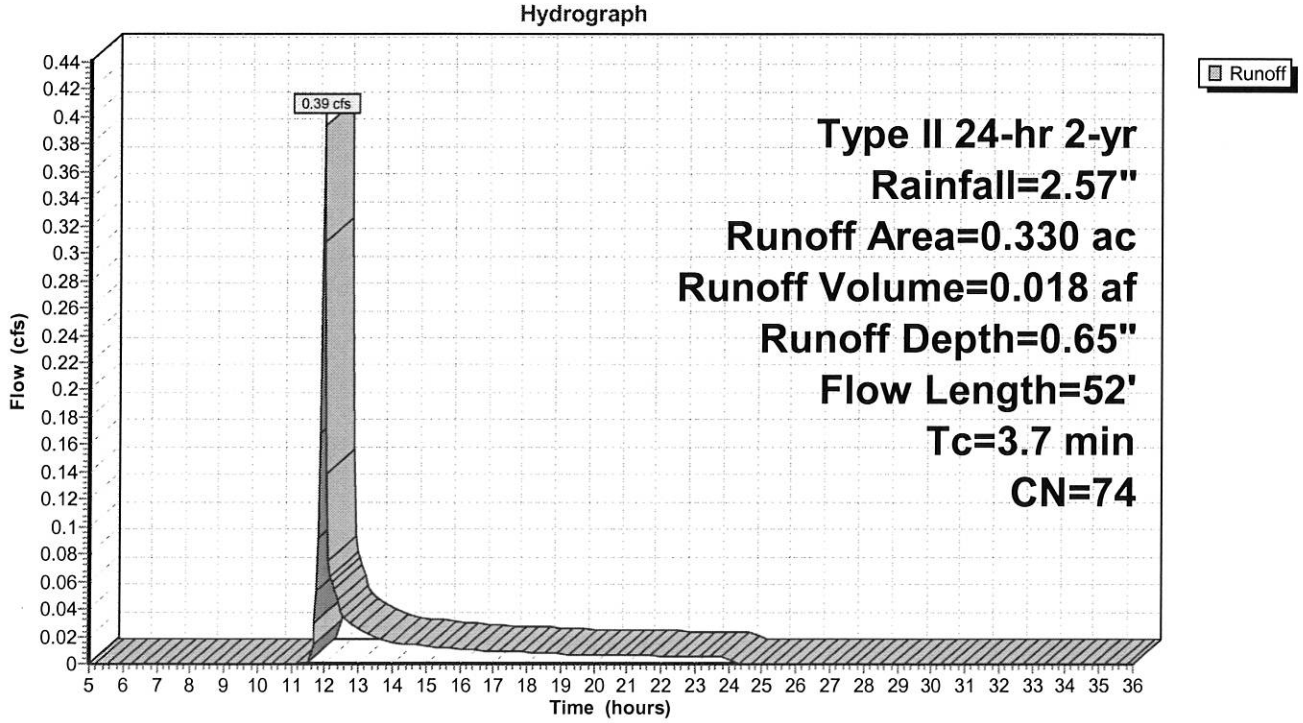
Runoff = 0.39 cfs @ 11.95 hrs, Volume= 0.018 af, Depth= 0.65"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=2.57"

Area (ac)	CN	Description
0.330	74	>75% Grass cover, Good, HSG C
0.330		Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.6	40	0.0500	0.18		**Sheet Flow, grass** Grass: Short n= 0.150 P2= 2.57"
0.1	12	0.0340	2.97		**Shallow Concentrated Flow, grass** Unpaved Kv= 16.1 fps
3.7	52	Total			

Subcatchment P-10S: Area J (S)



Summary for Subcatchment P-11S: Area K, Offsite (W)

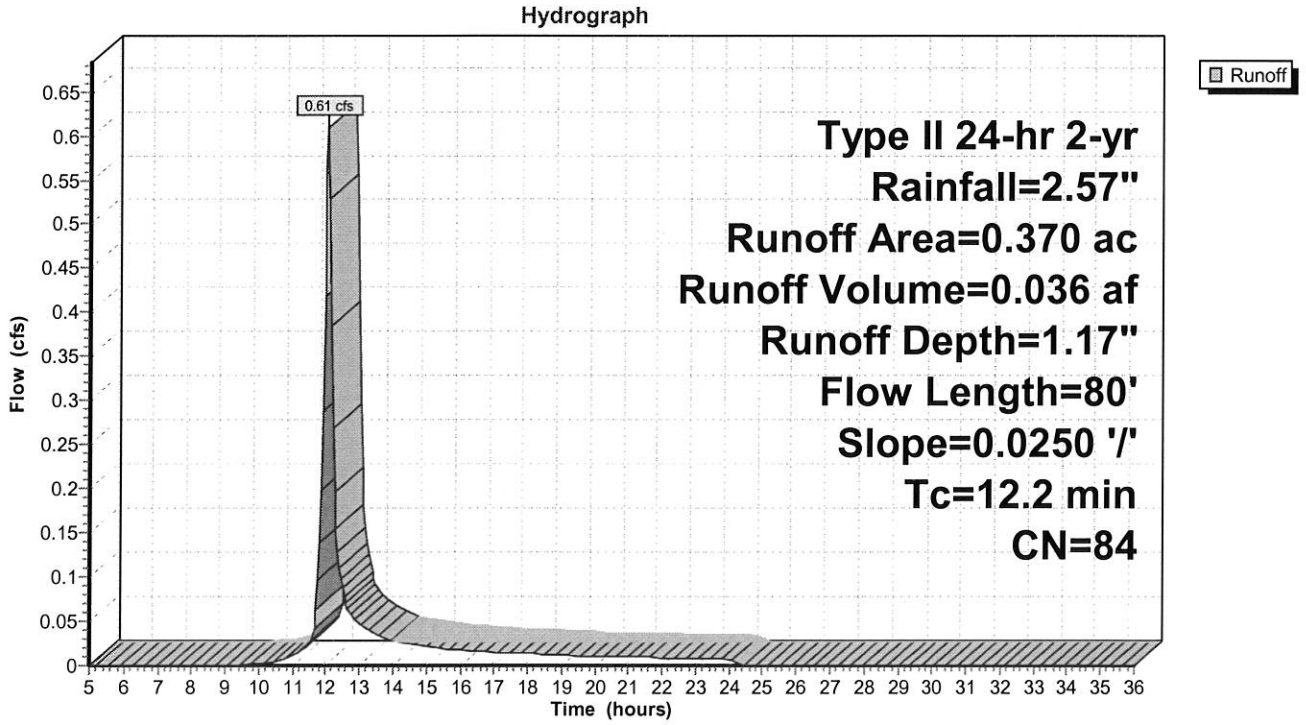
Runoff = 0.61 cfs @ 12.04 hrs, Volume= 0.036 af, Depth= 1.17"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=2.57"

	Area (ac)	CN	Description
	0.220	74	>75% Grass cover, Good, HSG C
*	0.150	98	
	0.370	84	Weighted Average
	0.220		Pervious Area
	0.150		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.2	80	0.0250	0.11		**Sheet Flow, grass** Grass: Dense n= 0.240 P2= 2.57"

Subcatchment P-11S: Area K, Offsite (W)



Summary for Subcatchment P-2S: Area B (Mid Site)

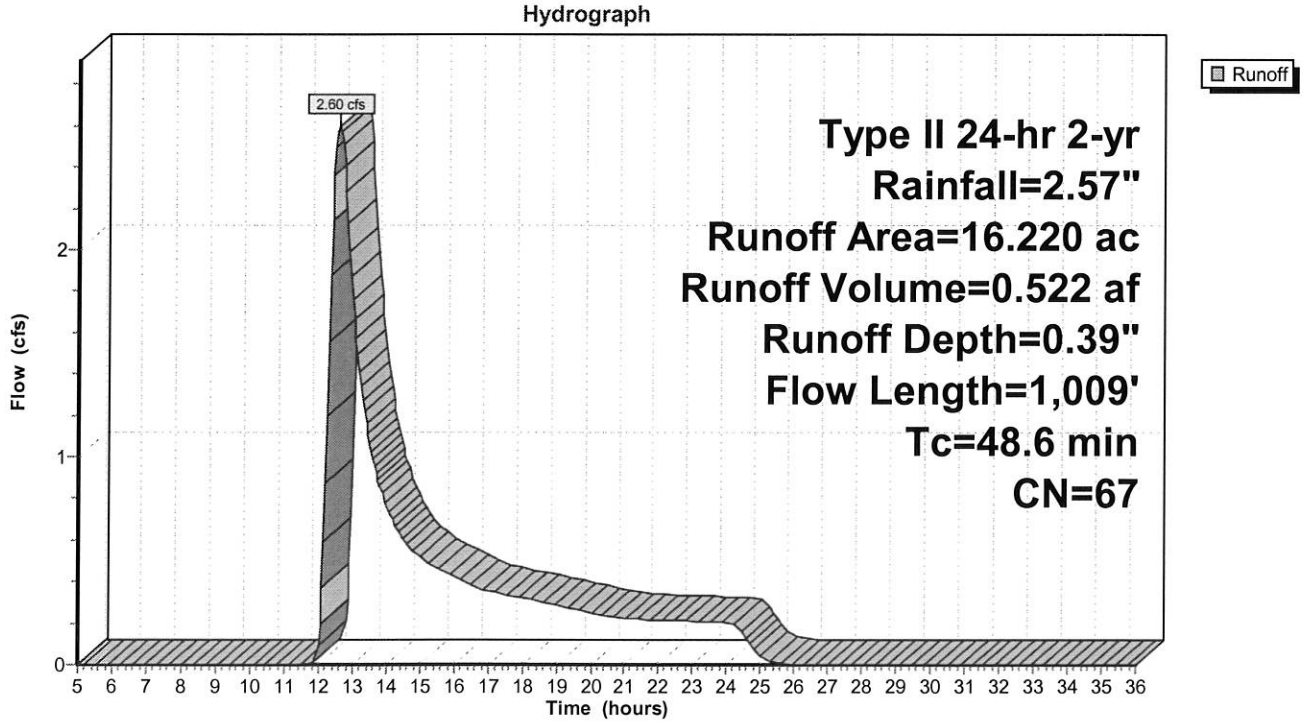
Runoff = 2.60 cfs @ 12.60 hrs, Volume= 0.522 af, Depth= 0.39"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=2.57"

	Area (ac)	CN	Description
	10.000	61	>75% Grass cover, Good, HSG B
*	1.000	98	
	5.220	74	>75% Grass cover, Good, HSG C
	16.220	67	Weighted Average
	15.220		Pervious Area
	1.000		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
43.0	300	0.0150	0.12		**Sheet Flow, Soccer Field** Grass: Dense n= 0.240 P2= 2.57"
5.6	709	0.0169	2.09		**Shallow Concentrated Flow, shallow conentrated** Unpaved Kv= 16.1 fps
48.6	1,009	Total			

Subcatchment P-2S: Area B (Mid Site)



Summary for Subcatchment P-3S: Area C (N)

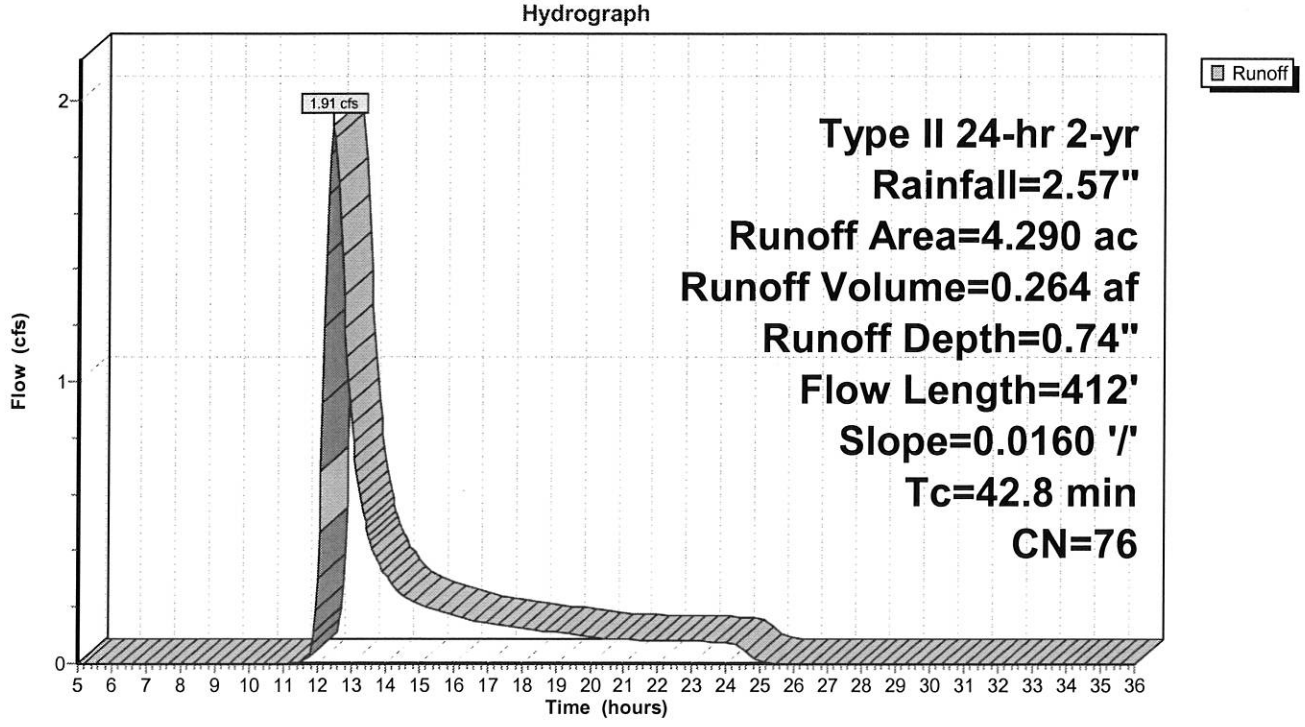
Runoff = 1.91 cfs @ 12.44 hrs, Volume= 0.264 af, Depth= 0.74"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=2.57"

	Area (ac)	CN	Description
	2.590	61	>75% Grass cover, Good, HSG B
*	1.700	98	
	4.290	76	Weighted Average
	2.590		Pervious Area
	1.700		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
41.9	300	0.0160	0.12		**Sheet Flow, Soccer Field** Grass: Dense n= 0.240 P2= 2.57"
0.9	112	0.0160	2.04		**Shallow Concentrated Flow, Soccer Field** Unpaved Kv= 16.1 fps
42.8	412	Total			

Subcatchment P-3S: Area C (N)



Summary for Subcatchment P-4S: Area D, Offsite (N)

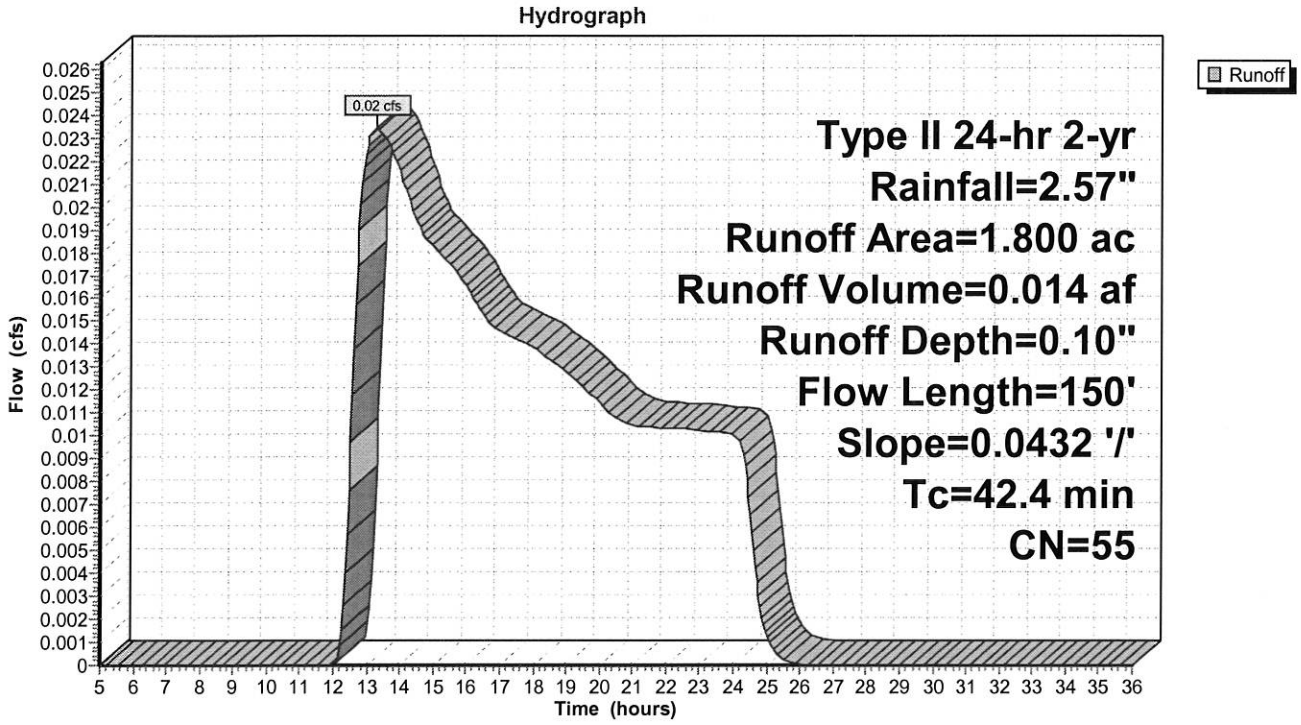
Runoff = 0.02 cfs @ 13.27 hrs, Volume= 0.014 af, Depth= 0.10"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=2.57"

Area (ac)	CN	Description
1.800	55	Woods, Good, HSG B
1.800		Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
42.4	150	0.0432	0.06		**Sheet Flow, Woods** Woods: Dense underbrush n= 0.800 P2= 2.57"

Subcatchment P-4S: Area D, Offsite (N)



Summary for Subcatchment P-5S: Area E (W)

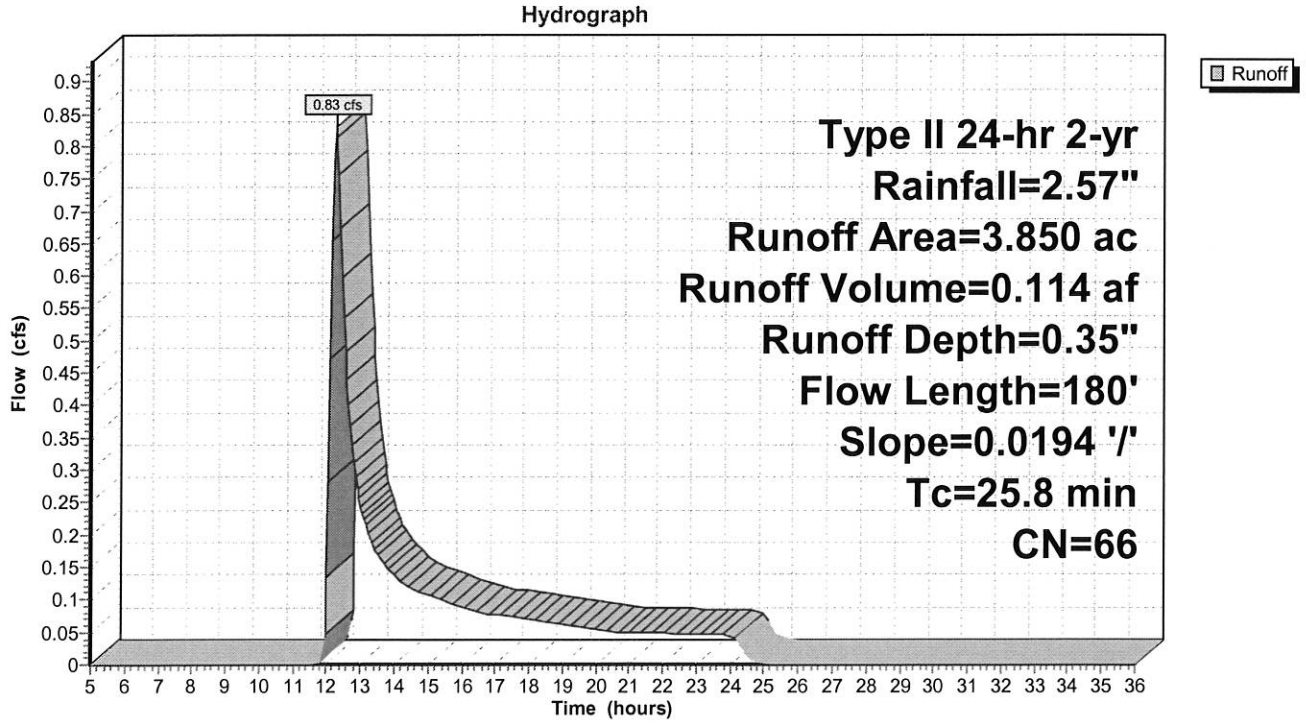
Runoff = 0.83 cfs @ 12.26 hrs, Volume= 0.114 af, Depth= 0.35"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=2.57"

Area (ac)	CN	Description
2.330	61	>75% Grass cover, Good, HSG B
1.520	74	>75% Grass cover, Good, HSG C
3.850	66	Weighted Average
3.850		Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
25.8	180	0.0194	0.12		**Sheet Flow, Grass** Grass: Dense n= 0.240 P2= 2.57"

Subcatchment P-5S: Area E (W)



Summary for Subcatchment P-6S: Area F (Mid Site)

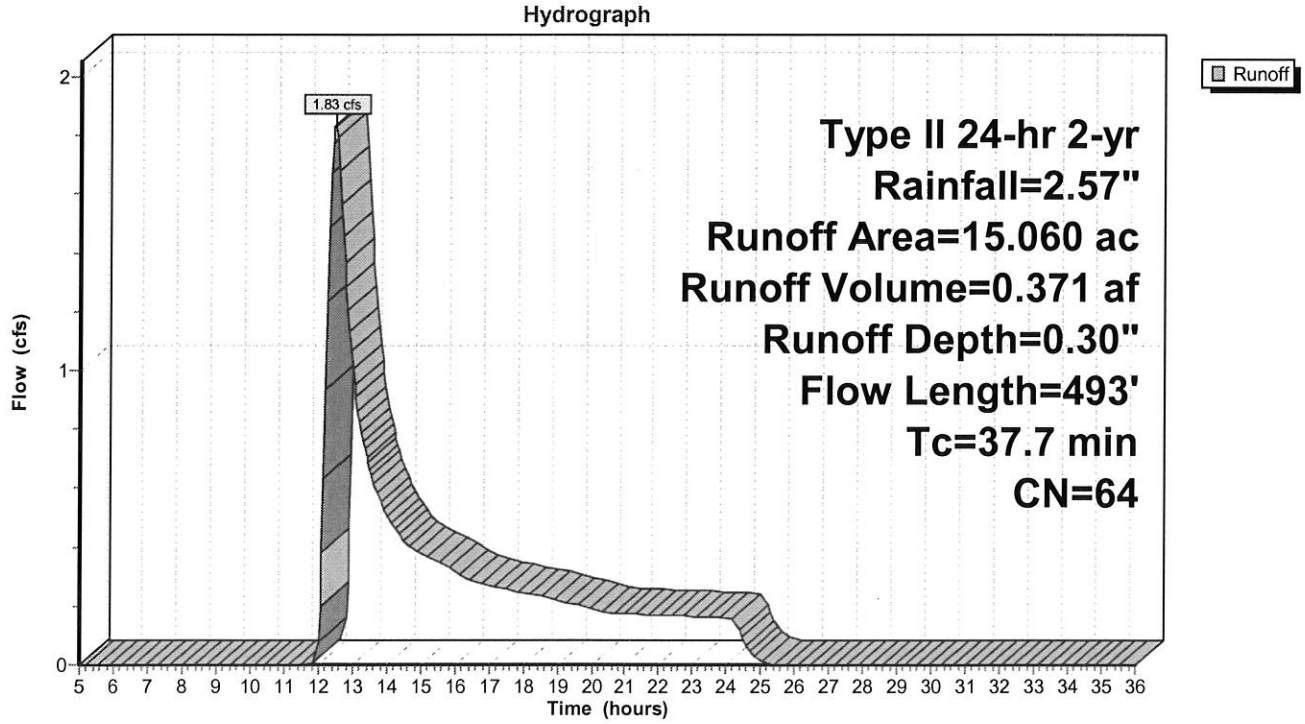
Runoff = 1.83 cfs @ 12.47 hrs, Volume= 0.371 af, Depth= 0.30"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=2.57"

	Area (ac)	CN	Description
	2.720	61	>75% Grass cover, Good, HSG B
	7.650	58	Woods/grass comb., Good, HSG B
*	0.500	98	
	4.190	72	Woods/grass comb., Good, HSG C
	15.060	64	Weighted Average
	14.560		Pervious Area
	0.500		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
36.5	212	0.0113	0.10		**Sheet Flow, baseball field, grass** Grass: Dense n= 0.240 P2= 2.57"
1.2	281	0.0569	3.84		**Shallow Concentrated Flow, grass** Unpaved Kv= 16.1 fps
37.7	493	Total			

Subcatchment P-6S: Area F (Mid Site)



Summary for Subcatchment P-7S: Area G

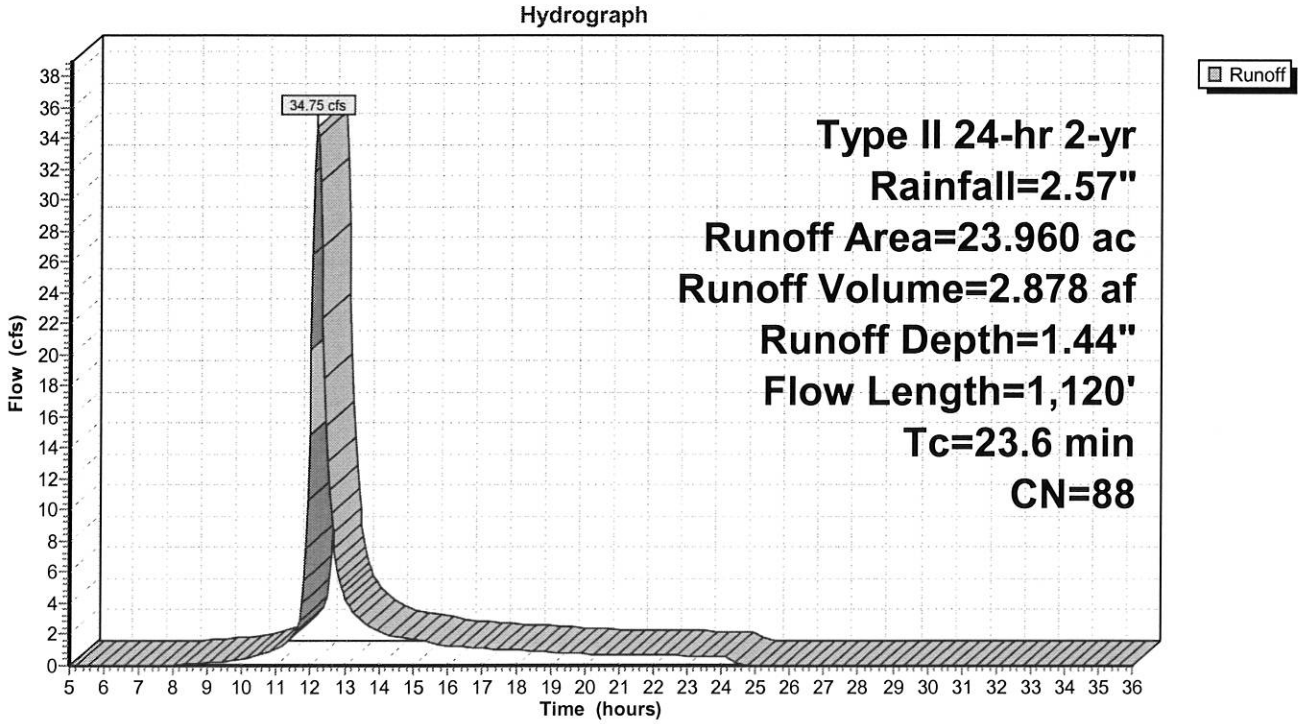
Runoff = 34.75 cfs @ 12.17 hrs, Volume= 2.878 af, Depth= 1.44"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=2.57"

	Area (ac)	CN	Description
*	14.630	98	
	1.000	61	>75% Grass cover, Good, HSG B
	8.330	74	>75% Grass cover, Good, HSG C
	23.960	88	Weighted Average
	9.330		Pervious Area
	14.630		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
22.2	240	0.0500	0.18		**Sheet Flow, grass** Grass: Dense n= 0.240 P2= 2.57"
1.4	880	0.0200	10.18	31.99	**Circular Channel (pipe), RCP** Diam= 24.0" Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.013
23.6	1,120	Total			

Subcatchment P-7S: Area G



Summary for Subcatchment P-8S: Area H (E)

[49] Hint: Tc<2dt may require smaller dt

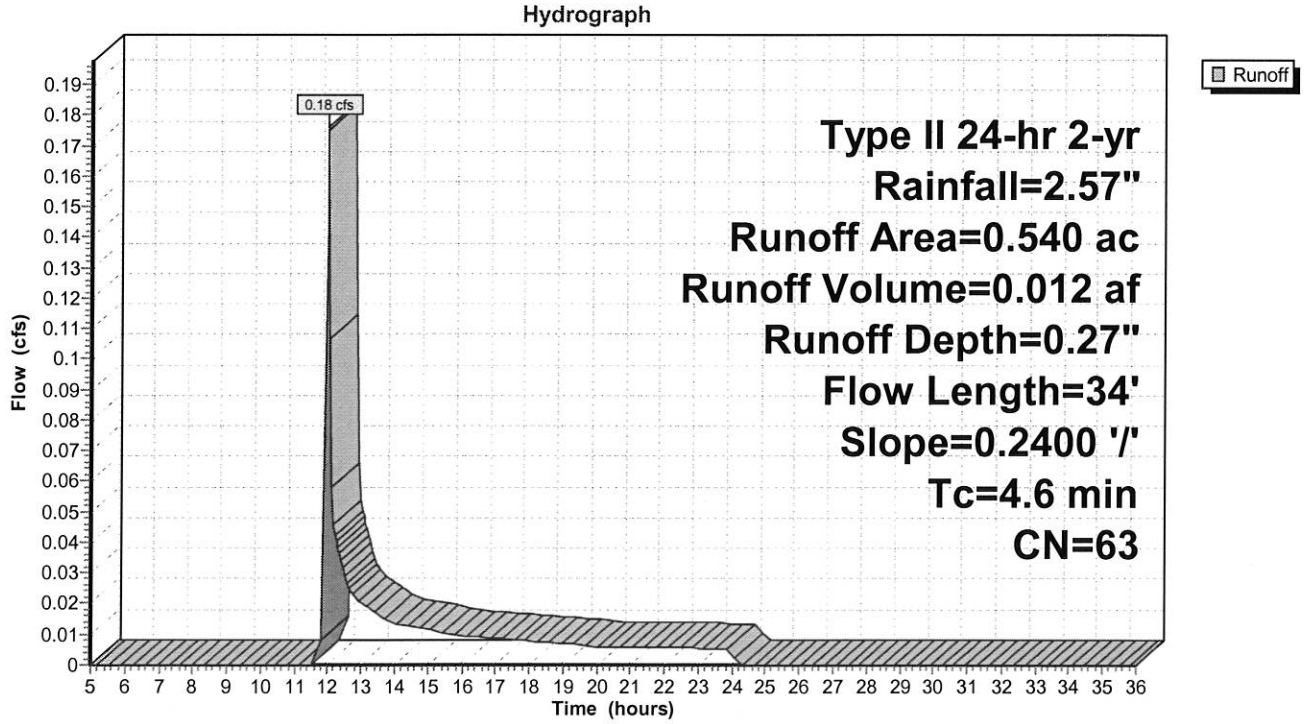
Runoff = 0.18 cfs @ 11.99 hrs, Volume= 0.012 af, Depth= 0.27"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=2.57"

Area (ac)	CN	Description
0.270	61	>75% Grass cover, Good, HSG B
0.120	55	Woods, Good, HSG B
0.150	72	Woods/grass comb., Good, HSG C
0.540	63	Weighted Average
0.540		Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.6	34	0.2400	0.12		**Sheet Flow, grass/woods** n= 0.520 P2= 2.57"

Subcatchment P-8S: Area H (E)



Summary for Pond 1P: Pond 3 (dry)

Inflow Area = 6.090 ac, 27.91% Impervious, Inflow Depth = 0.55" for 2-yr event
Inflow = 1.92 cfs @ 12.45 hrs, Volume= 0.278 af
Outflow = 1.13 cfs @ 12.84 hrs, Volume= 0.278 af, Atten= 41%, Lag= 23.9 min
Discarded = 0.15 cfs @ 12.84 hrs, Volume= 0.071 af
Primary = 0.98 cfs @ 12.84 hrs, Volume= 0.207 af
Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs
Peak Elev= 993.26' @ 12.84 hrs Surf.Area= 4,908 sf Storage= 2,133 cf

Plug-Flow detention time= 30.2 min calculated for 0.278 af (100% of inflow)
Center-of-Mass det. time= 30.0 min (938.4 - 908.5)

Volume	Invert	Avail.Storage	Storage Description
#1	992.50'	28,244 cf	**Custom Stage Data (Irregular)** Listed below

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
992.50	0	0.0	0	0	0
993.00	4,633	335.0	772	772	8,931
994.00	5,673	358.0	5,144	5,916	10,246
995.00	6,781	380.0	6,219	12,135	11,590
996.00	7,949	399.0	7,357	19,492	12,830
997.00	9,580	437.0	8,752	28,244	15,392

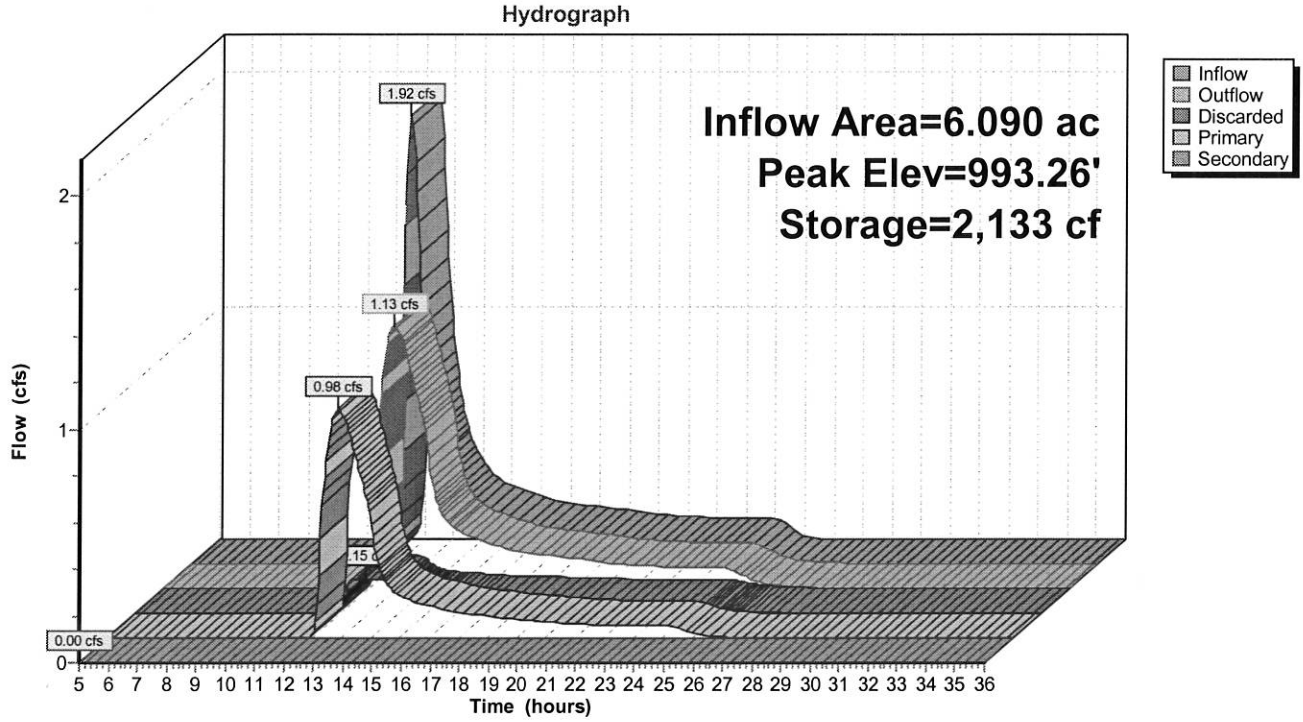
Device	Routing	Invert	Outlet Devices
#1	Discarded	992.50'	**1.296 in/hr Exfiltration over Surface area**
#2	Primary	992.50'	**8.0" x 35.0' long Culvert** CPP, end-section conforming to fill, Ke= 0.500 Outlet Invert= 992.32' S= 0.0051 '/' Cc= 0.900 n= 0.011
#3	Secondary	996.50'	**20.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Discarded OutFlow Max=0.15 cfs @ 12.84 hrs HW=993.26' (Free Discharge)
↑—**1=Exfiltration** (Exfiltration Controls 0.15 cfs)

Primary OutFlow Max=0.98 cfs @ 12.84 hrs HW=993.26' (Free Discharge)
↑—**2=Culvert** (Barrel Controls 0.98 cfs @ 3.06 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=992.50' (Free Discharge)
↑—**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 1P: Pond 3 (dry)



Summary for Pond 2P: Infiltration Basin

[81] Warning: Exceeded Pond P1 by 0.51' @ 27.35 hrs

Inflow Area = 23.960 ac, 61.06% Impervious, Inflow Depth > 1.26" for 2-yr event
Inflow = 2.69 cfs @ 13.64 hrs, Volume= 2.516 af
Outflow = 2.55 cfs @ 15.45 hrs, Volume= 2.391 af, Atten= 5%, Lag= 108.6 min
Discarded = 0.81 cfs @ 15.45 hrs, Volume= 1.488 af
Primary = 1.75 cfs @ 15.45 hrs, Volume= 0.903 af
Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs
Peak Elev= 998.20' @ 15.45 hrs Surf.Area= 9,709 sf Storage= 17,300 cf

Plug-Flow detention time= 178.8 min calculated for 2.388 af (95% of inflow)
Center-of-Mass det. time= 136.3 min (1,311.7 - 1,175.4)

Volume	Invert	Avail.Storage	Storage Description
#1	996.00'	51,736 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
996.00	6,106	382.0	0	0	6,106
997.00	7,685	407.0	6,880	6,880	7,724
998.00	9,364	433.0	8,511	15,391	9,512
999.00	11,150	458.0	10,244	25,635	11,340
1,000.00	13,035	483.0	12,080	37,715	13,270
1,001.00	15,030	508.0	14,021	51,736	15,303

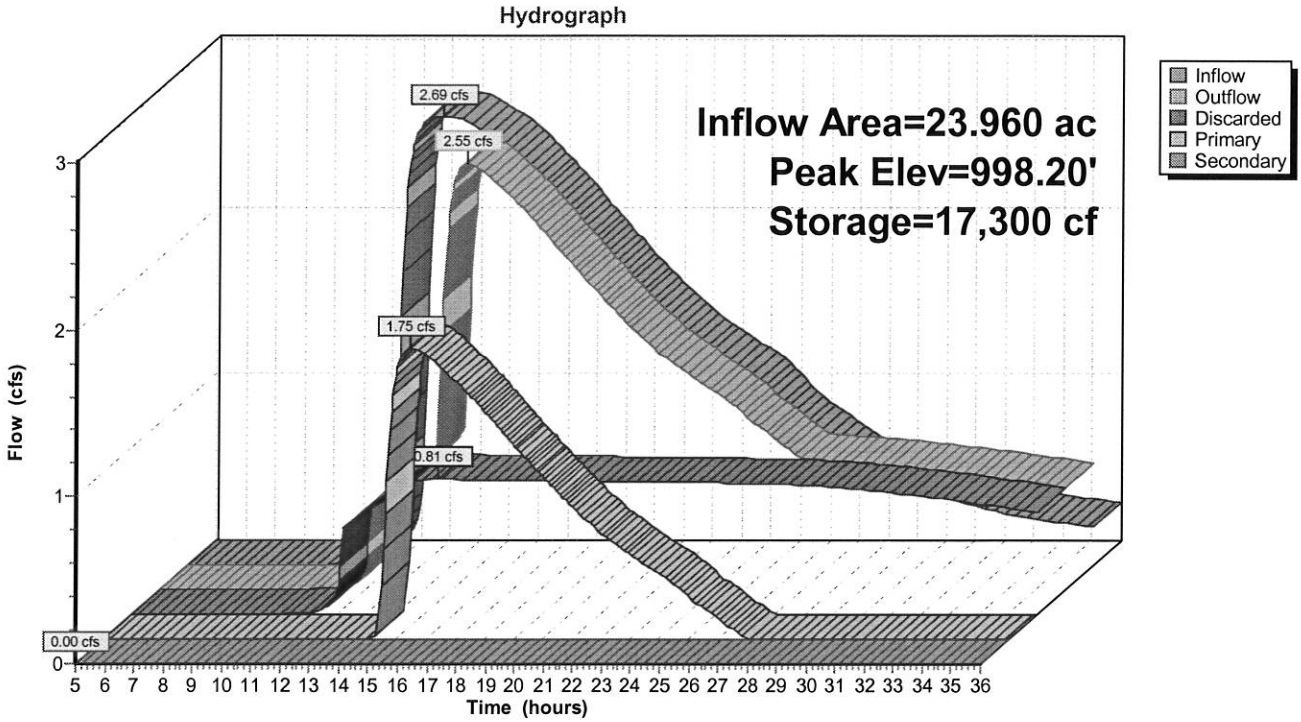
Device	Routing	Invert	Outlet Devices
#1	Primary	996.00'	**15.0" x 94.0' long Culvert** RCP, square edge headwall, Ke= 0.500 Outlet Invert= 995.51' S= 0.0052 '/' Cc= 0.900 n= 0.013 Concrete pipe, bends & connections
#2	Secondary	998.50'	**25.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64
#3	Device 1	998.00'	**6.0' long x 1.00' rise Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#4	Discarded	996.00'	**3.600 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.81 cfs @ 15.45 hrs HW=998.20' (Free Discharge)
↑—**4=Exfiltration** (Exfiltration Controls 0.81 cfs)

Primary OutFlow Max=1.75 cfs @ 15.45 hrs HW=998.20' (Free Discharge)
↑—**1=Culvert** (Passes 1.75 cfs of 6.15 cfs potential flow)
↑—**3=Sharp-Crested Rectangular Weir** (Weir Controls 1.75 cfs @ 1.46 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=996.00' (Free Discharge)
↑—**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 2P: Infiltration Basin



Summary for Pond P1: Pond 1

Inflow Area = 23.960 ac, 61.06% Impervious, Inflow Depth = 1.44" for 2-yr event
Inflow = 34.75 cfs @ 12.17 hrs, Volume= 2.878 af
Outflow = 2.69 cfs @ 13.64 hrs, Volume= 2.516 af, Atten= 92%, Lag= 88.3 min
Primary = 2.69 cfs @ 13.64 hrs, Volume= 2.516 af

Routing by Stor-Ind method, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs
Peak Elev= 998.21' @ 13.64 hrs Surf.Area= 63,665 sf Storage= 72,015 cf

Plug-Flow detention time= 397.7 min calculated for 2.512 af (87% of inflow)
Center-of-Mass det. time= 337.9 min (1,175.4 - 837.6)

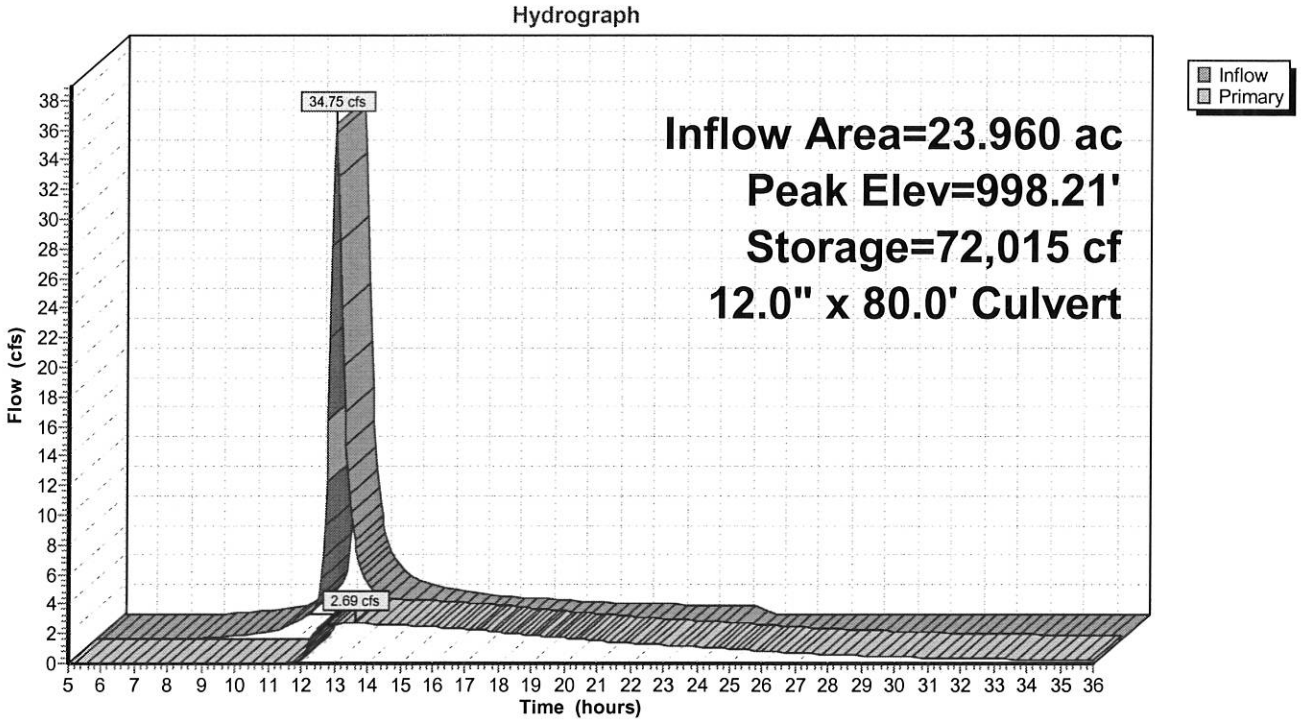
Volume	Invert	Avail.Storage	Storage Description
#1	997.00'	671,679 cf	**Custom Stage Data (Irregular)** Listed below

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
997.00	54,341	1,290.9	0	0	54,341
998.00	62,100	1,365.2	58,177	58,177	70,102
999.00	69,541	1,434.3	65,785	123,963	85,559
1,000.00	76,123	1,481.8	72,807	196,770	96,678
1,001.00	82,827	1,527.5	79,451	276,221	107,724
1,002.00	89,703	1,570.1	86,242	362,464	118,339
1,003.00	96,677	1,614.3	93,168	455,632	129,652
1,004.00	105,446	1,687.5	101,030	556,662	148,956
1,005.00	124,863	1,808.9	115,018	671,679	182,779

Device	Routing	Invert	Outlet Devices
#1	Primary	997.00'	**12.0" x 80.0' long Culvert** RCP, end-section conforming to fill, Ke= 0.500 Outlet Invert= 996.60' S= 0.0050 '/' Cc= 0.900 n= 0.013

Primary OutFlow Max=2.69 cfs @ 13.64 hrs HW=998.21' (Free Discharge)
↑—**1=Culvert** (Barrel Controls 2.69 cfs @ 3.60 fps)

Pond P1: Pond 1



Summary for Pond P2: Pond 2 (Dry)

Inflow Area = 16.220 ac, 6.17% Impervious, Inflow Depth = 0.39" for 2-yr event
Inflow = 2.60 cfs @ 12.60 hrs, Volume= 0.522 af
Outflow = 2.57 cfs @ 12.65 hrs, Volume= 0.522 af, Atten= 1%, Lag= 3.1 min
Primary = 2.57 cfs @ 12.65 hrs, Volume= 0.522 af

Routing by Stor-Ind method, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs
Peak Elev= 1,002.08' @ 12.65 hrs Surf.Area= 1,214 sf Storage= 744 cf

Plug-Flow detention time= 9.6 min calculated for 0.521 af (100% of inflow)
Center-of-Mass det. time= 9.9 min (957.3 - 947.4)

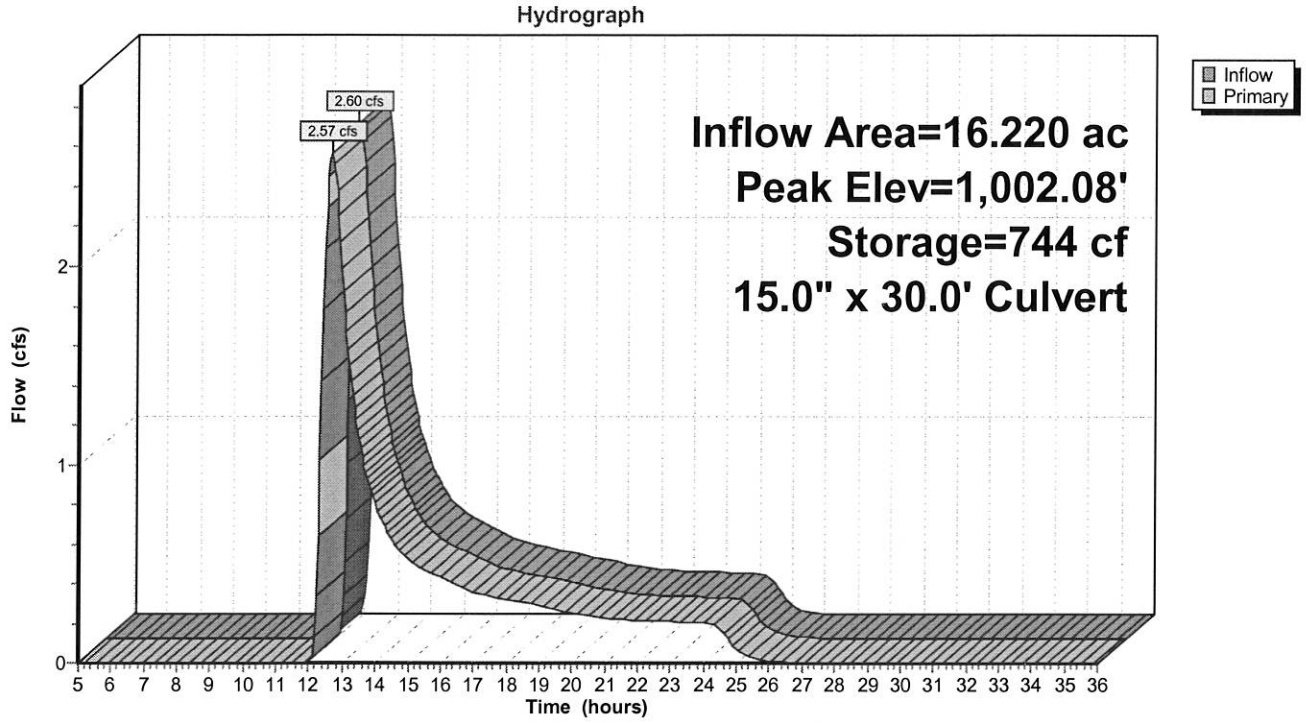
Volume	Invert	Avail.Storage	Storage Description
#1	1,001.16'	39,351 cf	**Custom Stage Data (Irregular)** Listed below

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
1,001.16	0	0.0	0	0	0
1,003.00	2,423	227.0	1,486	1,486	4,106
1,004.00	25,153	979.0	11,794	13,280	76,278
1,005.00	27,000	1,000.0	26,071	39,351	79,730

Device	Routing	Invert	Outlet Devices
#1	Primary	1,001.16'	**15.0" x 30.0' long Culvert** RCP, groove end projecting, Ke= 0.200 Outlet Invert= 1,001.00' S= 0.0053 '/' Cc= 0.900 n= 0.013

Primary OutFlow Max=2.57 cfs @ 12.65 hrs HW=1,002.08' (Free Discharge)
↑**1=Culvert** (Barrel Controls 2.57 cfs @ 3.69 fps)

Pond P2: Pond 2 (Dry)

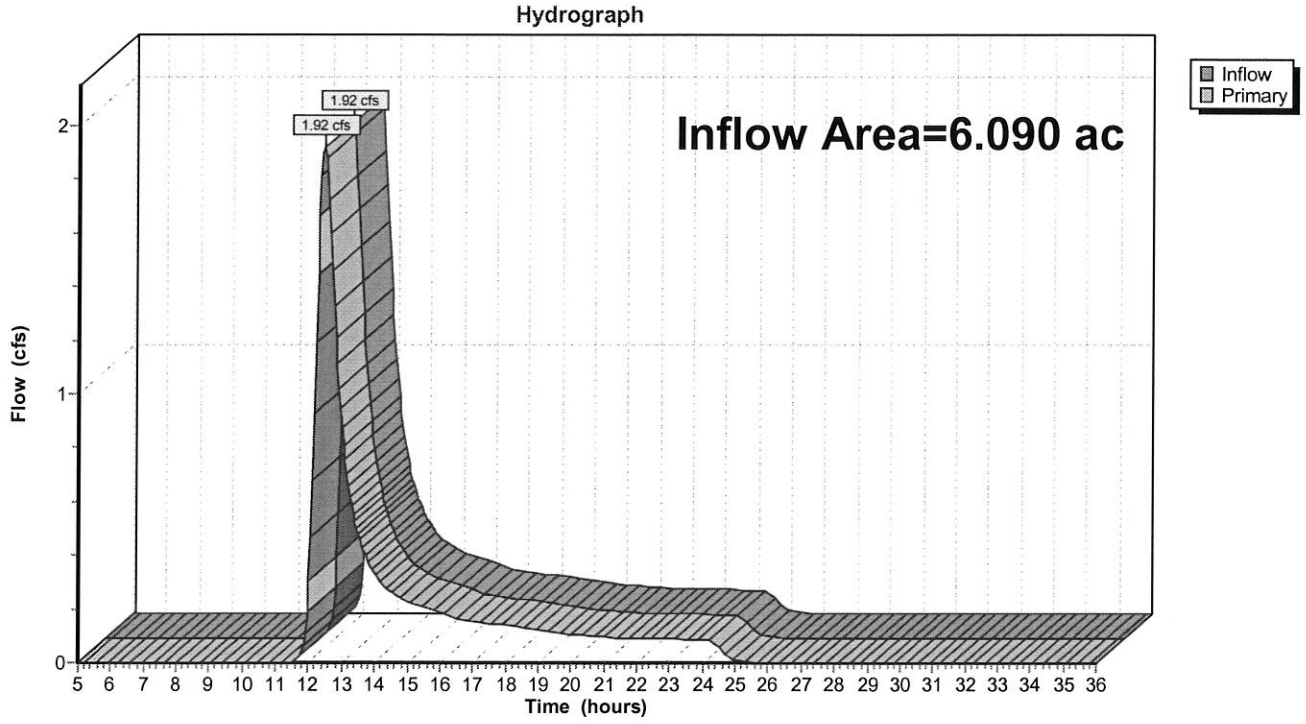


Summary for Link P-1L: North Discharge

Inflow Area = 6.090 ac, 27.91% Impervious, Inflow Depth = 0.55" for 2-yr event
Inflow = 1.92 cfs @ 12.45 hrs, Volume= 0.278 af
Primary = 1.92 cfs @ 12.45 hrs, Volume= 0.278 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs

Link P-1L: North Discharge

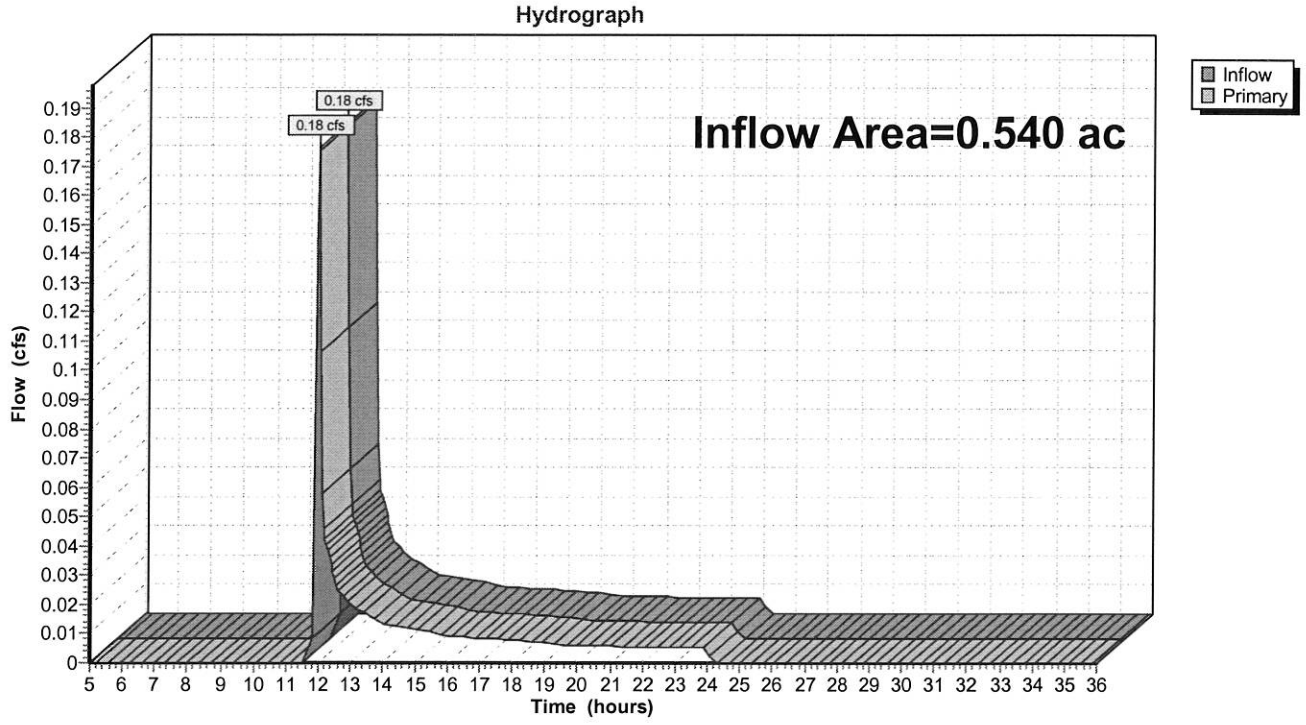


Summary for Link P-3L: East Discharge

Inflow Area = 0.540 ac, 0.00% Impervious, Inflow Depth = 0.27" for 2-yr event
Inflow = 0.18 cfs @ 11.99 hrs, Volume= 0.012 af
Primary = 0.18 cfs @ 11.99 hrs, Volume= 0.012 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs

Link P-3L: East Discharge

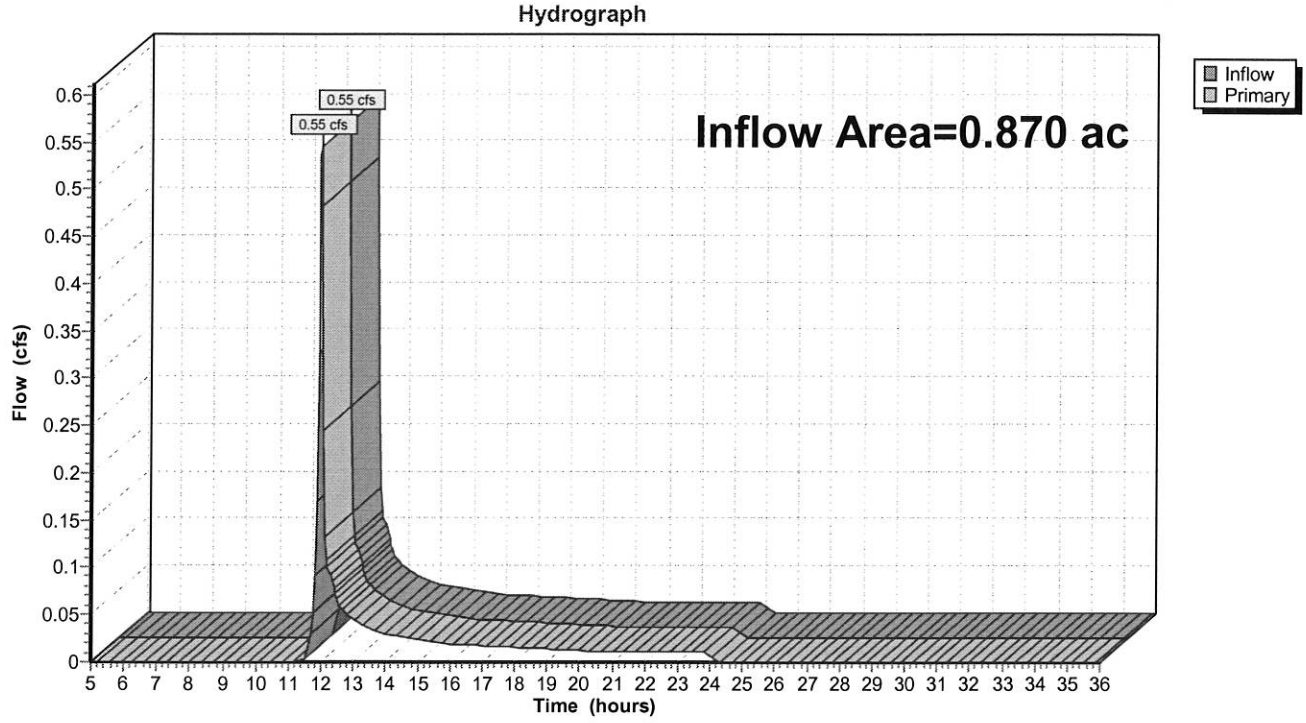


Summary for Link P-4L: South & East Discharge

Inflow Area = 0.870 ac, 0.00% Impervious, Inflow Depth = 0.41" for 2-yr event
Inflow = 0.55 cfs @ 11.97 hrs, Volume= 0.030 af
Primary = 0.55 cfs @ 11.97 hrs, Volume= 0.030 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs

Link P-4L: South & East Discharge

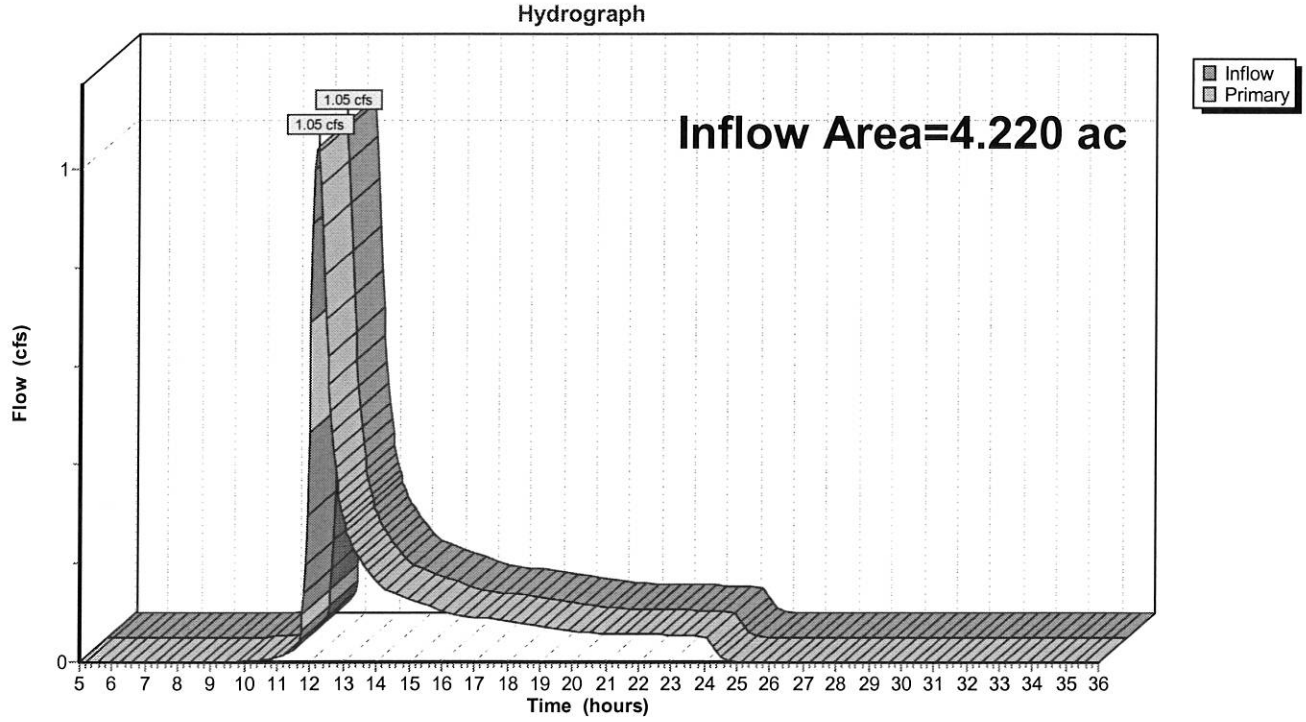


Summary for Link P-5L: West Discharge

Inflow Area = 4.220 ac, 3.55% Impervious, Inflow Depth = 0.43" for 2-yr event
Inflow = 1.05 cfs @ 12.19 hrs, Volume= 0.150 af
Primary = 1.05 cfs @ 12.19 hrs, Volume= 0.150 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs

Link P-5L: West Discharge

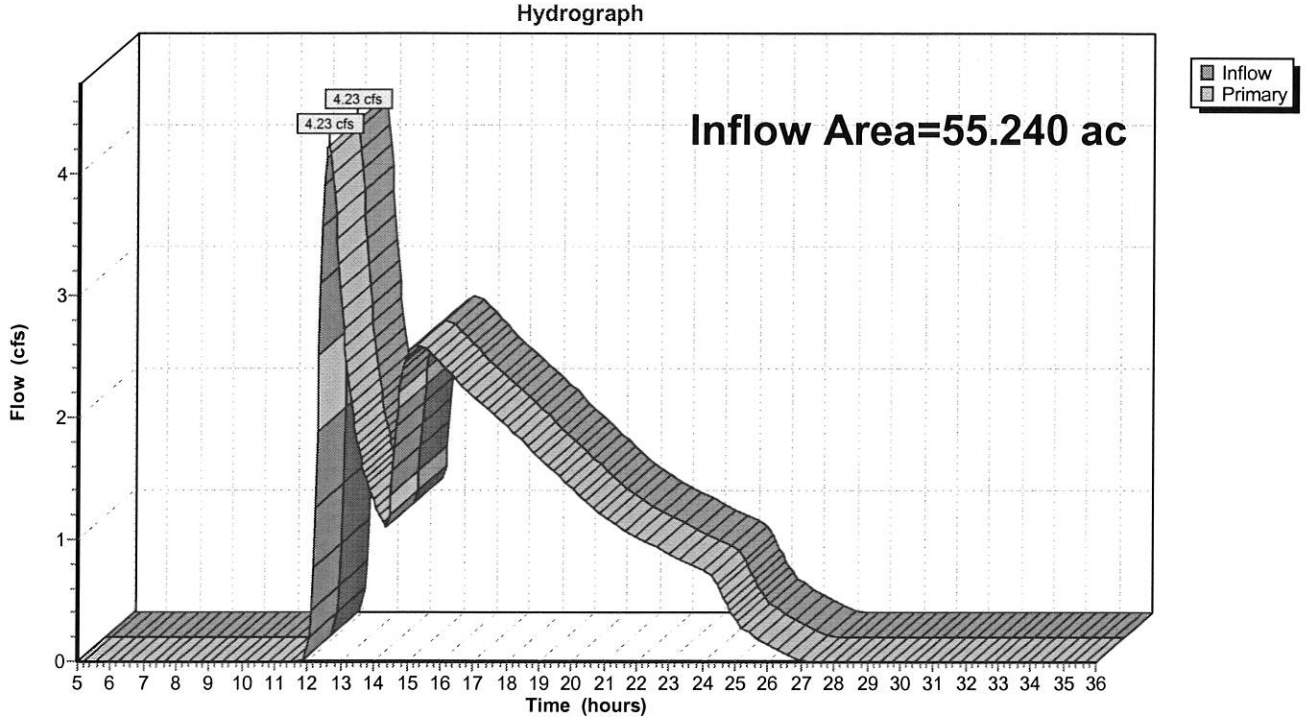


Summary for Link P-6L: Mid Site Discharge

Inflow Area = 55.240 ac, 29.20% Impervious, Inflow Depth = 0.39" for 2-yr event
Inflow = 4.23 cfs @ 12.57 hrs, Volume= 1.795 af
Primary = 4.23 cfs @ 12.57 hrs, Volume= 1.795 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs

Link P-6L: Mid Site Discharge

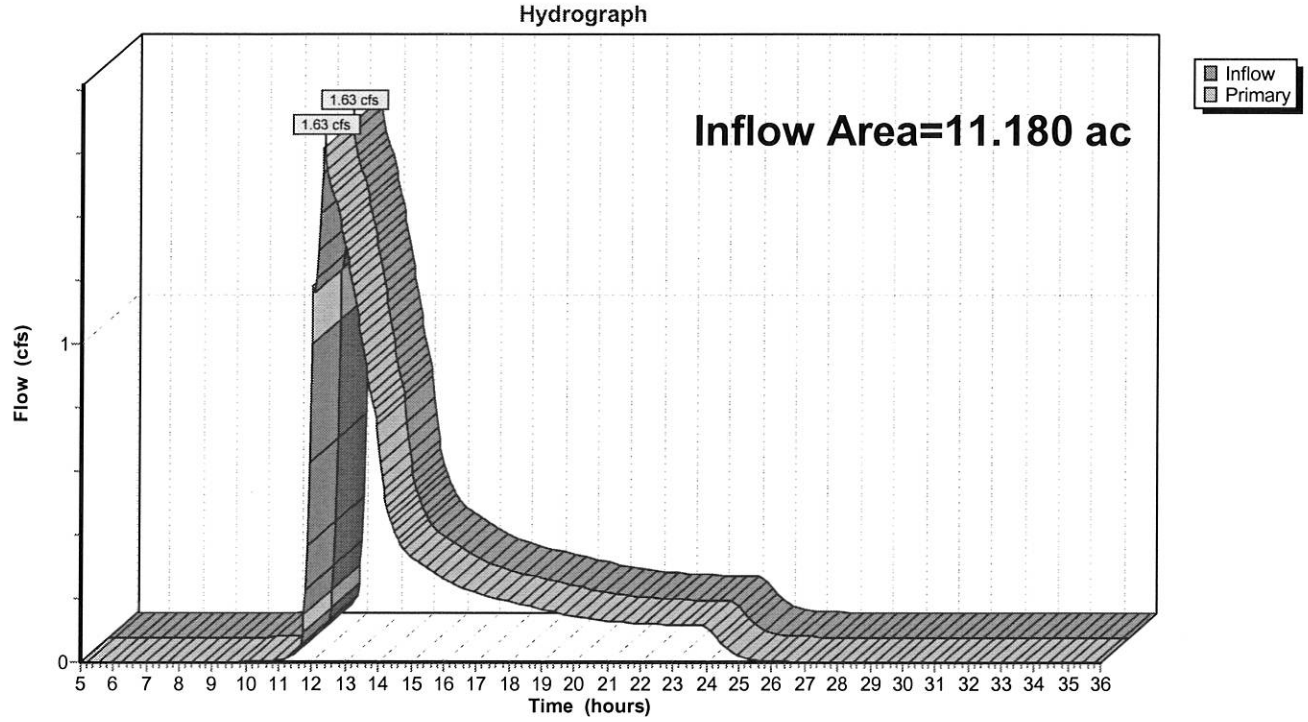


Summary for Link P-7L: Proposed Discharge (Site)

Inflow Area = 11.180 ac, 16.55% Impervious, Inflow Depth = 0.42" for 2-yr event
Inflow = 1.63 cfs @ 12.31 hrs, Volume= 0.387 af
Primary = 1.63 cfs @ 12.31 hrs, Volume= 0.387 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs

Link P-7L: Proposed Discharge (Site)

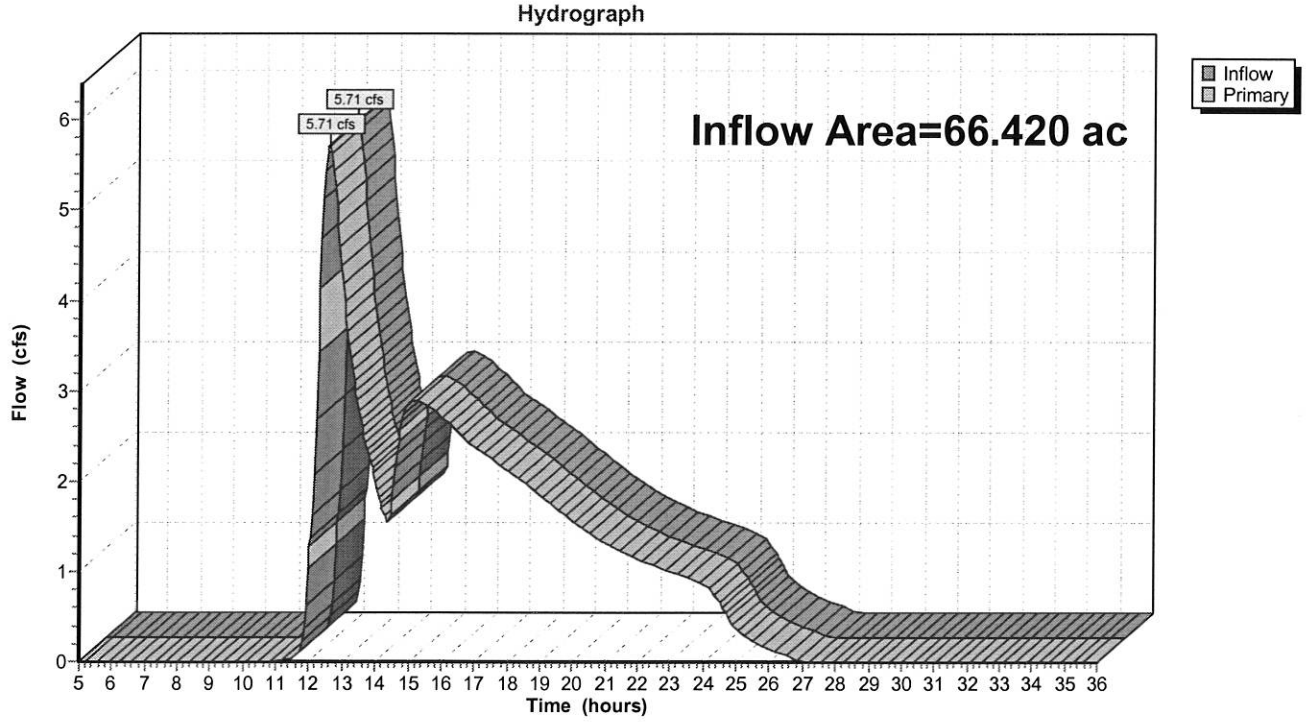


Summary for Link P-8L: Proposed Discharge Total

Inflow Area = 66.420 ac, 27.07% Impervious, Inflow Depth = 0.39" for 2-yr event
Inflow = 5.71 cfs @ 12.57 hrs, Volume= 2.182 af
Primary = 5.71 cfs @ 12.57 hrs, Volume= 2.182 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs

Link P-8L: Proposed Discharge Total



Time span=5.00-36.00 hrs, dt=0.05 hrs, 621 points
Runoff by SCS TR-20 method, UH=SCS
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment P-10S: Area J (S) Runoff Area=0.330 ac 0.00% Impervious Runoff Depth=1.32"
Flow Length=52' Tc=3.7 min CN=74 Runoff=0.83 cfs 0.036 af

Subcatchment P-11S: Area K, Offsite (W) Runoff Area=0.370 ac 40.54% Impervious Runoff Depth=2.04"
Flow Length=80' Slope=0.0250 '/' Tc=12.2 min CN=84 Runoff=1.06 cfs 0.063 af

Subcatchment P-2S: Area B (Mid Site) Runoff Area=16.220 ac 6.17% Impervious Runoff Depth=0.92"
Flow Length=1,009' Tc=48.6 min CN=67 Runoff=7.88 cfs 1.241 af

Subcatchment P-3S: Area C (N) Runoff Area=4.290 ac 39.63% Impervious Runoff Depth=1.45"
Flow Length=412' Slope=0.0160 '/' Tc=42.8 min CN=76 Runoff=4.09 cfs 0.519 af

Subcatchment P-4S: Area D, Offsite (N) Runoff Area=1.800 ac 0.00% Impervious Runoff Depth=0.39"
Flow Length=150' Slope=0.0432 '/' Tc=42.4 min CN=55 Runoff=0.25 cfs 0.058 af

Subcatchment P-5S: Area E (W) Runoff Area=3.850 ac 0.00% Impervious Runoff Depth=0.87"
Flow Length=180' Slope=0.0194 '/' Tc=25.8 min CN=66 Runoff=2.72 cfs 0.278 af

Subcatchment P-6S: Area F (Mid Site) Runoff Area=15.060 ac 3.32% Impervious Runoff Depth=0.77"
Flow Length=493' Tc=37.7 min CN=64 Runoff=6.82 cfs 0.962 af

Subcatchment P-7S: Area G Runoff Area=23.960 ac 61.06% Impervious Runoff Depth=2.38"
Flow Length=1,120' Tc=23.6 min CN=88 Runoff=57.07 cfs 4.749 af

Subcatchment P-8S: Area H (E) Runoff Area=0.540 ac 0.00% Impervious Runoff Depth=0.72"
Flow Length=34' Slope=0.2400 '/' Tc=4.6 min CN=63 Runoff=0.65 cfs 0.032 af

Pond 1P: Pond 3 (dry) Peak Elev=994.07' Storage=6,323 cf Inflow=4.32 cfs 0.578 af
Discarded=0.17 cfs 0.103 af Primary=1.72 cfs 0.474 af Secondary=0.00 cfs 0.000 af Outflow=1.90 cfs 0.578 af

Pond 2P: Infiltration Basin Peak Elev=998.28' Storage=18,087 cf Inflow=3.75 cfs 4.284 af
Discarded=0.82 cfs 1.584 af Primary=2.90 cfs 2.441 af Secondary=0.00 cfs 0.000 af Outflow=3.72 cfs 4.026 af

Pond P1: Pond 1 Peak Elev=999.02' Storage=125,590 cf Inflow=57.07 cfs 4.749 af
12.0" x 80.0' Culvert Outflow=3.75 cfs 4.284 af

Pond P2: Pond 2 (Dry) Peak Elev=1,003.12' Storage=2,845 cf Inflow=7.88 cfs 1.241 af
15.0" x 30.0' Culvert Outflow=6.65 cfs 1.241 af

Link P-1L: North Discharge Inflow=4.32 cfs 0.578 af
Primary=4.32 cfs 0.578 af

Link P-3L: East Discharge Inflow=0.65 cfs 0.032 af
Primary=0.65 cfs 0.032 af

Link P-4L: South & East Discharge Inflow=1.46 cfs 0.069 af
Primary=1.46 cfs 0.069 af

Link P-5L: West Discharge
Inflow=3.15 cfs 0.341 af
Primary=3.15 cfs 0.341 af

Link P-6L: Mid Site Discharge
Inflow=13.11 cfs 4.645 af
Primary=13.11 cfs 4.645 af

Link P-7L: Proposed Discharge (Site)
Inflow=4.13 cfs 0.884 af
Primary=4.13 cfs 0.884 af

Link P-8L: Proposed Discharge Total
Inflow=16.50 cfs 5.529 af
Primary=16.50 cfs 5.529 af

Total Runoff Area = 66.420 ac Runoff Volume = 7.939 af Average Runoff Depth = 1.43"
72.93% Pervious = 48.440 ac 27.07% Impervious = 17.980 ac

Summary for Subcatchment P-10S: Area J (S)

[49] Hint: Tc<2dt may require smaller dt

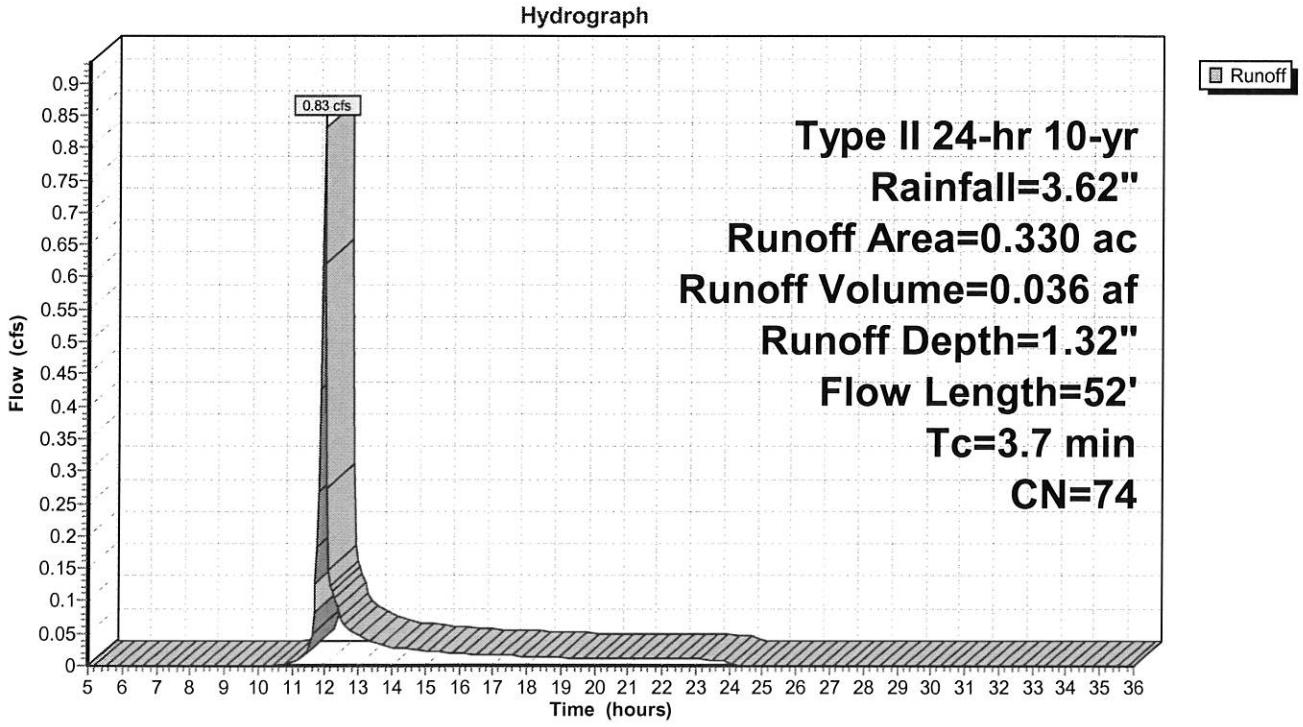
Runoff = 0.83 cfs @ 11.95 hrs, Volume= 0.036 af, Depth= 1.32"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=3.62"

Area (ac)	CN	Description
0.330	74	>75% Grass cover, Good, HSG C
0.330		Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.6	40	0.0500	0.18		**Sheet Flow, grass** Grass: Short n= 0.150 P2= 2.57"
0.1	12	0.0340	2.97		**Shallow Concentrated Flow, grass** Unpaved Kv= 16.1 fps
3.7	52	Total			

Subcatchment P-10S: Area J (S)



Summary for Subcatchment P-11S: Area K, Offsite (W)

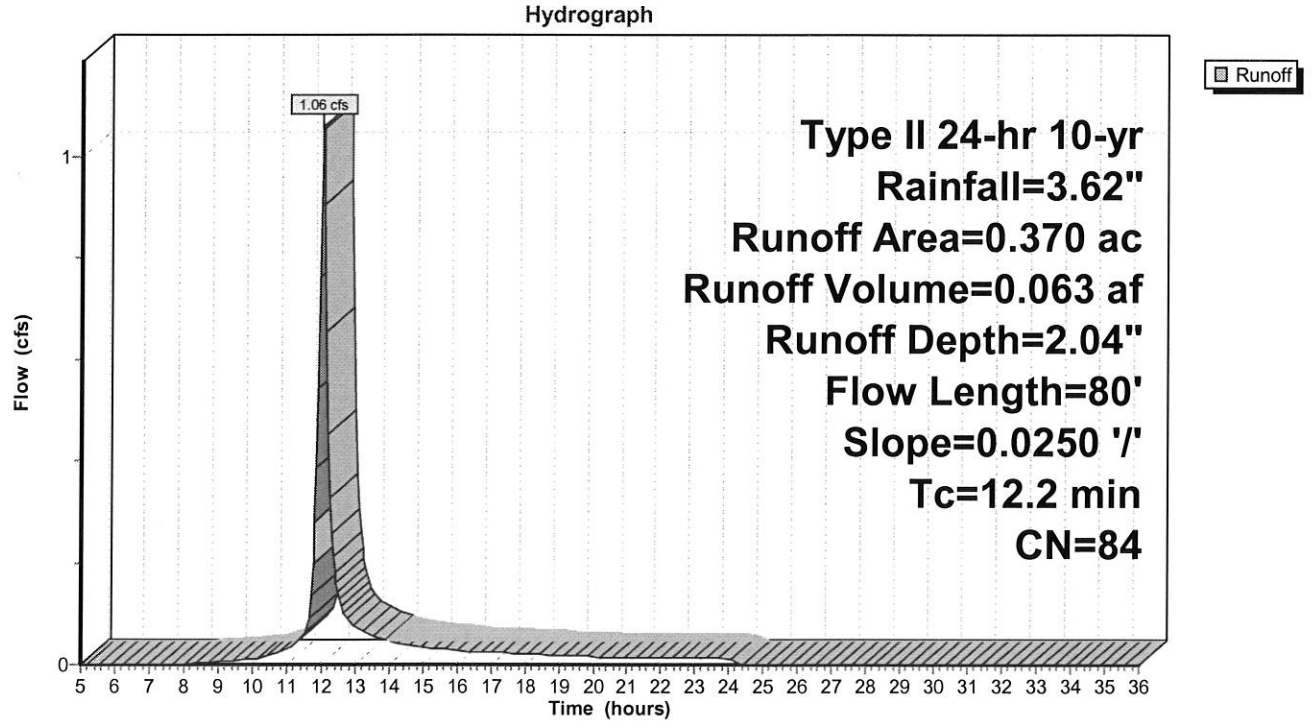
Runoff = 1.06 cfs @ 12.04 hrs, Volume= 0.063 af, Depth= 2.04"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=3.62"

	Area (ac)	CN	Description
	0.220	74	>75% Grass cover, Good, HSG C
*	0.150	98	
	0.370	84	Weighted Average
	0.220		Pervious Area
	0.150		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.2	80	0.0250	0.11		**Sheet Flow, grass** Grass: Dense n= 0.240 P2= 2.57"

Subcatchment P-11S: Area K, Offsite (W)



Summary for Subcatchment P-2S: Area B (Mid Site)

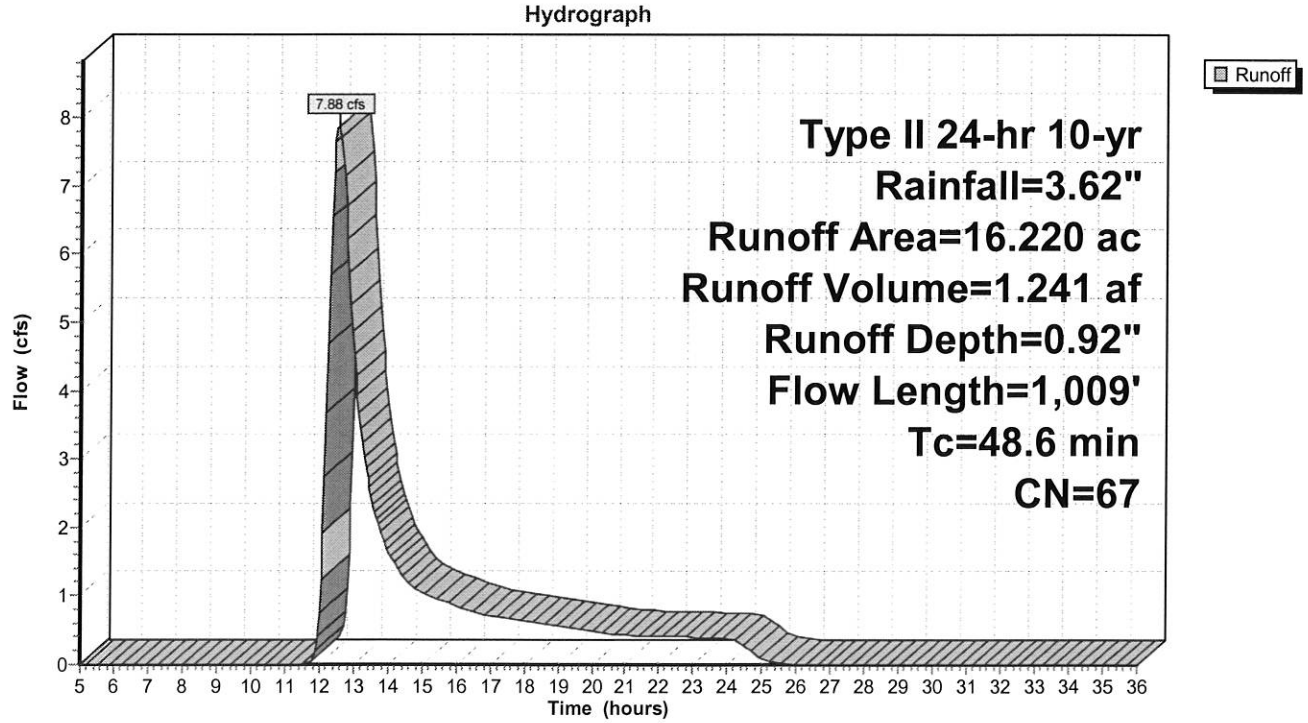
Runoff = 7.88 cfs @ 12.54 hrs, Volume= 1.241 af, Depth= 0.92"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=3.62"

	Area (ac)	CN	Description
	10.000	61	>75% Grass cover, Good, HSG B
*	1.000	98	
	5.220	74	>75% Grass cover, Good, HSG C
	16.220	67	Weighted Average
	15.220		Pervious Area
	1.000		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
43.0	300	0.0150	0.12		**Sheet Flow, Soccer Field** Grass: Dense n= 0.240 P2= 2.57"
5.6	709	0.0169	2.09		**Shallow Concentrated Flow, shallow conentrated** Unpaved Kv= 16.1 fps
48.6	1,009	Total			

Subcatchment P-2S: Area B (Mid Site)



Summary for Subcatchment P-3S: Area C (N)

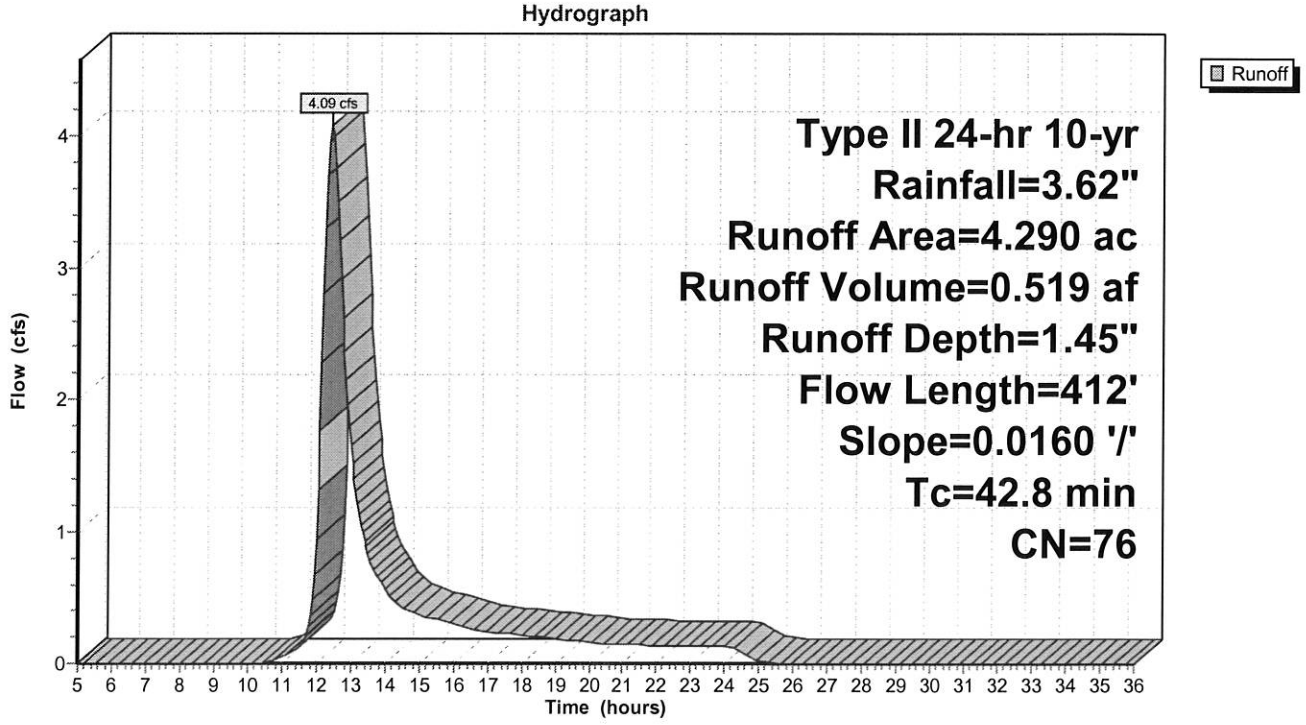
Runoff = 4.09 cfs @ 12.42 hrs, Volume= 0.519 af, Depth= 1.45"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=3.62"

	Area (ac)	CN	Description
	2.590	61	>75% Grass cover, Good, HSG B
*	1.700	98	
	4.290	76	Weighted Average
	2.590		Pervious Area
	1.700		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
41.9	300	0.0160	0.12		**Sheet Flow, Soccer Field** Grass: Dense n= 0.240 P2= 2.57"
0.9	112	0.0160	2.04		**Shallow Concentrated Flow, Soccer Field** Unpaved Kv= 16.1 fps
42.8	412	Total			

Subcatchment P-3S: Area C (N)



Summary for Subcatchment P-4S: Area D, Offsite (N)

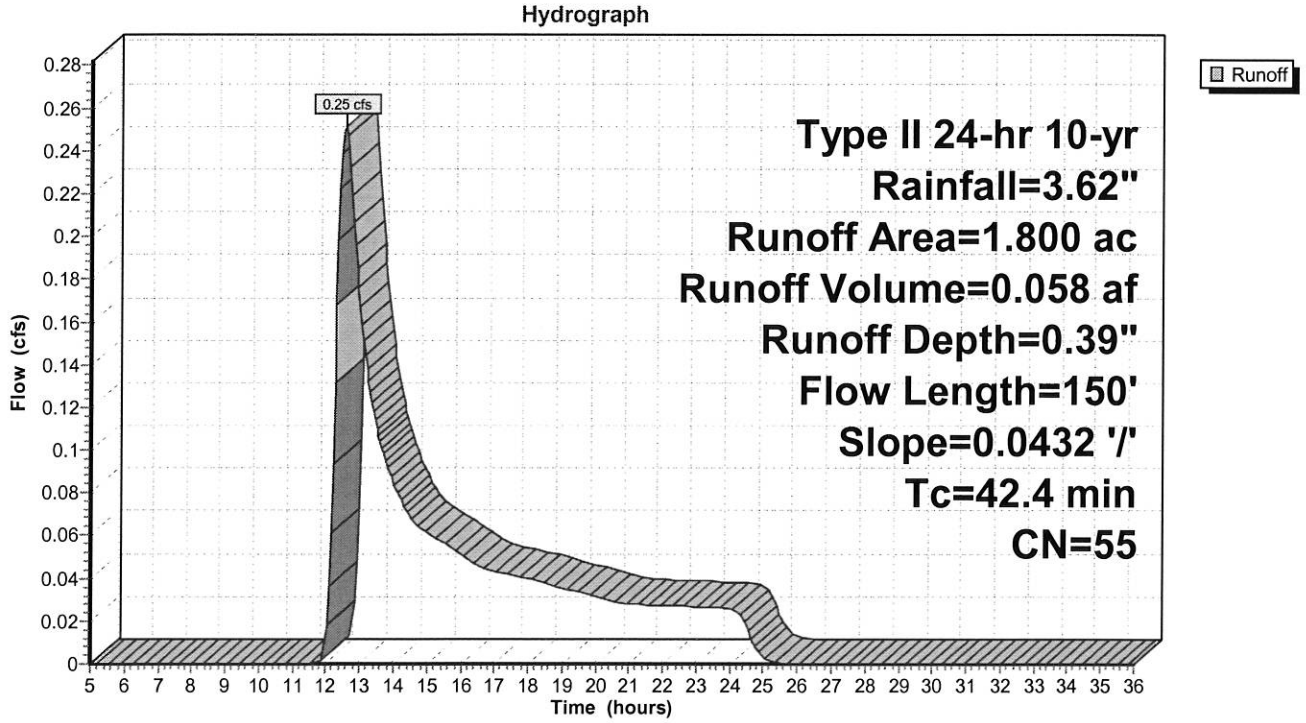
Runoff = 0.25 cfs @ 12.56 hrs, Volume= 0.058 af, Depth= 0.39"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=3.62"

Area (ac)	CN	Description
1.800	55	Woods, Good, HSG B
1.800		Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
42.4	150	0.0432	0.06		**Sheet Flow, Woods** Woods: Dense underbrush n= 0.800 P2= 2.57"

Subcatchment P-4S: Area D, Offsite (N)



Summary for Subcatchment P-5S: Area E (W)

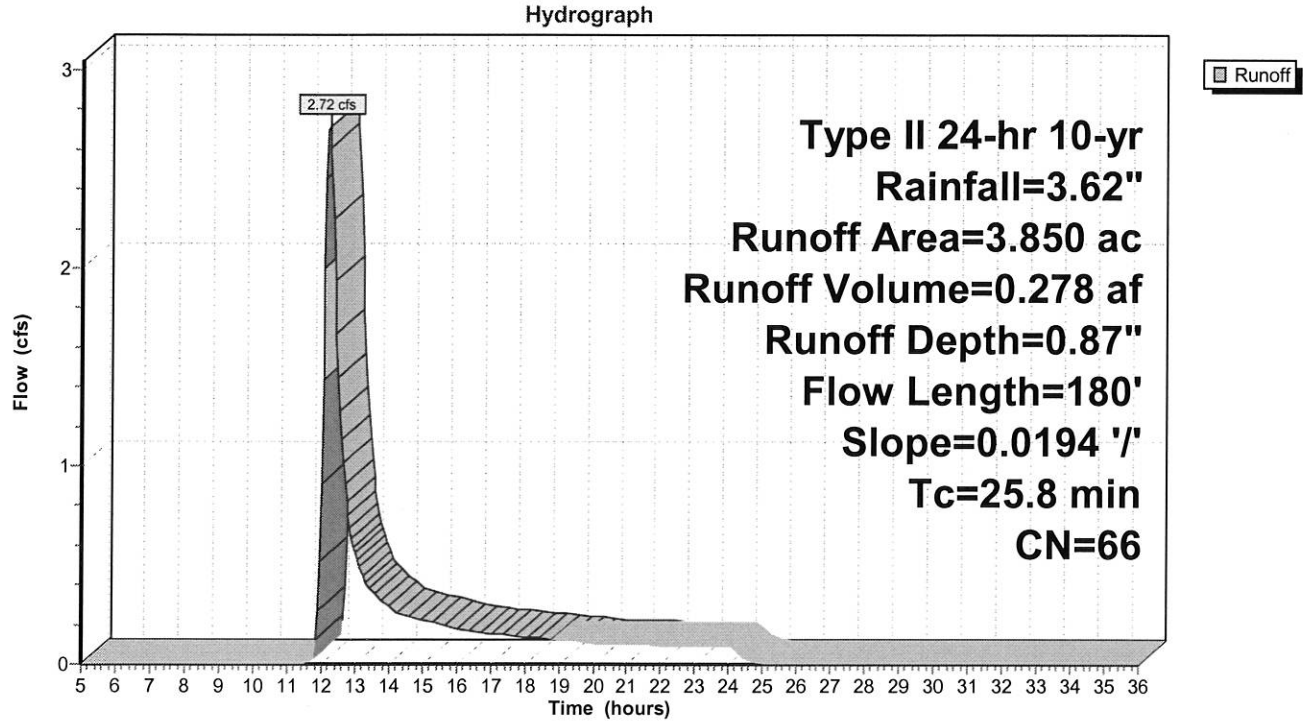
Runoff = 2.72 cfs @ 12.23 hrs, Volume= 0.278 af, Depth= 0.87"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=3.62"

Area (ac)	CN	Description
2.330	61	>75% Grass cover, Good, HSG B
1.520	74	>75% Grass cover, Good, HSG C
3.850	66	Weighted Average
3.850		Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
25.8	180	0.0194	0.12		**Sheet Flow, Grass** Grass: Dense n= 0.240 P2= 2.57"

Subcatchment P-5S: Area E (W)



Summary for Subcatchment P-6S: Area F (Mid Site)

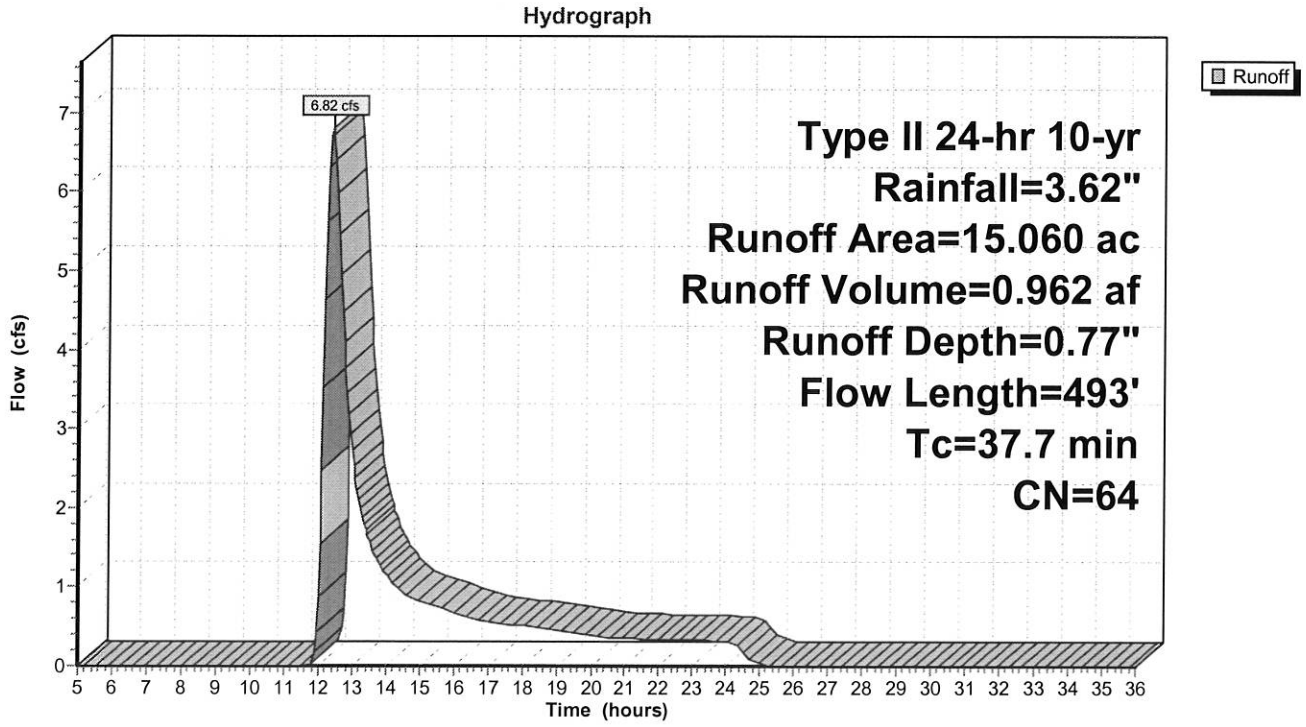
Runoff = 6.82 cfs @ 12.40 hrs, Volume= 0.962 af, Depth= 0.77"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=3.62"

	Area (ac)	CN	Description
	2.720	61	>75% Grass cover, Good, HSG B
	7.650	58	Woods/grass comb., Good, HSG B
*	0.500	98	
	4.190	72	Woods/grass comb., Good, HSG C
	15.060	64	Weighted Average
	14.560		Pervious Area
	0.500		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
36.5	212	0.0113	0.10		**Sheet Flow, baseball field, grass** Grass: Dense n= 0.240 P2= 2.57"
1.2	281	0.0569	3.84		**Shallow Concentrated Flow, grass** Unpaved Kv= 16.1 fps
37.7	493	Total			

Subcatchment P-6S: Area F (Mid Site)



Summary for Subcatchment P-7S: Area G

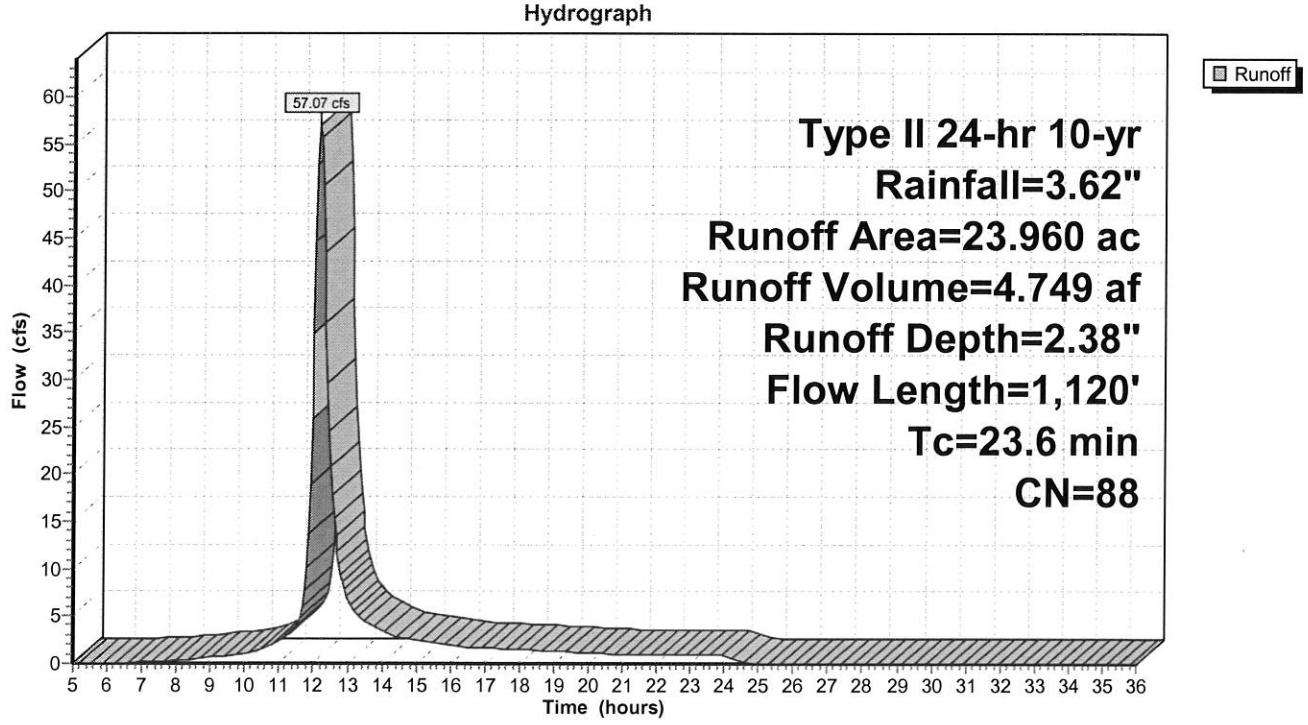
Runoff = 57.07 cfs @ 12.16 hrs, Volume= 4.749 af, Depth= 2.38"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=3.62"

	Area (ac)	CN	Description
*	14.630	98	
	1.000	61	>75% Grass cover, Good, HSG B
	8.330	74	>75% Grass cover, Good, HSG C
	23.960	88	Weighted Average
	9.330		Pervious Area
	14.630		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
22.2	240	0.0500	0.18		**Sheet Flow, grass** Grass: Dense n= 0.240 P2= 2.57"
1.4	880	0.0200	10.18	31.99	**Circular Channel (pipe), RCP** Diam= 24.0" Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.013
23.6	1,120	Total			

Subcatchment P-7S: Area G



Summary for Subcatchment P-8S: Area H (E)

[49] Hint: Tc<2dt may require smaller dt

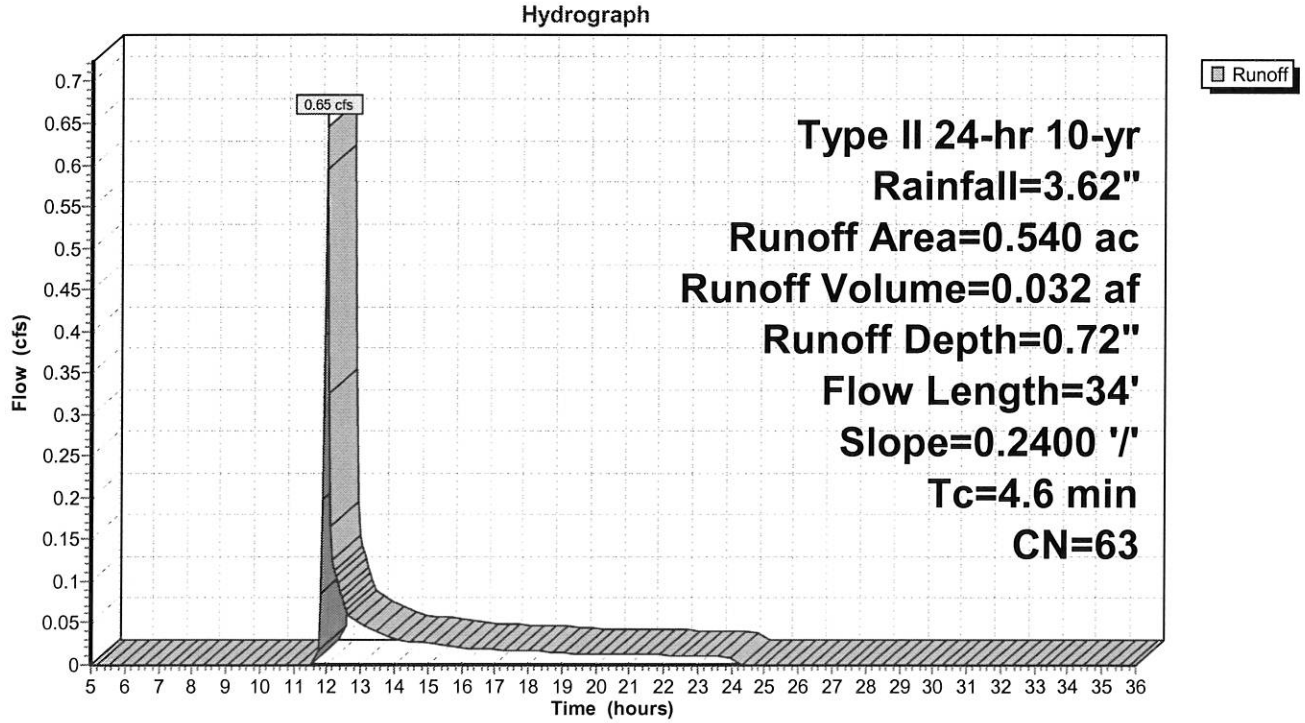
Runoff = 0.65 cfs @ 11.97 hrs, Volume= 0.032 af, Depth= 0.72"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=3.62"

Area (ac)	CN	Description
0.270	61	>75% Grass cover, Good, HSG B
0.120	55	Woods, Good, HSG B
0.150	72	Woods/grass comb., Good, HSG C
0.540	63	Weighted Average
0.540		Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.6	34	0.2400	0.12		**Sheet Flow, grass/woods** n= 0.520 P2= 2.57"

Subcatchment P-8S: Area H (E)



Summary for Pond 1P: Pond 3 (dry)

Inflow Area = 6.090 ac, 27.91% Impervious, Inflow Depth = 1.14" for 10-yr event
Inflow = 4.32 cfs @ 12.42 hrs, Volume= 0.578 af
Outflow = 1.90 cfs @ 12.98 hrs, Volume= 0.578 af, Atten= 56%, Lag= 33.1 min
Discarded = 0.17 cfs @ 12.98 hrs, Volume= 0.103 af
Primary = 1.72 cfs @ 12.98 hrs, Volume= 0.474 af
Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs
Peak Elev= 994.07' @ 12.98 hrs Surf.Area= 5,745 sf Storage= 6,323 cf

Plug-Flow detention time= 38.4 min calculated for 0.577 af (100% of inflow)
Center-of-Mass det. time= 38.6 min (926.7 - 888.1)

Volume	Invert	Avail.Storage	Storage Description
#1	992.50'	28,244 cf	**Custom Stage Data (Irregular)** Listed below

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
992.50	0	0.0	0	0	0
993.00	4,633	335.0	772	772	8,931
994.00	5,673	358.0	5,144	5,916	10,246
995.00	6,781	380.0	6,219	12,135	11,590
996.00	7,949	399.0	7,357	19,492	12,830
997.00	9,580	437.0	8,752	28,244	15,392

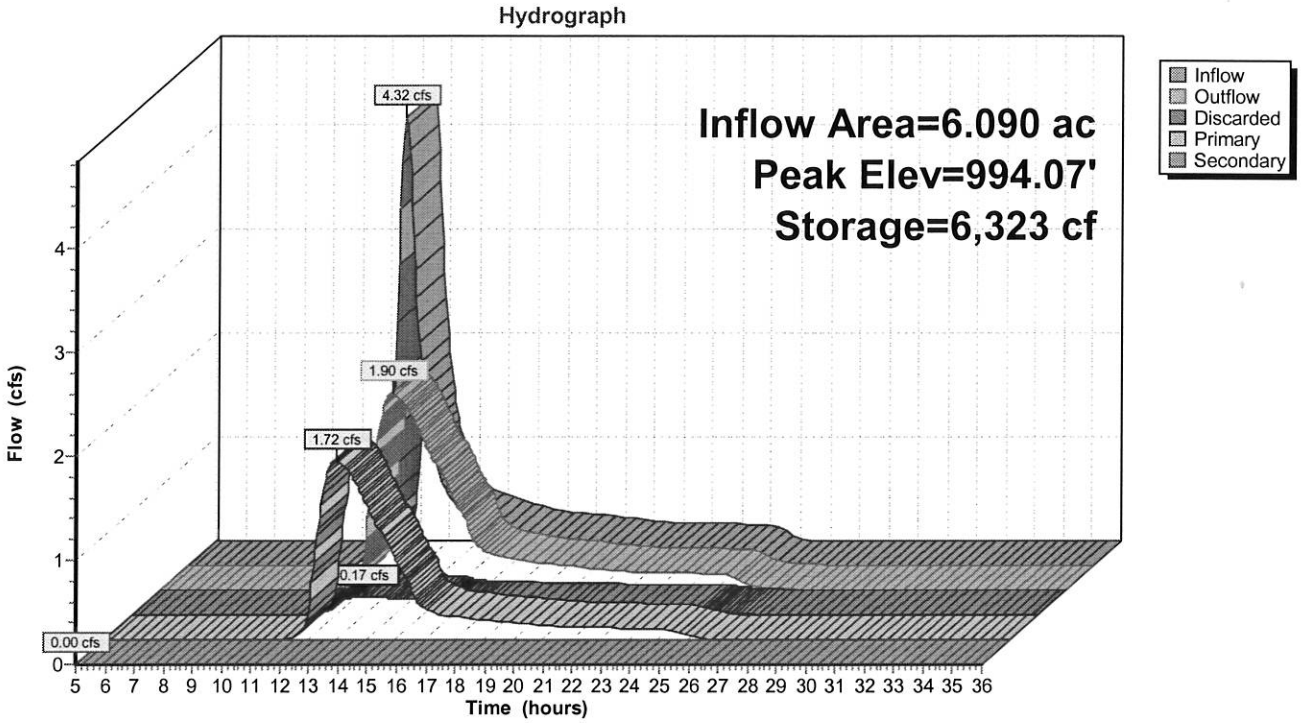
Device	Routing	Invert	Outlet Devices
#1	Discarded	992.50'	**1.296 in/hr Exfiltration over Surface area**
#2	Primary	992.50'	**8.0" x 35.0' long Culvert** CPP, end-section conforming to fill, Ke= 0.500 Outlet Invert= 992.32' S= 0.0051 '/' Cc= 0.900 n= 0.011
#3	Secondary	996.50'	**20.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Discarded OutFlow Max=0.17 cfs @ 12.98 hrs HW=994.06' (Free Discharge)
↑—**1=Exfiltration** (Exfiltration Controls 0.17 cfs)

Primary OutFlow Max=1.72 cfs @ 12.98 hrs HW=994.06' (Free Discharge)
↑—**2=Culvert** (Barrel Controls 1.72 cfs @ 4.94 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=992.50' (Free Discharge)
↑—**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 1P: Pond 3 (dry)



Summary for Pond 2P: Infiltration Basin

[81] Warning: Exceeded Pond P1 by 0.51' @ 31.65 hrs

Inflow Area = 23.960 ac, 61.06% Impervious, Inflow Depth > 2.15" for 10-yr event
Inflow = 3.75 cfs @ 13.82 hrs, Volume= 4.284 af
Outflow = 3.72 cfs @ 14.67 hrs, Volume= 4.026 af, Atten= 1%, Lag= 51.0 min
Discarded = 0.82 cfs @ 14.67 hrs, Volume= 1.584 af
Primary = 2.90 cfs @ 14.67 hrs, Volume= 2.441 af
Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs
Peak Elev= 998.28' @ 14.67 hrs Surf.Area= 9,850 sf Storage= 18,087 cf

Plug-Flow detention time= 117.7 min calculated for 4.026 af (94% of inflow)
Center-of-Mass det. time= 69.3 min (1,282.9 - 1,213.6)

Volume	Invert	Avail.Storage	Storage Description
#1	996.00'	51,736 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
996.00	6,106	382.0	0	0	6,106
997.00	7,685	407.0	6,880	6,880	7,724
998.00	9,364	433.0	8,511	15,391	9,512
999.00	11,150	458.0	10,244	25,635	11,340
1,000.00	13,035	483.0	12,080	37,715	13,270
1,001.00	15,030	508.0	14,021	51,736	15,303

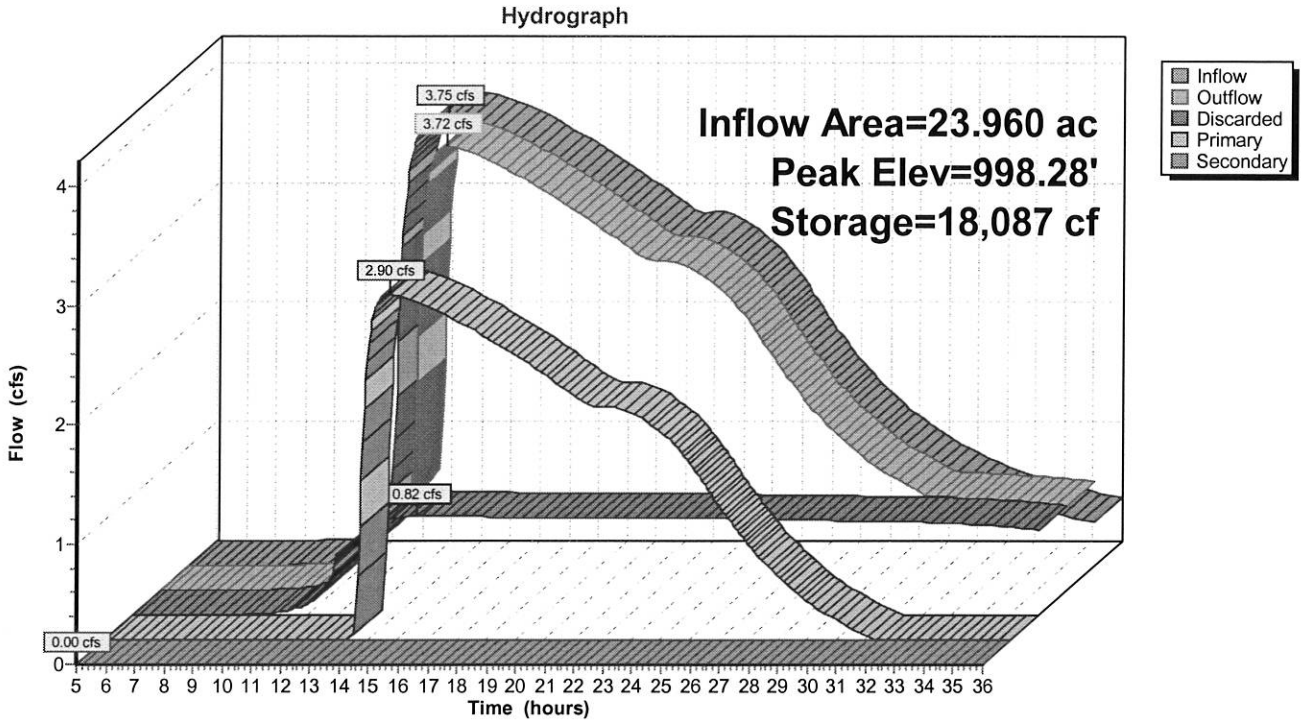
Device	Routing	Invert	Outlet Devices
#1	Primary	996.00'	**15.0" x 94.0' long Culvert** RCP, square edge headwall, Ke= 0.500 Outlet Invert= 995.51' S= 0.0052 '/' Cc= 0.900 n= 0.013 Concrete pipe, bends & connections
#2	Secondary	998.50'	**25.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64
#3	Device 1	998.00'	**6.0' long x 1.00' rise Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#4	Discarded	996.00'	**3.600 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.82 cfs @ 14.67 hrs HW=998.28' (Free Discharge)
↑—**4=Exfiltration** (Exfiltration Controls 0.82 cfs)

Primary OutFlow Max=2.89 cfs @ 14.67 hrs HW=998.28' (Free Discharge)
↑—**1=Culvert** (Passes 2.89 cfs of 6.32 cfs potential flow)
↑—**3=Sharp-Crested Rectangular Weir** (Weir Controls 2.89 cfs @ 1.73 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=996.00' (Free Discharge)
↑—**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 2P: Infiltration Basin



Summary for Pond P1: Pond 1

Inflow Area = 23.960 ac, 61.06% Impervious, Inflow Depth = 2.38" for 10-yr event
Inflow = 57.07 cfs @ 12.16 hrs, Volume= 4.749 af
Outflow = 3.75 cfs @ 13.82 hrs, Volume= 4.284 af, Atten= 93%, Lag= 99.4 min
Primary = 3.75 cfs @ 13.82 hrs, Volume= 4.284 af

Routing by Stor-Ind method, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs
Peak Elev= 999.02' @ 13.82 hrs Surf.Area= 69,688 sf Storage= 125,590 cf

Plug-Flow detention time= 439.4 min calculated for 4.277 af (90% of inflow)
Center-of-Mass det. time= 390.3 min (1,213.6 - 823.3)

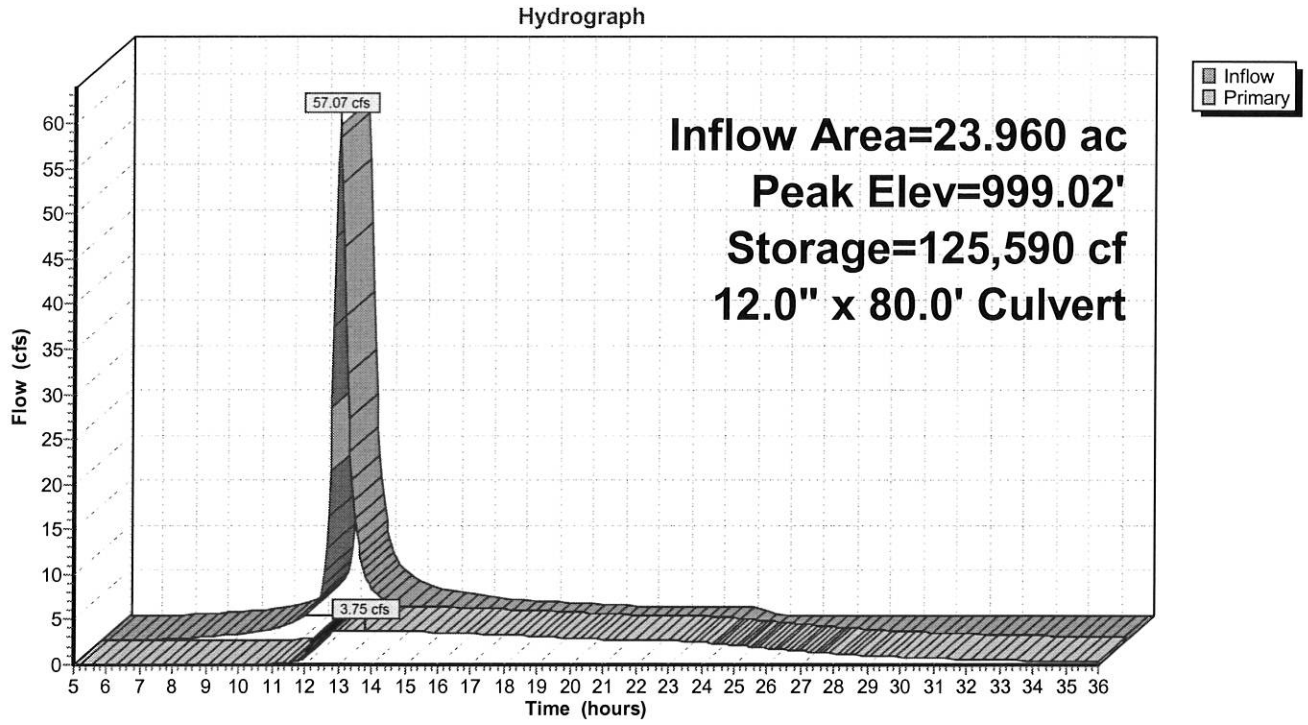
Volume	Invert	Avail.Storage	Storage Description
#1	997.00'	671,679 cf	**Custom Stage Data (Irregular)** Listed below

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
997.00	54,341	1,290.9	0	0	54,341
998.00	62,100	1,365.2	58,177	58,177	70,102
999.00	69,541	1,434.3	65,785	123,963	85,559
1,000.00	76,123	1,481.8	72,807	196,770	96,678
1,001.00	82,827	1,527.5	79,451	276,221	107,724
1,002.00	89,703	1,570.1	86,242	362,464	118,339
1,003.00	96,677	1,614.3	93,168	455,632	129,652
1,004.00	105,446	1,687.5	101,030	556,662	148,956
1,005.00	124,863	1,808.9	115,018	671,679	182,779

Device	Routing	Invert	Outlet Devices
#1	Primary	997.00'	**12.0" x 80.0' long Culvert** RCP, end-section conforming to fill, Ke= 0.500 Outlet Invert= 996.60' S= 0.0050 '/' Cc= 0.900 n= 0.013

Primary OutFlow Max=3.75 cfs @ 13.82 hrs HW=999.02' (Free Discharge)
↑—**1=Culvert** (Barrel Controls 3.75 cfs @ 4.78 fps)

Pond P1: Pond 1



Summary for Pond P2: Pond 2 (Dry)

Inflow Area = 16.220 ac, 6.17% Impervious, Inflow Depth = 0.92" for 10-yr event
Inflow = 7.88 cfs @ 12.54 hrs, Volume= 1.241 af
Outflow = 6.65 cfs @ 12.76 hrs, Volume= 1.241 af, Atten= 16%, Lag= 13.1 min
Primary = 6.65 cfs @ 12.76 hrs, Volume= 1.241 af

Routing by Stor-Ind method, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs
Peak Elev= 1,003.12' @ 12.76 hrs Surf.Area= 5,041 sf Storage= 2,845 cf

Plug-Flow detention time= 7.0 min calculated for 1.239 af (100% of inflow)
Center-of-Mass det. time= 7.2 min (920.5 - 913.4)

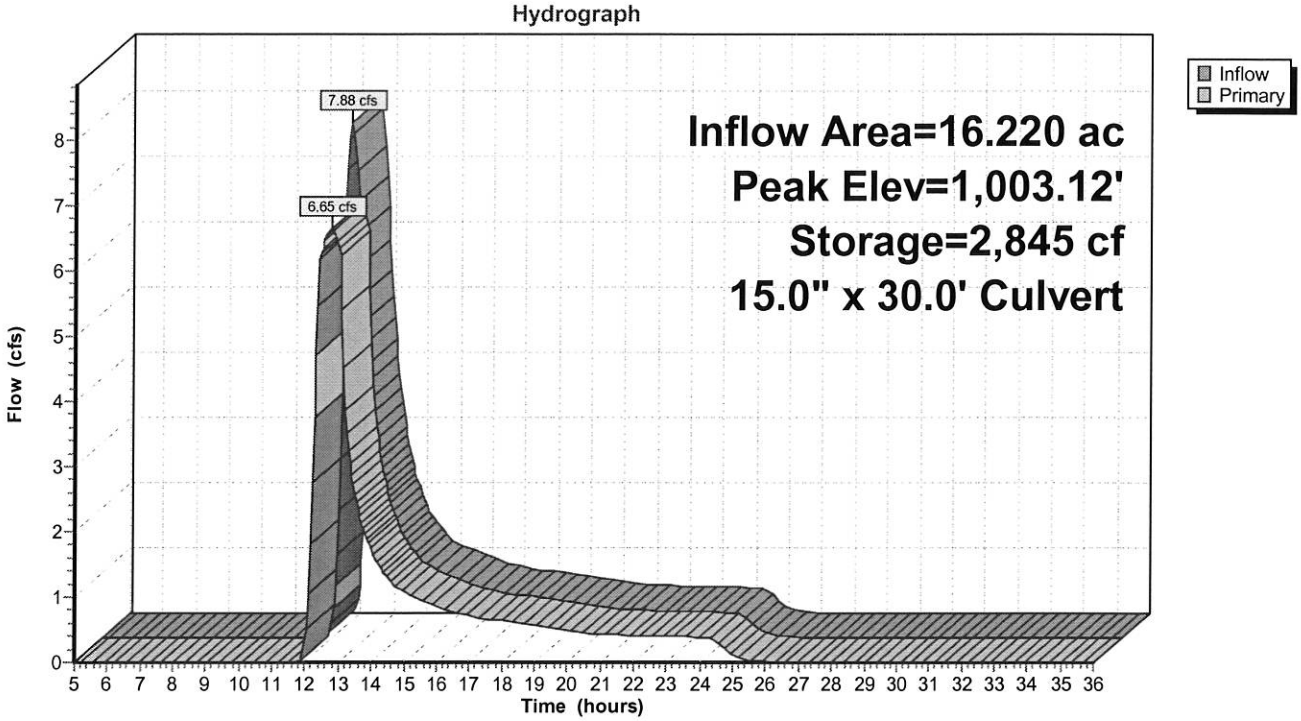
Volume	Invert	Avail.Storage	Storage Description
#1	1,001.16'	39,351 cf	**Custom Stage Data (Irregular)** Listed below

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
1,001.16	0	0.0	0	0	0
1,003.00	2,423	227.0	1,486	1,486	4,106
1,004.00	25,153	979.0	11,794	13,280	76,278
1,005.00	27,000	1,000.0	26,071	39,351	79,730

Device	Routing	Invert	Outlet Devices
#1	Primary	1,001.16'	**15.0" x 30.0' long Culvert** RCP, groove end projecting, Ke= 0.200 Outlet Invert= 1,001.00' S= 0.0053 '/' Cc= 0.900 n= 0.013

Primary OutFlow Max=6.64 cfs @ 12.76 hrs HW=1,003.11' (Free Discharge)
↑—**1=Culvert** (Barrel Controls 6.64 cfs @ 5.41 fps)

Pond P2: Pond 2 (Dry)

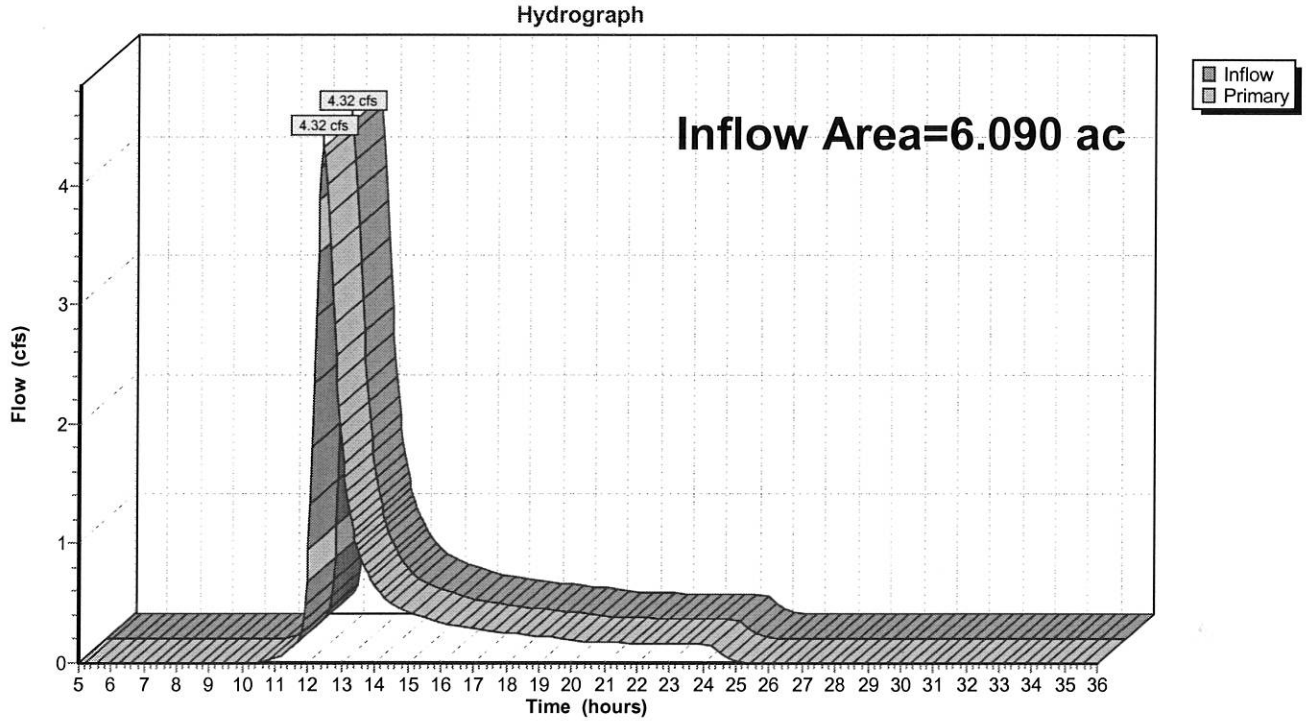


Summary for Link P-1L: North Discharge

Inflow Area = 6.090 ac, 27.91% Impervious, Inflow Depth = 1.14" for 10-yr event
Inflow = 4.32 cfs @ 12.42 hrs, Volume= 0.578 af
Primary = 4.32 cfs @ 12.42 hrs, Volume= 0.578 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs

Link P-1L: North Discharge

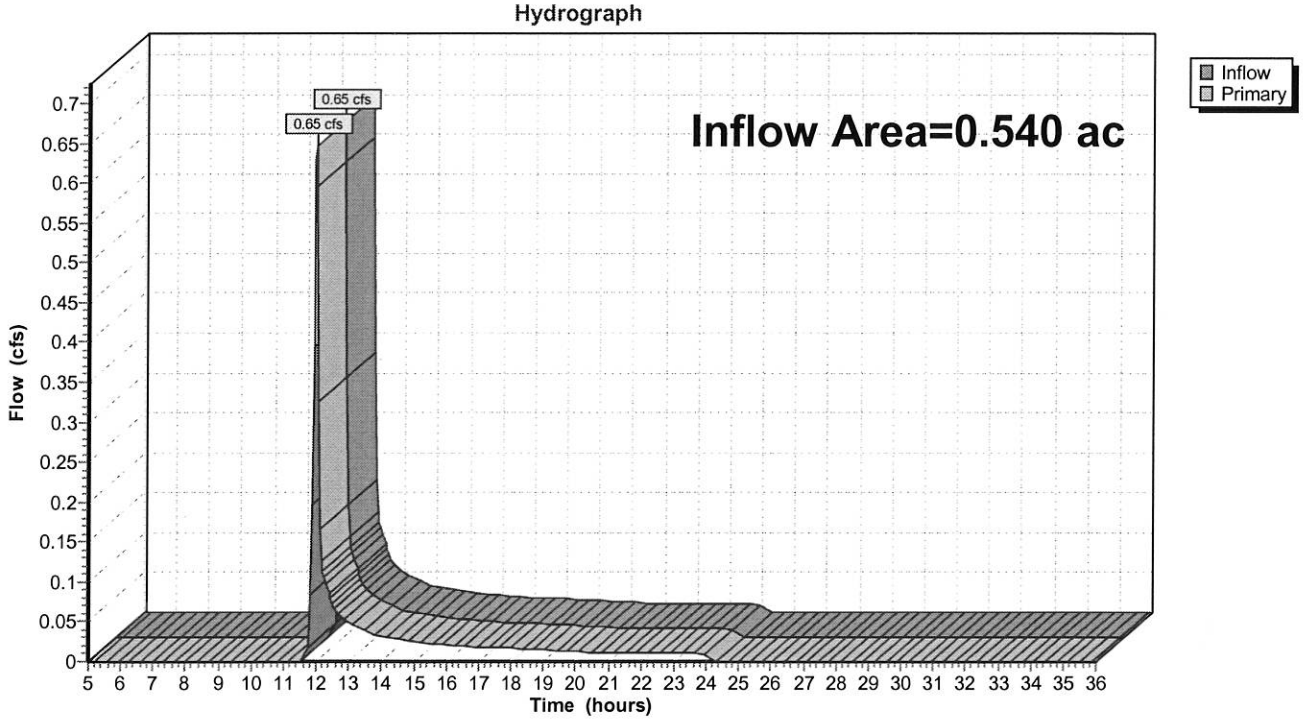


Summary for Link P-3L: East Discharge

Inflow Area = 0.540 ac, 0.00% Impervious, Inflow Depth = 0.72" for 10-yr event
Inflow = 0.65 cfs @ 11.97 hrs, Volume= 0.032 af
Primary = 0.65 cfs @ 11.97 hrs, Volume= 0.032 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs

Link P-3L: East Discharge

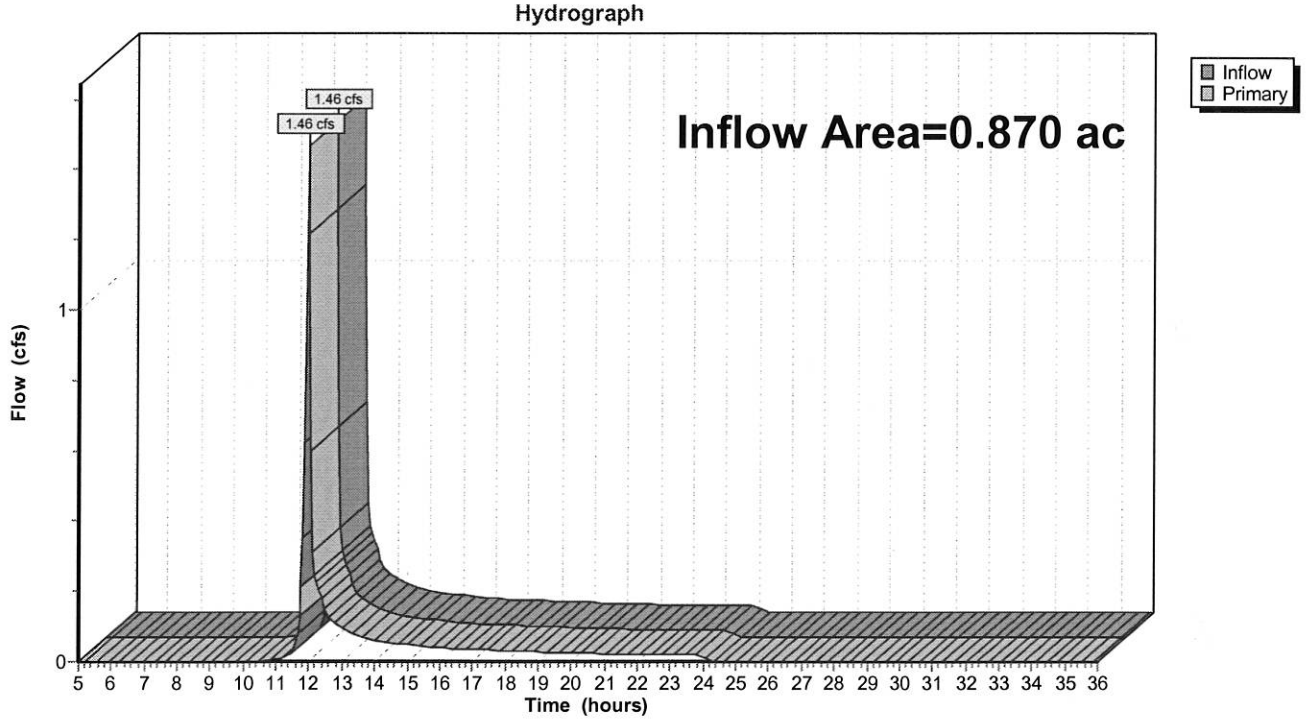


Summary for Link P-4L: South & East Discharge

Inflow Area = 0.870 ac, 0.00% Impervious, Inflow Depth = 0.95" for 10-yr event
Inflow = 1.46 cfs @ 11.96 hrs, Volume= 0.069 af
Primary = 1.46 cfs @ 11.96 hrs, Volume= 0.069 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs

Link P-4L: South & East Discharge

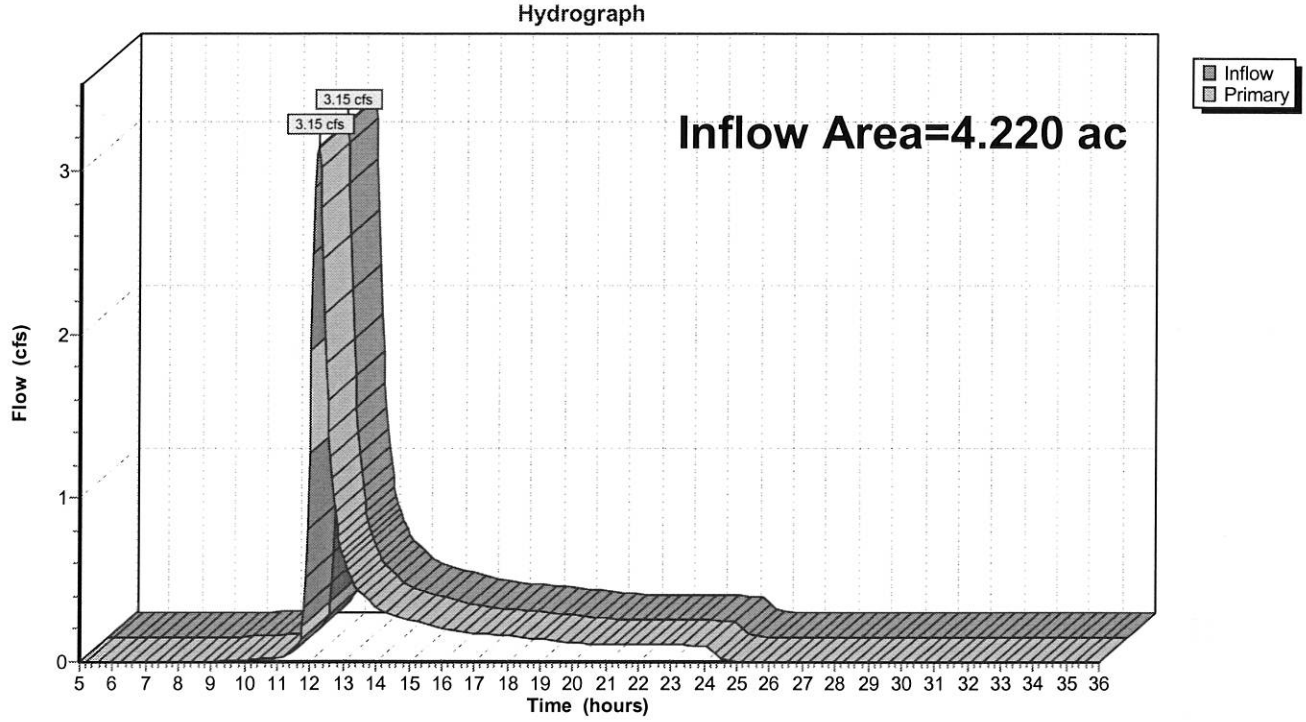


Summary for Link P-5L: West Discharge

Inflow Area = 4.220 ac, 3.55% Impervious, Inflow Depth = 0.97" for 10-yr event
Inflow = 3.15 cfs @ 12.19 hrs, Volume= 0.341 af
Primary = 3.15 cfs @ 12.19 hrs, Volume= 0.341 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs

Link P-5L: West Discharge

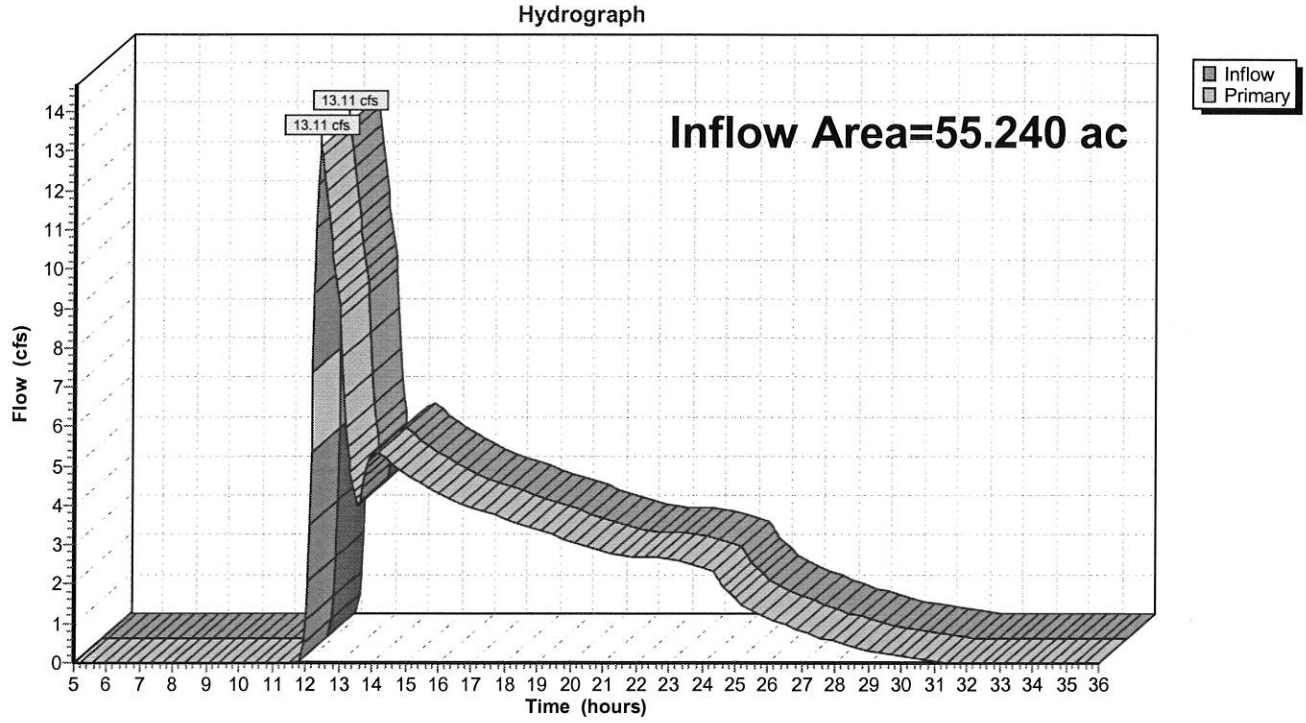


Summary for Link P-6L: Mid Site Discharge

Inflow Area = 55.240 ac, 29.20% Impervious, Inflow Depth = 1.01" for 10-yr event
Inflow = 13.11 cfs @ 12.42 hrs, Volume= 4.645 af
Primary = 13.11 cfs @ 12.42 hrs, Volume= 4.645 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs

Link P-6L: Mid Site Discharge

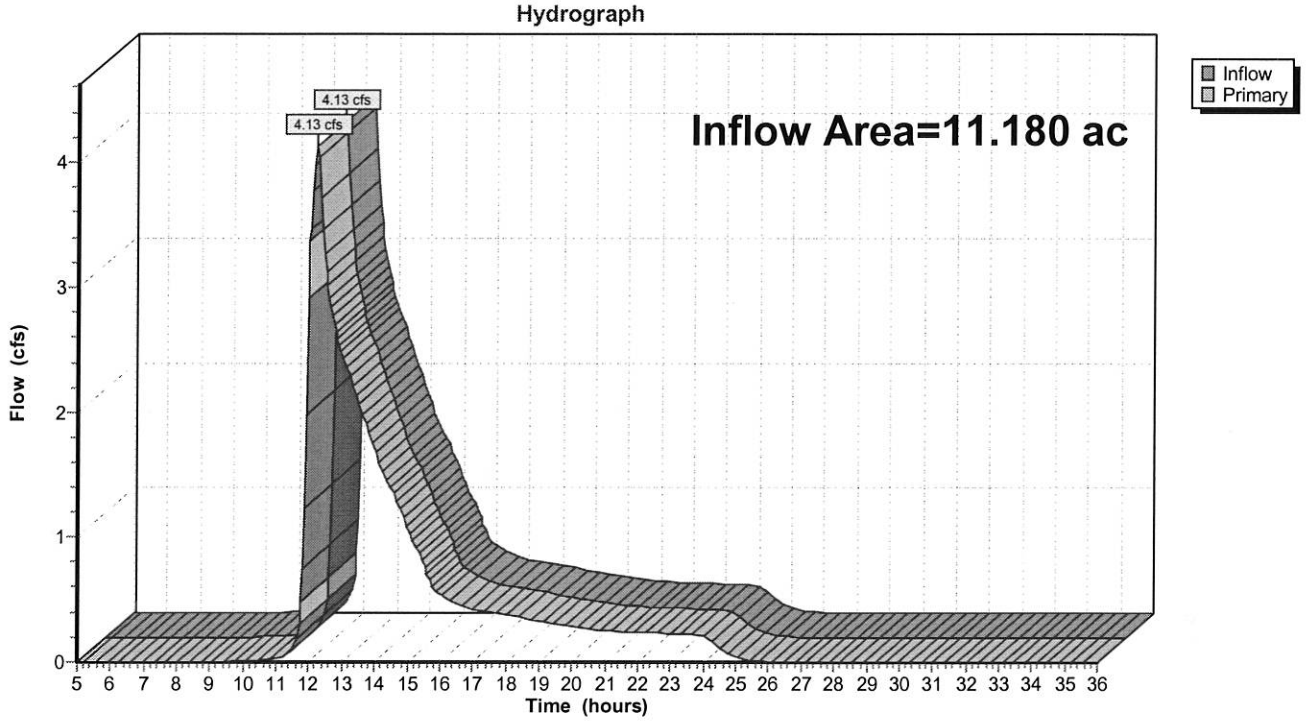


Summary for Link P-7L: Proposed Discharge (Site)

Inflow Area = 11.180 ac, 16.55% Impervious, Inflow Depth = 0.95" for 10-yr event
Inflow = 4.13 cfs @ 12.22 hrs, Volume= 0.884 af
Primary = 4.13 cfs @ 12.22 hrs, Volume= 0.884 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs

Link P-7L: Proposed Discharge (Site)

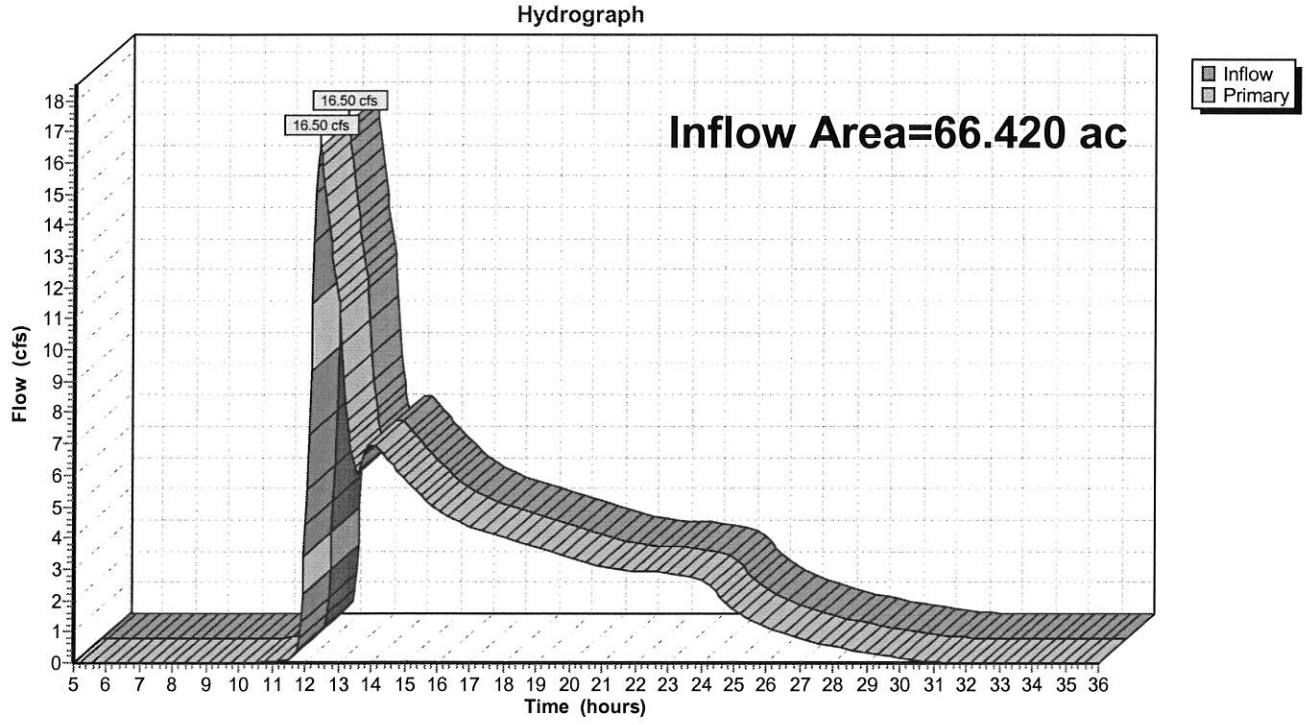


Summary for Link P-8L: Proposed Discharge Total

Inflow Area = 66.420 ac, 27.07% Impervious, Inflow Depth = 1.00" for 10-yr event
Inflow = 16.50 cfs @ 12.41 hrs, Volume= 5.529 af
Primary = 16.50 cfs @ 12.41 hrs, Volume= 5.529 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs

Link P-8L: Proposed Discharge Total



Time span=5.00-36.00 hrs, dt=0.05 hrs, 621 points
Runoff by SCS TR-20 method, UH=SCS
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment P-10S: Area J (S) Runoff Area=0.330 ac 0.00% Impervious Runoff Depth=3.08"
Flow Length=52' Tc=3.7 min CN=74 Runoff=1.92 cfs 0.085 af

Subcatchment P-11S: Area K, Offsite (W) Runoff Area=0.370 ac 40.54% Impervious Runoff Depth=4.08"
Flow Length=80' Slope=0.0250 '/' Tc=12.2 min CN=84 Runoff=2.08 cfs 0.126 af

Subcatchment P-2S: Area B (Mid Site) Runoff Area=16.220 ac 6.17% Impervious Runoff Depth=2.44"
Flow Length=1,009' Tc=48.6 min CN=67 Runoff=23.82 cfs 3.298 af

Subcatchment P-3S: Area C (N) Runoff Area=4.290 ac 39.63% Impervious Runoff Depth=3.28"
Flow Length=412' Slope=0.0160 '/' Tc=42.8 min CN=76 Runoff=9.57 cfs 1.171 af

Subcatchment P-4S: Area D, Offsite (N) Runoff Area=1.800 ac 0.00% Impervious Runoff Depth=1.45"
Flow Length=150' Slope=0.0432 '/' Tc=42.4 min CN=55 Runoff=1.51 cfs 0.217 af

Subcatchment P-5S: Area E (W) Runoff Area=3.850 ac 0.00% Impervious Runoff Depth=2.35"
Flow Length=180' Slope=0.0194 '/' Tc=25.8 min CN=66 Runoff=8.40 cfs 0.754 af

Subcatchment P-6S: Area F (Mid Site) Runoff Area=15.060 ac 3.32% Impervious Runoff Depth=2.18"
Flow Length=493' Tc=37.7 min CN=64 Runoff=23.22 cfs 2.734 af

Subcatchment P-7S: Area G Runoff Area=23.960 ac 61.06% Impervious Runoff Depth>4.51"
Flow Length=1,120' Tc=23.6 min CN=88 Runoff=105.97 cfs 9.000 af

Subcatchment P-8S: Area H (E) Runoff Area=0.540 ac 0.00% Impervious Runoff Depth=2.09"
Flow Length=34' Slope=0.2400 '/' Tc=4.6 min CN=63 Runoff=2.06 cfs 0.094 af

Pond 1P: Pond 3 (dry) Peak Elev=996.16' Storage=20,896 cf Inflow=11.06 cfs 1.389 af
Discarded=0.25 cfs 0.171 af Primary=2.96 cfs 1.218 af Secondary=0.00 cfs 0.000 af Outflow=3.20 cfs 1.389 af

Pond 2P: Infiltration Basin Peak Elev=998.39' Storage=19,157 cf Inflow=5.53 cfs 8.091 af
Discarded=0.84 cfs 1.729 af Primary=4.69 cfs 5.990 af Secondary=0.00 cfs 0.000 af Outflow=5.53 cfs 7.719 af

Pond P1: Pond 1 Peak Elev=1,000.69' Storage=251,382 cf Inflow=105.97 cfs 9.000 af
12.0" x 80.0' Culvert Outflow=5.53 cfs 8.091 af

Pond P2: Pond 2 (Dry) Peak Elev=1,004.66' Storage=30,570 cf Inflow=23.82 cfs 3.298 af
15.0" x 30.0' Culvert Outflow=11.10 cfs 3.298 af

Link P-1L: North Discharge Inflow=11.06 cfs 1.389 af
Primary=11.06 cfs 1.389 af

Link P-3L: East Discharge Inflow=2.06 cfs 0.094 af
Primary=2.06 cfs 0.094 af

Link P-4L: South & East Discharge Inflow=3.97 cfs 0.179 af
Primary=3.97 cfs 0.179 af

Link P-5L: West Discharge
Inflow=9.32 cfs 0.880 af
Primary=9.32 cfs 0.880 af

Link P-6L: Mid Site Discharge
Inflow=31.82 cfs 12.022 af
Primary=31.82 cfs 12.022 af

Link P-7L: Proposed Discharge (Site)
Inflow=11.22 cfs 2.278 af
Primary=11.22 cfs 2.278 af

Link P-8L: Proposed Discharge Total
Inflow=40.87 cfs 14.299 af
Primary=40.87 cfs 14.299 af

Total Runoff Area = 66.420 ac Runoff Volume = 17.480 af Average Runoff Depth = 3.16"
72.93% Pervious = 48.440 ac 27.07% Impervious = 17.980 ac

Summary for Subcatchment P-10S: Area J (S)

[49] Hint: Tc<2dt may require smaller dt

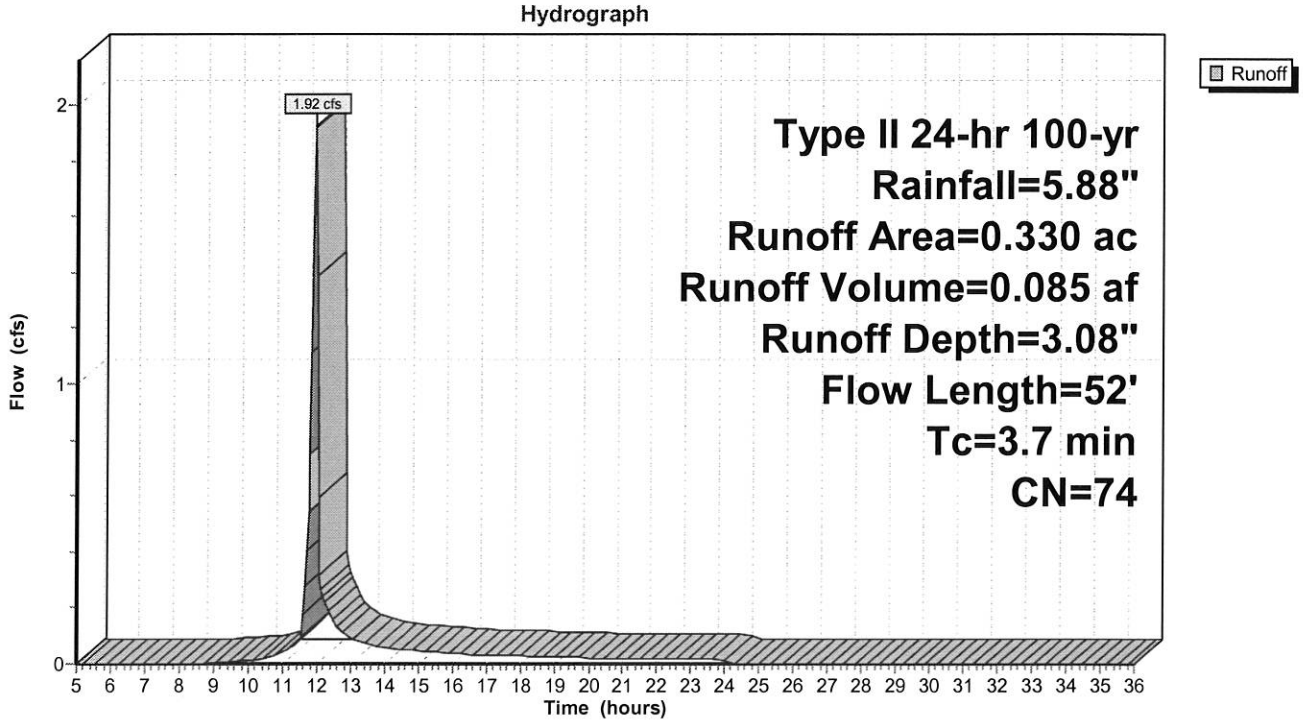
Runoff = 1.92 cfs @ 11.94 hrs, Volume= 0.085 af, Depth= 3.08"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=5.88"

Area (ac)	CN	Description
0.330	74	>75% Grass cover, Good, HSG C
0.330		Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.6	40	0.0500	0.18		**Sheet Flow, grass** Grass: Short n= 0.150 P2= 2.57"
0.1	12	0.0340	2.97		**Shallow Concentrated Flow, grass** Unpaved Kv= 16.1 fps
3.7	52	Total			

Subcatchment P-10S: Area J (S)



Summary for Subcatchment P-11S: Area K, Offsite (W)

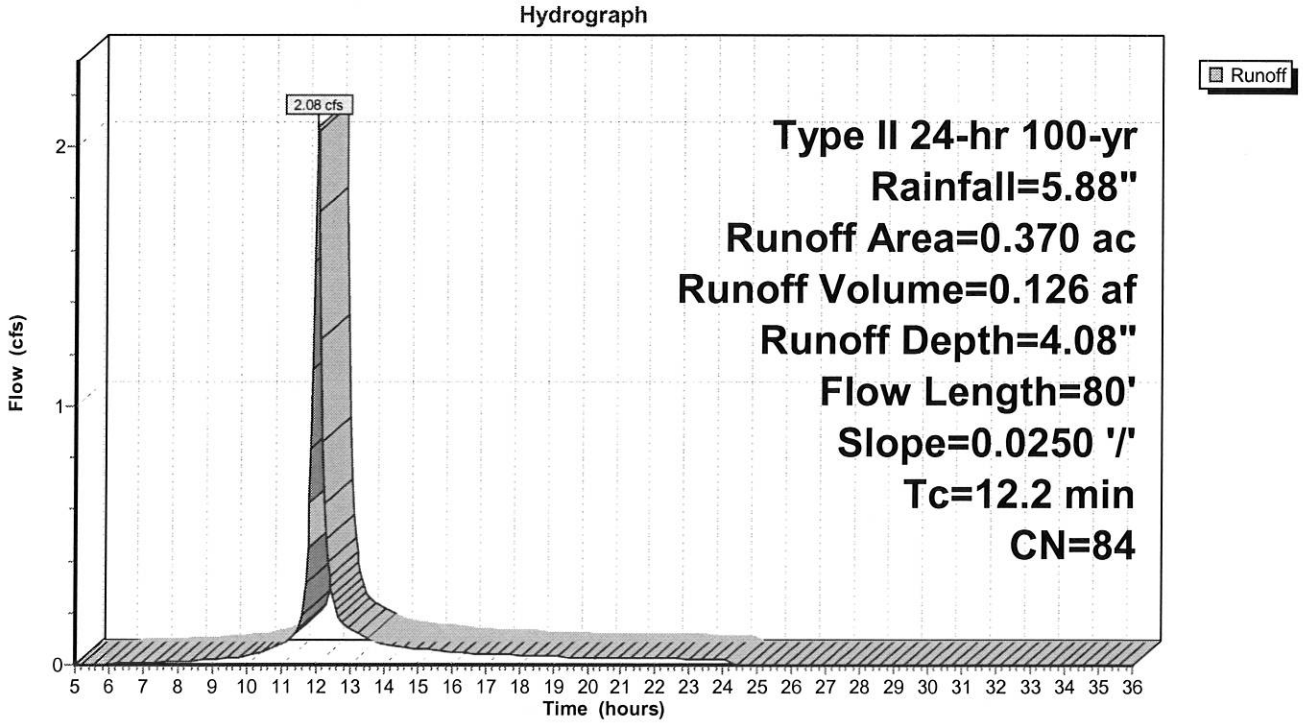
Runoff = 2.08 cfs @ 12.04 hrs, Volume= 0.126 af, Depth= 4.08"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=5.88"

	Area (ac)	CN	Description
	0.220	74	>75% Grass cover, Good, HSG C
*	0.150	98	
	0.370	84	Weighted Average
	0.220		Pervious Area
	0.150		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.2	80	0.0250	0.11		**Sheet Flow, grass** Grass: Dense n= 0.240 P2= 2.57"

Subcatchment P-11S: Area K, Offsite (W)



Summary for Subcatchment P-2S: Area B (Mid Site)

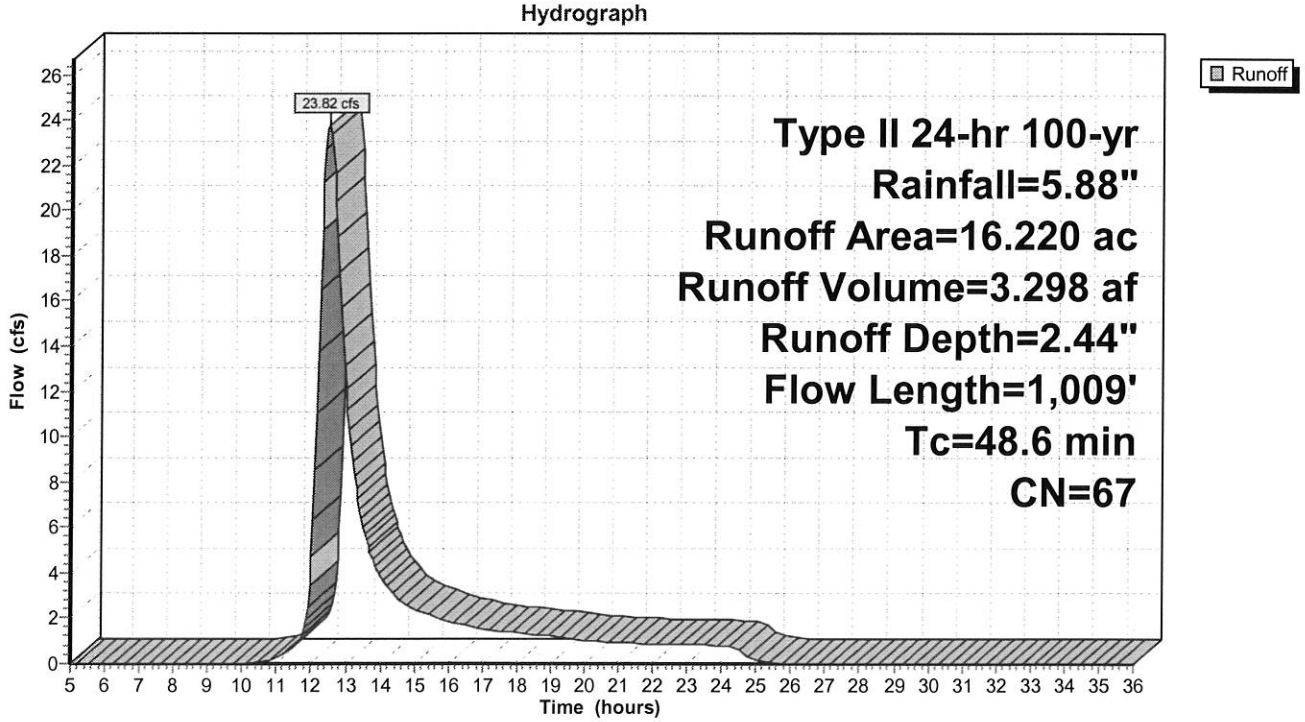
Runoff = 23.82 cfs @ 12.49 hrs, Volume= 3.298 af, Depth= 2.44"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=5.88"

	Area (ac)	CN	Description
	10.000	61	>75% Grass cover, Good, HSG B
*	1.000	98	
	5.220	74	>75% Grass cover, Good, HSG C
	16.220	67	Weighted Average
	15.220		Pervious Area
	1.000		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
43.0	300	0.0150	0.12		**Sheet Flow, Soccer Field** Grass: Dense n= 0.240 P2= 2.57"
5.6	709	0.0169	2.09		**Shallow Concentrated Flow, shallow conentrated** Unpaved Kv= 16.1 fps
48.6	1,009	Total			

Subcatchment P-2S: Area B (Mid Site)



Summary for Subcatchment P-3S: Area C (N)

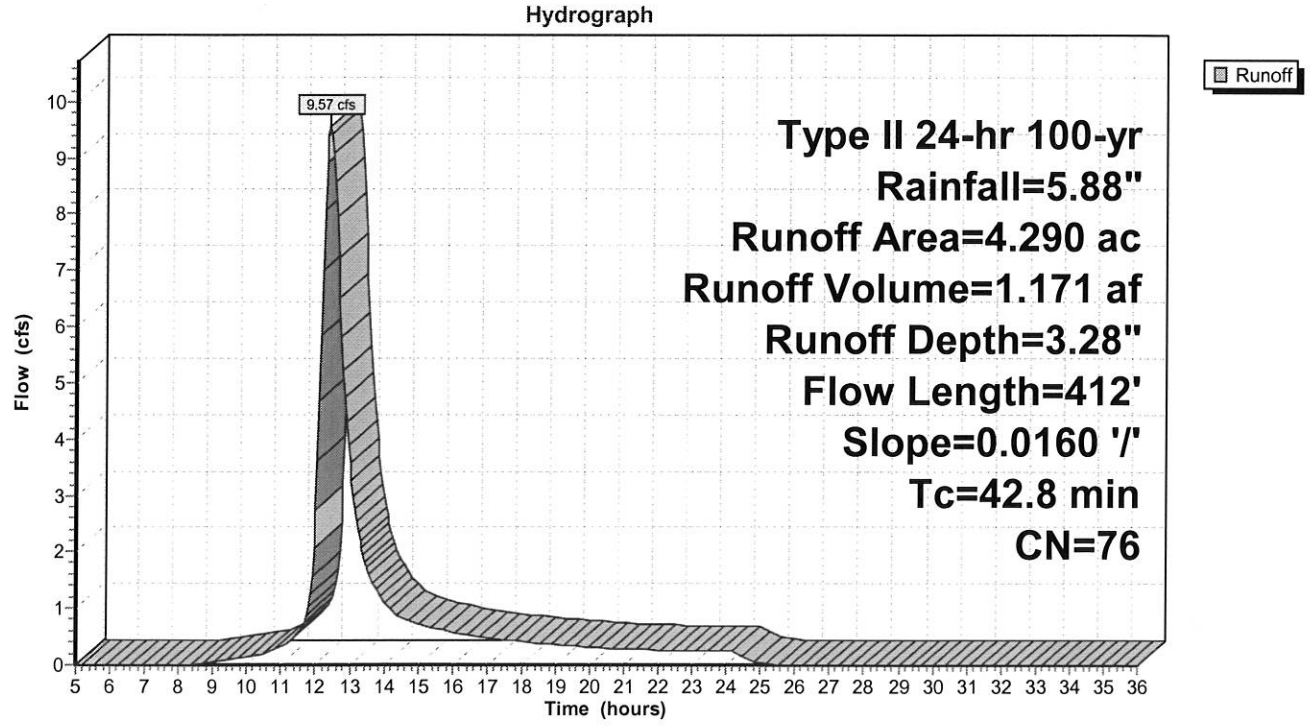
Runoff = 9.57 cfs @ 12.40 hrs, Volume= 1.171 af, Depth= 3.28"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=5.88"

	Area (ac)	CN	Description
	2.590	61	>75% Grass cover, Good, HSG B
*	1.700	98	
	4.290	76	Weighted Average
	2.590		Pervious Area
	1.700		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
41.9	300	0.0160	0.12		**Sheet Flow, Soccer Field** Grass: Dense n= 0.240 P2= 2.57"
0.9	112	0.0160	2.04		**Shallow Concentrated Flow, Soccer Field** Unpaved Kv= 16.1 fps
42.8	412	Total			

Subcatchment P-3S: Area C (N)



Summary for Subcatchment P-4S: Area D, Offsite (N)

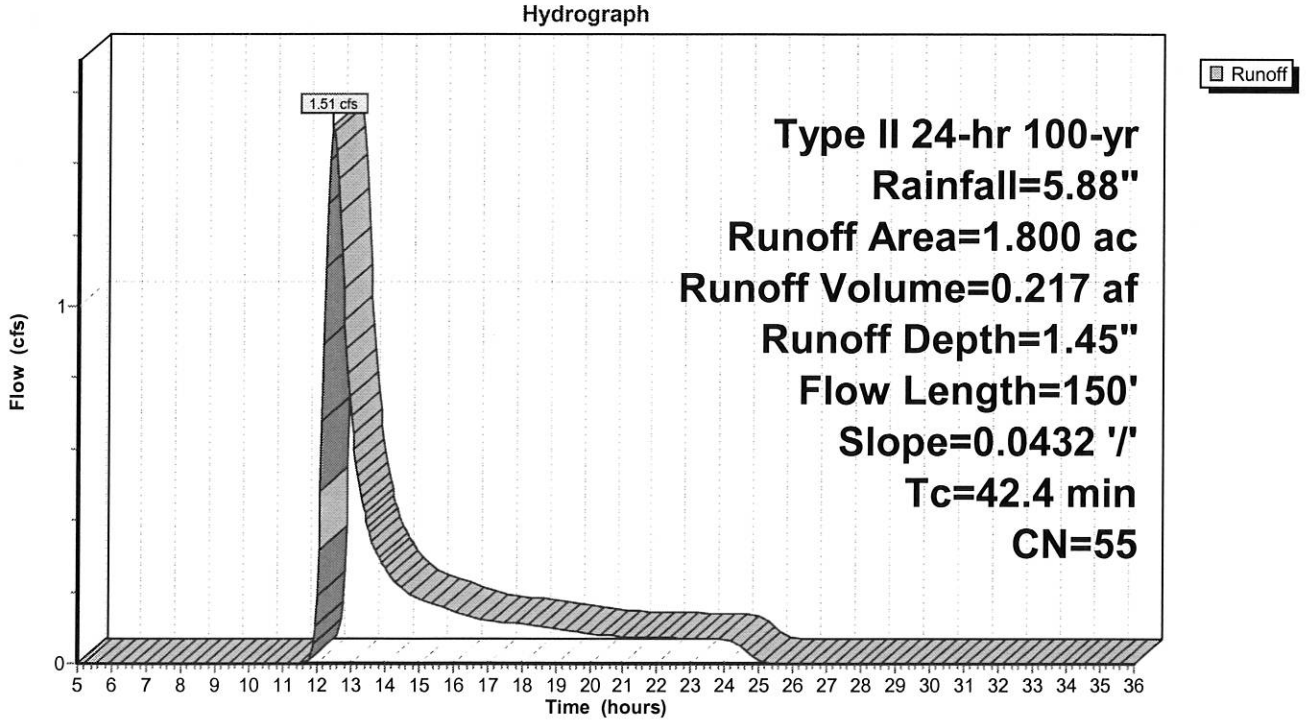
Runoff = 1.51 cfs @ 12.45 hrs, Volume= 0.217 af, Depth= 1.45"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=5.88"

Area (ac)	CN	Description
1.800	55	Woods, Good, HSG B
1.800		Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
42.4	150	0.0432	0.06		**Sheet Flow, Woods** Woods: Dense underbrush n= 0.800 P2= 2.57"

Subcatchment P-4S: Area D, Offsite (N)



Summary for Subcatchment P-5S: Area E (W)

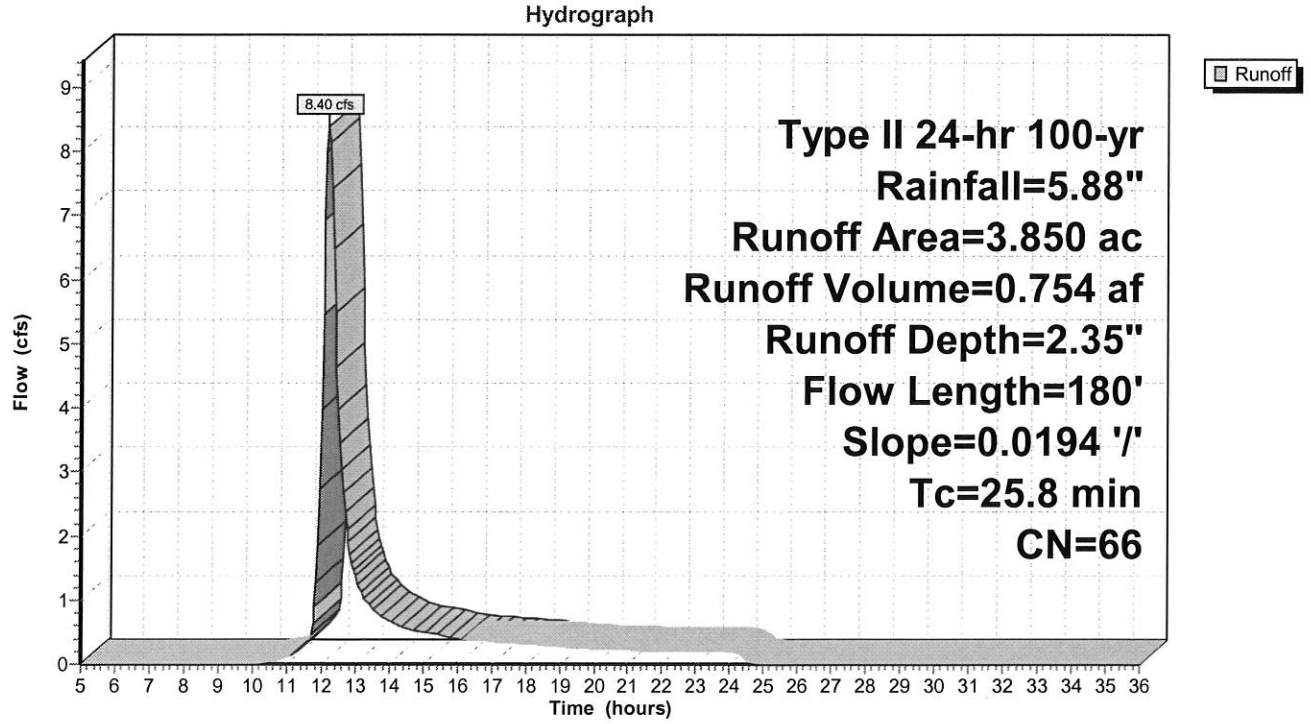
Runoff = 8.40 cfs @ 12.21 hrs, Volume= 0.754 af, Depth= 2.35"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=5.88"

Area (ac)	CN	Description
2.330	61	>75% Grass cover, Good, HSG B
1.520	74	>75% Grass cover, Good, HSG C
3.850	66	Weighted Average
3.850		Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
25.8	180	0.0194	0.12		**Sheet Flow, Grass** Grass: Dense n= 0.240 P2= 2.57"

Subcatchment P-5S: Area E (W)



Summary for Subcatchment P-6S: Area F (Mid Site)

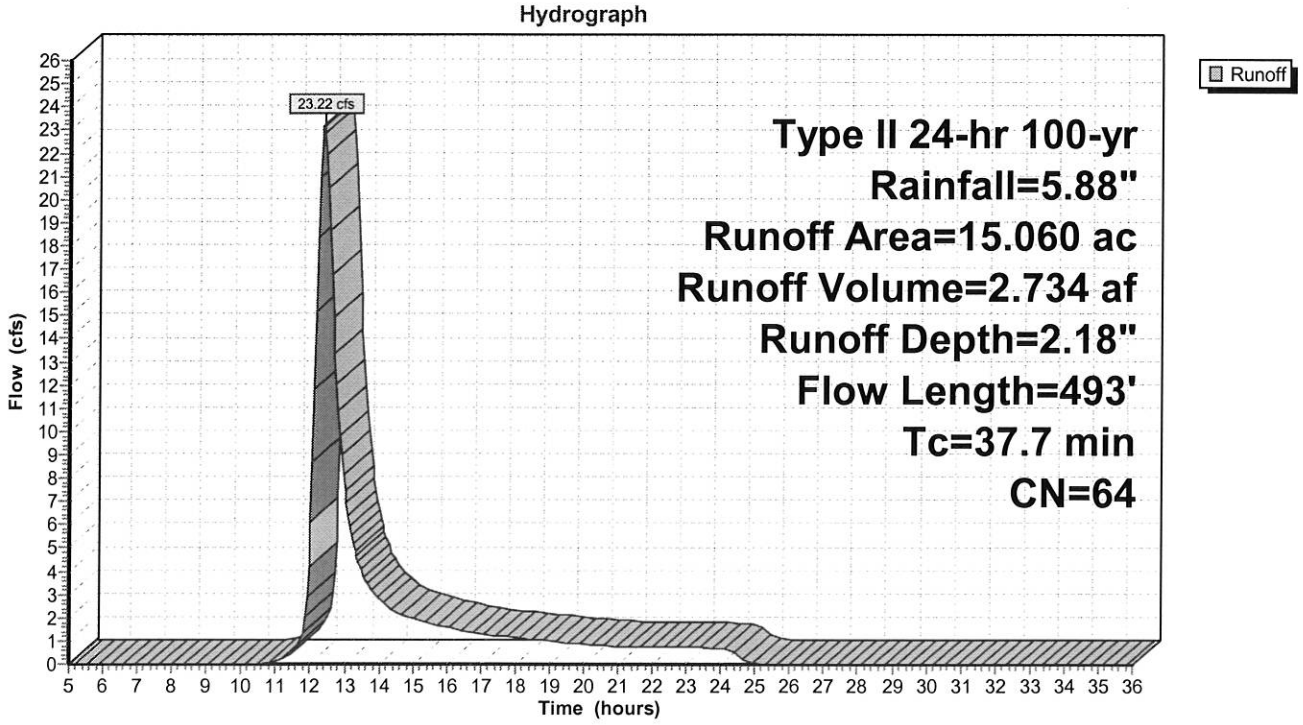
Runoff = 23.22 cfs @ 12.36 hrs, Volume= 2.734 af, Depth= 2.18"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=5.88"

	Area (ac)	CN	Description
	2.720	61	>75% Grass cover, Good, HSG B
	7.650	58	Woods/grass comb., Good, HSG B
*	0.500	98	
	4.190	72	Woods/grass comb., Good, HSG C
	15.060	64	Weighted Average
	14.560		Pervious Area
	0.500		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
36.5	212	0.0113	0.10		**Sheet Flow, baseball field, grass** Grass: Dense n= 0.240 P2= 2.57"
1.2	281	0.0569	3.84		**Shallow Concentrated Flow, grass** Unpaved Kv= 16.1 fps
37.7	493	Total			

Subcatchment P-6S: Area F (Mid Site)



Summary for Subcatchment P-7S: Area G

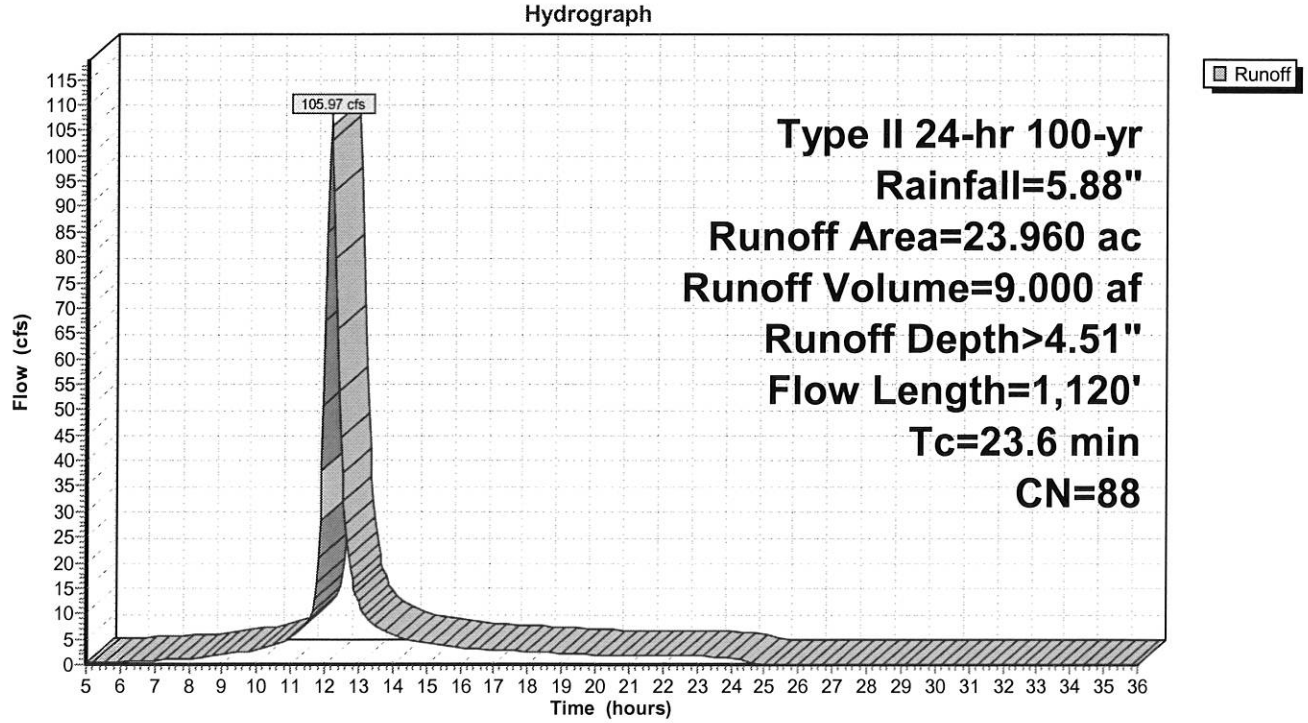
Runoff = 105.97 cfs @ 12.16 hrs, Volume= 9.000 af, Depth> 4.51"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=5.88"

	Area (ac)	CN	Description
*	14.630	98	
	1.000	61	>75% Grass cover, Good, HSG B
	8.330	74	>75% Grass cover, Good, HSG C
	23.960	88	Weighted Average
	9.330		Pervious Area
	14.630		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
22.2	240	0.0500	0.18		**Sheet Flow, grass** Grass: Dense n= 0.240 P2= 2.57"
1.4	880	0.0200	10.18	31.99	**Circular Channel (pipe), RCP** Diam= 24.0" Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.013
23.6	1,120	Total			

Subcatchment P-7S: Area G



Summary for Subcatchment P-8S: Area H (E)

[49] Hint: Tc<2dt may require smaller dt

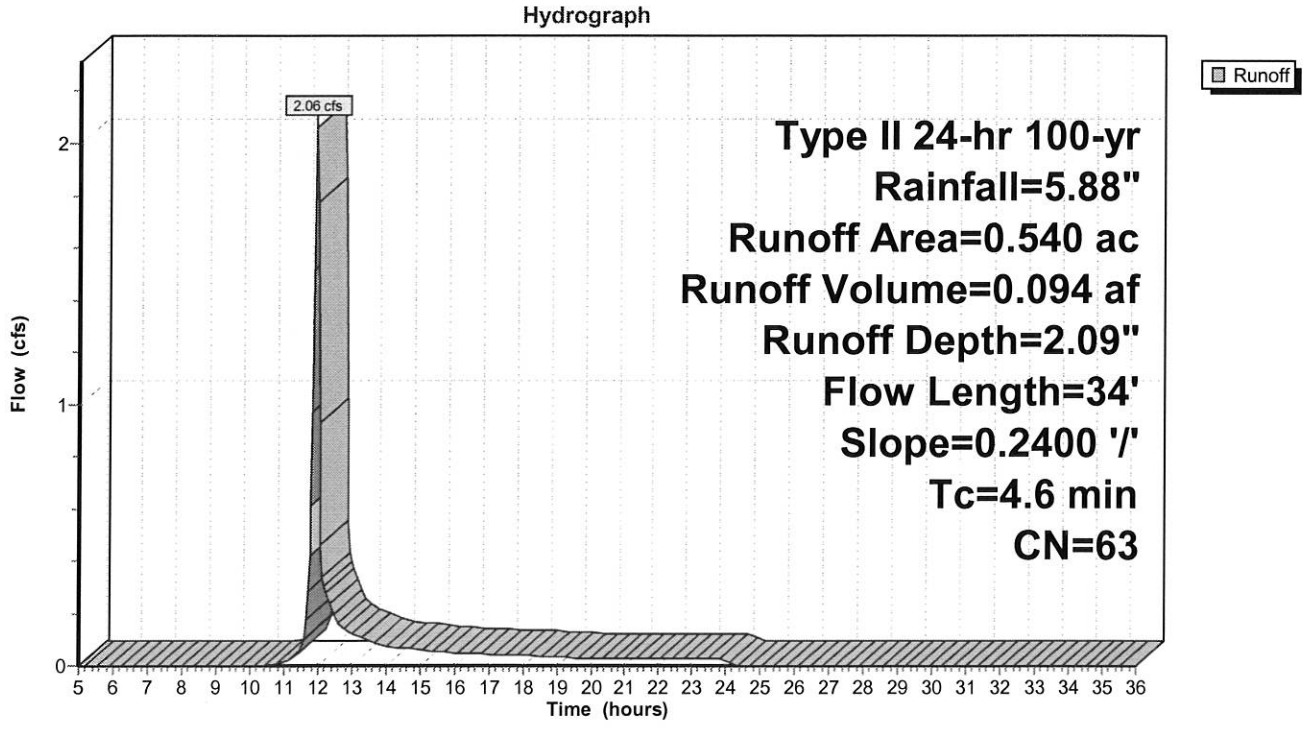
Runoff = 2.06 cfs @ 11.96 hrs, Volume= 0.094 af, Depth= 2.09"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=5.88"

Area (ac)	CN	Description
0.270	61	>75% Grass cover, Good, HSG B
0.120	55	Woods, Good, HSG B
0.150	72	Woods/grass comb., Good, HSG C
0.540	63	Weighted Average
0.540		Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.6	34	0.2400	0.12		**Sheet Flow, grass/woods** n= 0.520 P2= 2.57"

Subcatchment P-8S: Area H (E)



Summary for Pond 1P: Pond 3 (dry)

Inflow Area = 6.090 ac, 27.91% Impervious, Inflow Depth = 2.74" for 100-yr event
Inflow = 11.06 cfs @ 12.41 hrs, Volume= 1.389 af
Outflow = 3.20 cfs @ 13.17 hrs, Volume= 1.389 af, Atten= 71%, Lag= 45.9 min
Discarded = 0.25 cfs @ 13.17 hrs, Volume= 0.171 af
Primary = 2.96 cfs @ 13.17 hrs, Volume= 1.218 af
Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs
Peak Elev= 996.16' @ 13.17 hrs Surf.Area= 8,210 sf Storage= 20,896 cf

Plug-Flow detention time= 67.6 min calculated for 1.389 af (100% of inflow)
Center-of-Mass det. time= 67.3 min (931.6 - 864.3)

Volume	Invert	Avail.Storage	Storage Description
#1	992.50'	28,244 cf	**Custom Stage Data (Irregular)** Listed below

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
992.50	0	0.0	0	0	0
993.00	4,633	335.0	772	772	8,931
994.00	5,673	358.0	5,144	5,916	10,246
995.00	6,781	380.0	6,219	12,135	11,590
996.00	7,949	399.0	7,357	19,492	12,830
997.00	9,580	437.0	8,752	28,244	15,392

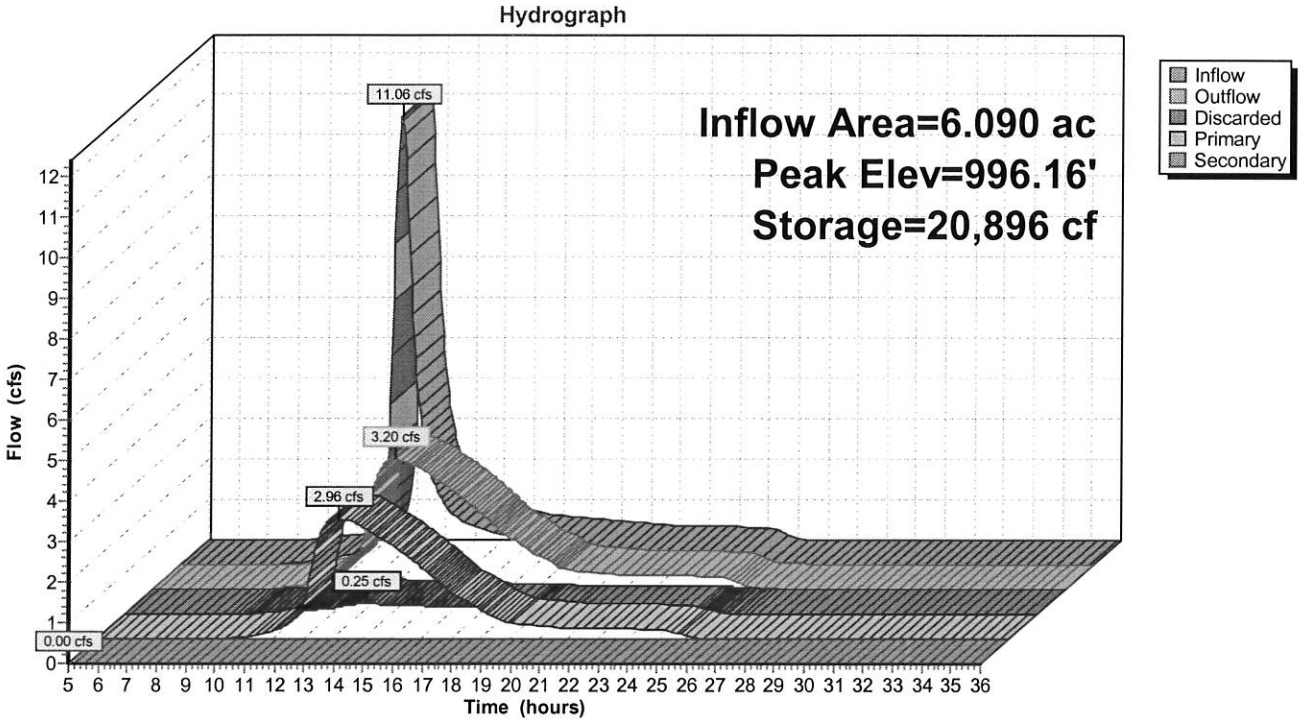
Device	Routing	Invert	Outlet Devices
#1	Discarded	992.50'	**1.296 in/hr Exfiltration over Surface area**
#2	Primary	992.50'	**8.0" x 35.0' long Culvert** CPP, end-section conforming to fill, Ke= 0.500 Outlet Invert= 992.32' S= 0.0051 '/' Cc= 0.900 n= 0.011
#3	Secondary	996.50'	**20.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Discarded OutFlow Max=0.25 cfs @ 13.17 hrs HW=996.16' (Free Discharge)
↑—**1=Exfiltration** (Exfiltration Controls 0.25 cfs)

Primary OutFlow Max=2.96 cfs @ 13.17 hrs HW=996.16' (Free Discharge)
↑—**2=Culvert** (Barrel Controls 2.96 cfs @ 8.47 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=992.50' (Free Discharge)
↑—**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 1P: Pond 3 (dry)



Summary for Pond 2P: Infiltration Basin

[81] Warning: Exceeded Pond P1 by 0.40' @ 35.95 hrs

Inflow Area = 23.960 ac, 61.06% Impervious, Inflow Depth > 4.05" for 100-yr event
Inflow = 5.53 cfs @ 14.16 hrs, Volume= 8.091 af
Outflow = 5.53 cfs @ 14.36 hrs, Volume= 7.719 af, Atten= 0%, Lag= 11.8 min
Discarded = 0.84 cfs @ 14.36 hrs, Volume= 1.729 af
Primary = 4.69 cfs @ 14.36 hrs, Volume= 5.990 af
Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs
Peak Elev= 998.39' @ 14.36 hrs Surf.Area= 10,039 sf Storage= 19,157 cf

Plug-Flow detention time= 72.5 min calculated for 7.707 af (95% of inflow)
Center-of-Mass det. time= 35.3 min (1,330.4 - 1,295.1)

Volume	Invert	Avail.Storage	Storage Description
#1	996.00'	51,736 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
996.00	6,106	382.0	0	0	6,106
997.00	7,685	407.0	6,880	6,880	7,724
998.00	9,364	433.0	8,511	15,391	9,512
999.00	11,150	458.0	10,244	25,635	11,340
1,000.00	13,035	483.0	12,080	37,715	13,270
1,001.00	15,030	508.0	14,021	51,736	15,303

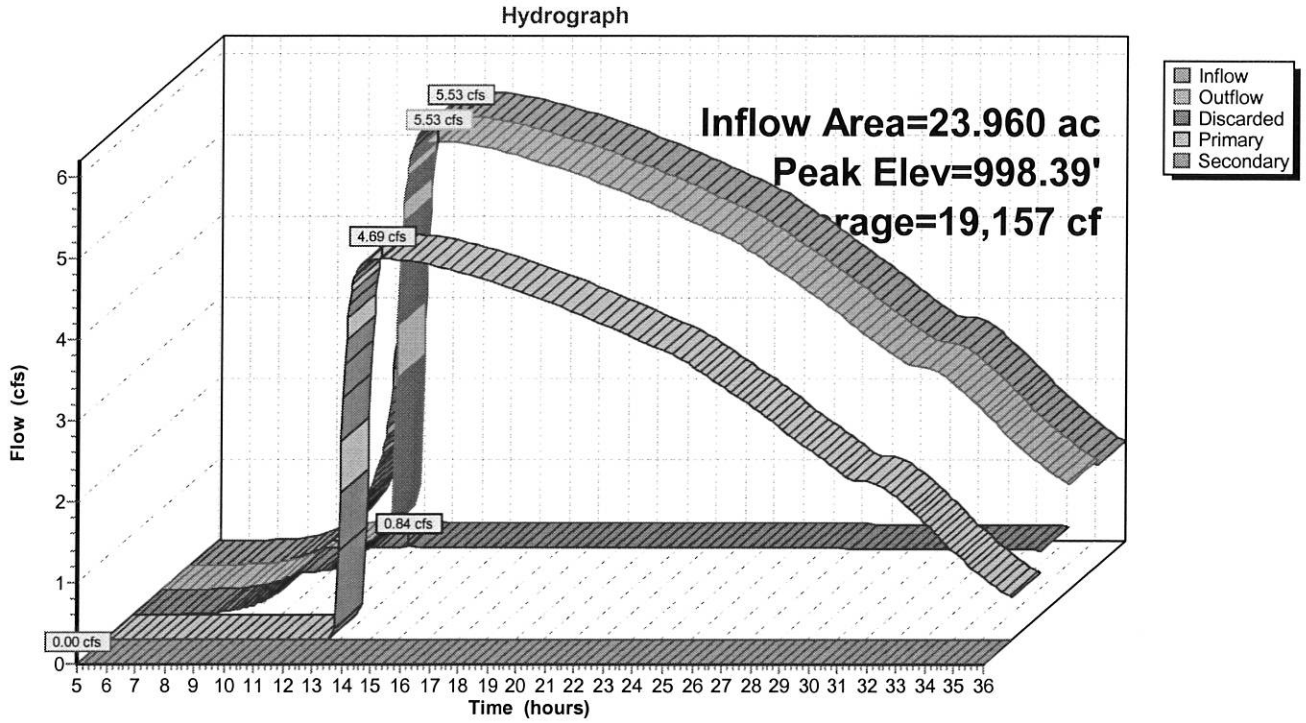
Device	Routing	Invert	Outlet Devices
#1	Primary	996.00'	**15.0" x 94.0' long Culvert** RCP, square edge headwall, Ke= 0.500 Outlet Invert= 995.51' S= 0.0052 '/' Cc= 0.900 n= 0.013 Concrete pipe, bends & connections
#2	Secondary	998.50'	**25.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64
#3	Device 1	998.00'	**6.0' long x 1.00' rise Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#4	Discarded	996.00'	**3.600 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.84 cfs @ 14.36 hrs HW=998.39' (Free Discharge)
└**4=Exfiltration** (Exfiltration Controls 0.84 cfs)

Primary OutFlow Max=4.69 cfs @ 14.36 hrs HW=998.39' (Free Discharge)
└**1=Culvert** (Passes 4.69 cfs of 6.54 cfs potential flow)
└**3=Sharp-Crested Rectangular Weir** (Weir Controls 4.69 cfs @ 2.04 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=996.00' (Free Discharge)
└**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 2P: Infiltration Basin



Summary for Pond P1: Pond 1

[82] Warning: Early inflow requires earlier time span

Inflow Area = 23.960 ac, 61.06% Impervious, Inflow Depth > 4.51" for 100-yr event
Inflow = 105.97 cfs @ 12.16 hrs, Volume= 9.000 af
Outflow = 5.53 cfs @ 14.16 hrs, Volume= 8.091 af, Atten= 95%, Lag= 120.2 min
Primary = 5.53 cfs @ 14.16 hrs, Volume= 8.091 af

Routing by Stor-Ind method, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs
Peak Elev= 1,000.69' @ 14.16 hrs Surf.Area= 80,731 sf Storage= 251,382 cf

Plug-Flow detention time= 541.1 min calculated for 8.091 af (90% of inflow)
Center-of-Mass det. time= 489.5 min (1,295.1 - 805.6)

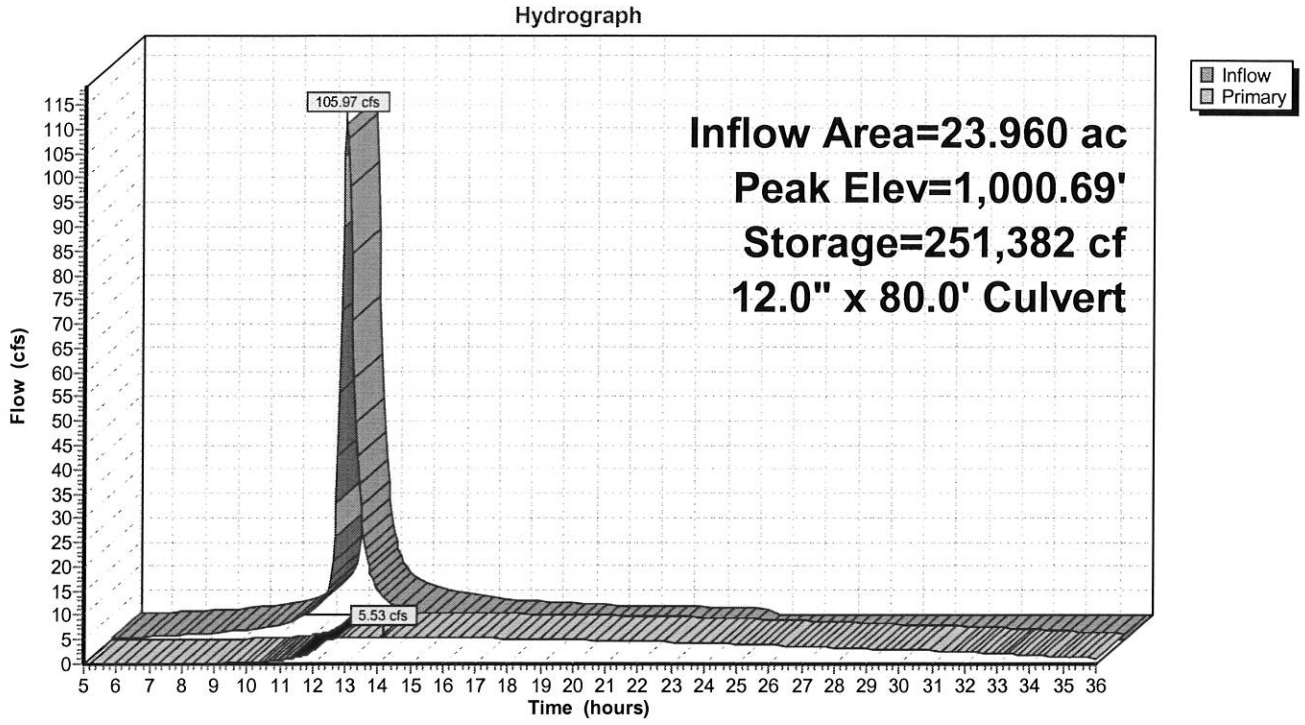
Volume	Invert	Avail.Storage	Storage Description
#1	997.00'	671,679 cf	**Custom Stage Data (Irregular)** Listed below

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
997.00	54,341	1,290.9	0	0	54,341
998.00	62,100	1,365.2	58,177	58,177	70,102
999.00	69,541	1,434.3	65,785	123,963	85,559
1,000.00	76,123	1,481.8	72,807	196,770	96,678
1,001.00	82,827	1,527.5	79,451	276,221	107,724
1,002.00	89,703	1,570.1	86,242	362,464	118,339
1,003.00	96,677	1,614.3	93,168	455,632	129,652
1,004.00	105,446	1,687.5	101,030	556,662	148,956
1,005.00	124,863	1,808.9	115,018	671,679	182,779

Device	Routing	Invert	Outlet Devices
#1	Primary	997.00'	**12.0" x 80.0' long Culvert**
			RCP, end-section conforming to fill, Ke= 0.500
			Outlet Invert= 996.60' S= 0.0050 '/' Cc= 0.900 n= 0.013

Primary OutFlow Max=5.53 cfs @ 14.16 hrs HW=1,000.69' (Free Discharge)
↑—**1=Culvert** (Barrel Controls 5.53 cfs @ 7.04 fps)

Pond P1: Pond 1



Summary for Pond P2: Pond 2 (Dry)

Inflow Area = 16.220 ac, 6.17% Impervious, Inflow Depth = 2.44" for 100-yr event
Inflow = 23.82 cfs @ 12.49 hrs, Volume= 3.298 af
Outflow = 11.10 cfs @ 13.06 hrs, Volume= 3.298 af, Atten= 53%, Lag= 33.7 min
Primary = 11.10 cfs @ 13.06 hrs, Volume= 3.298 af

Routing by Stor-Ind method, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs
Peak Elev= 1,004.66' @ 13.06 hrs Surf.Area= 26,378 sf Storage= 30,570 cf

Plug-Flow detention time= 22.3 min calculated for 3.293 af (100% of inflow)
Center-of-Mass det. time= 22.3 min (904.9 - 882.6)

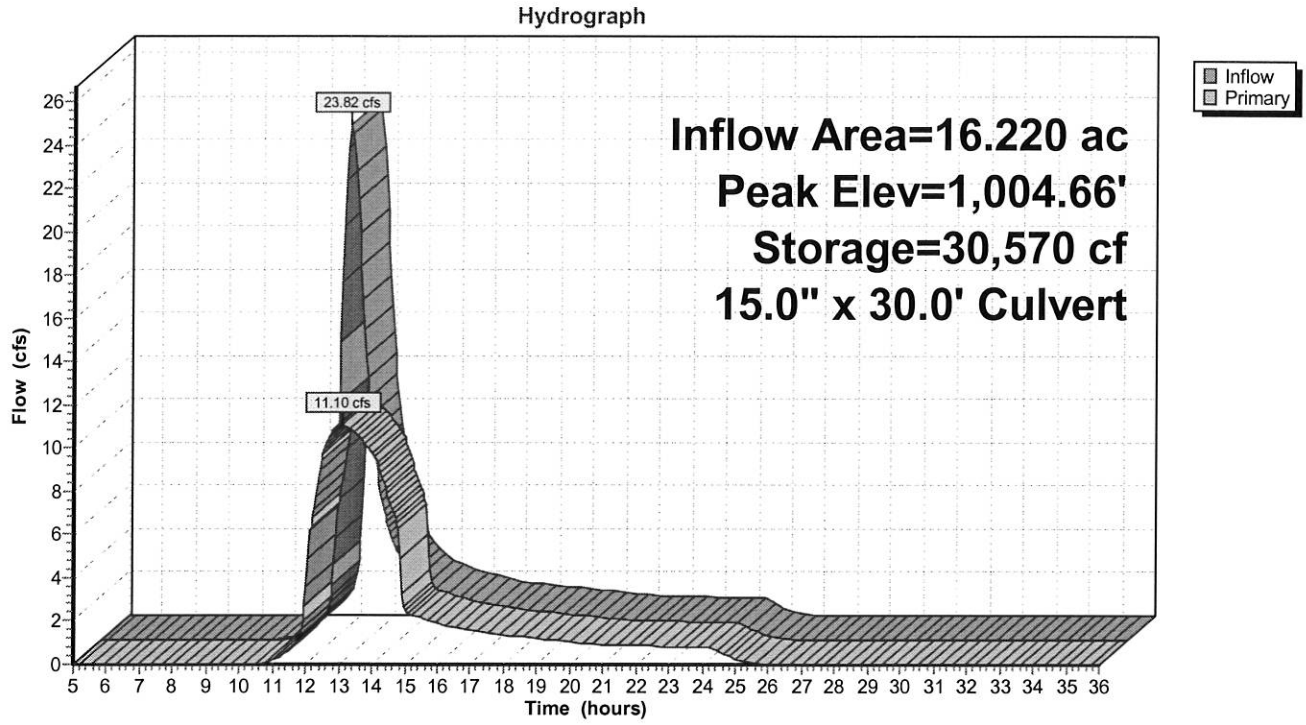
Volume	Invert	Avail.Storage	Storage Description
#1	1,001.16'	39,351 cf	**Custom Stage Data (Irregular)** Listed below

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
1,001.16	0	0.0	0	0	0
1,003.00	2,423	227.0	1,486	1,486	4,106
1,004.00	25,153	979.0	11,794	13,280	76,278
1,005.00	27,000	1,000.0	26,071	39,351	79,730

Device	Routing	Invert	Outlet Devices
#1	Primary	1,001.16'	**15.0" x 30.0' long Culvert** RCP, groove end projecting, Ke= 0.200 Outlet Invert= 1,001.00' S= 0.0053 '/' Cc= 0.900 n= 0.013

Primary OutFlow Max=11.10 cfs @ 13.06 hrs HW=1,004.66' (Free Discharge)
↑**1=Culvert** (Barrel Controls 11.10 cfs @ 9.04 fps)

Pond P2: Pond 2 (Dry)

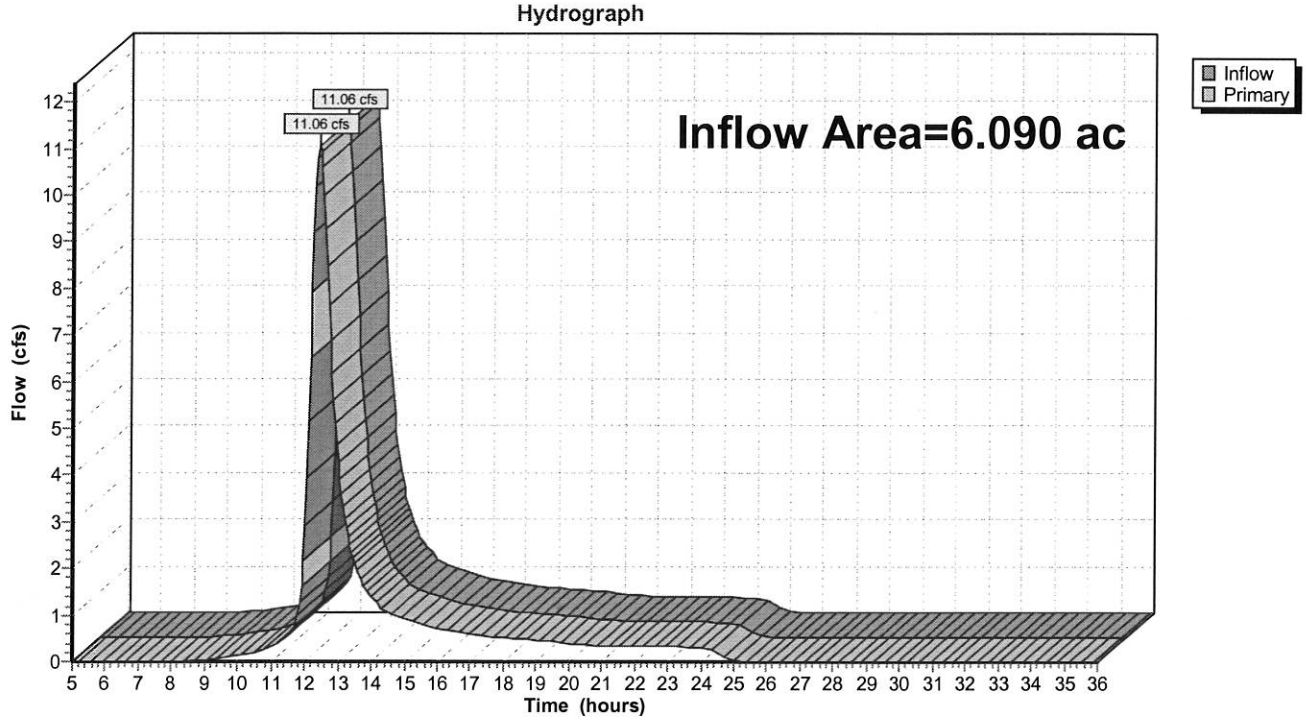


Summary for Link P-1L: North Discharge

Inflow Area = 6.090 ac, 27.91% Impervious, Inflow Depth = 2.74" for 100-yr event
Inflow = 11.06 cfs @ 12.41 hrs, Volume= 1.389 af
Primary = 11.06 cfs @ 12.41 hrs, Volume= 1.389 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs

Link P-1L: North Discharge

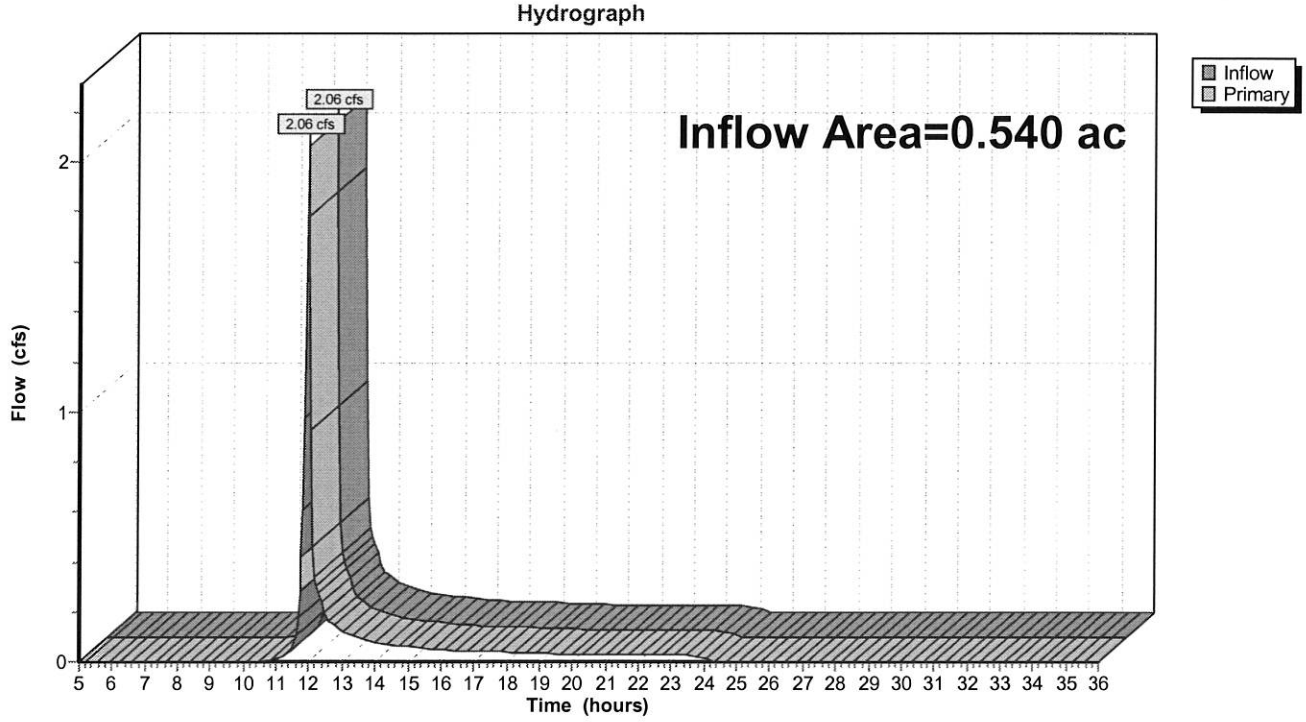


Summary for Link P-3L: East Discharge

Inflow Area = 0.540 ac, 0.00% Impervious, Inflow Depth = 2.09" for 100-yr event
Inflow = 2.06 cfs @ 11.96 hrs, Volume= 0.094 af
Primary = 2.06 cfs @ 11.96 hrs, Volume= 0.094 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs

Link P-3L: East Discharge

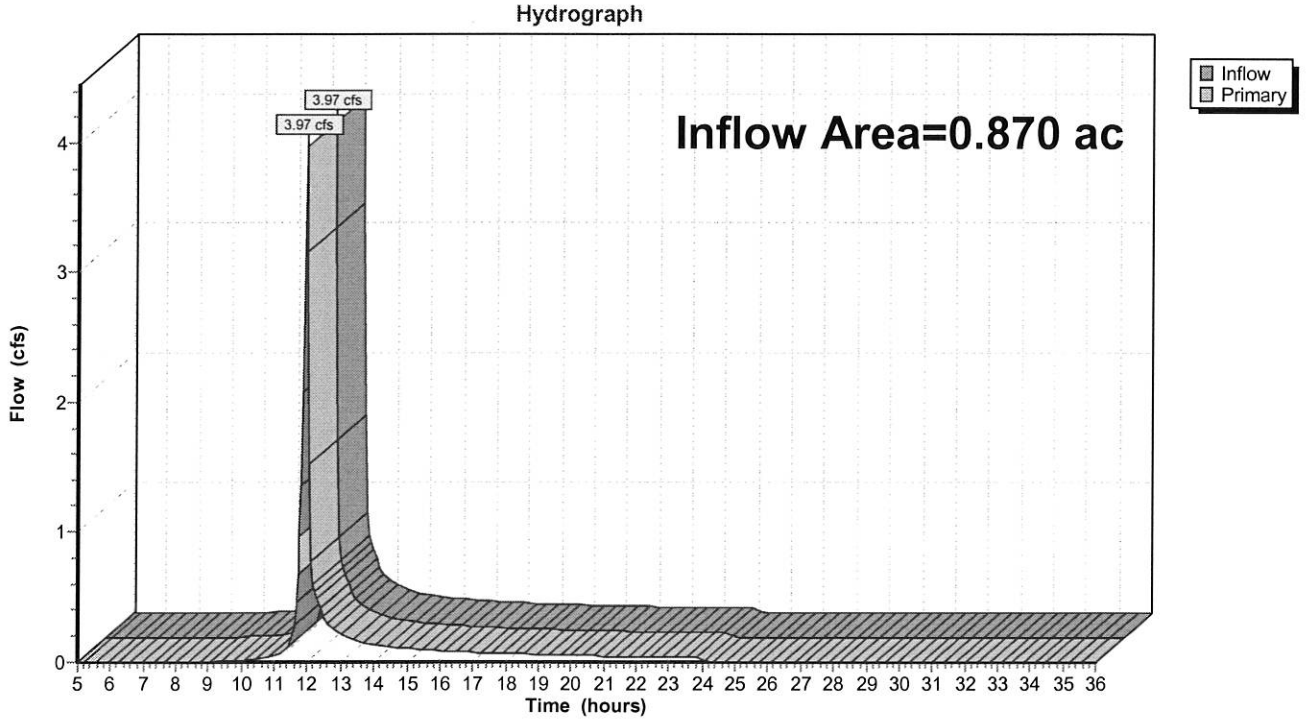


Summary for Link P-4L: South & East Discharge

Inflow Area = 0.870 ac, 0.00% Impervious, Inflow Depth = 2.47" for 100-yr event
Inflow = 3.97 cfs @ 11.95 hrs, Volume= 0.179 af
Primary = 3.97 cfs @ 11.95 hrs, Volume= 0.179 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs

Link P-4L: South & East Discharge

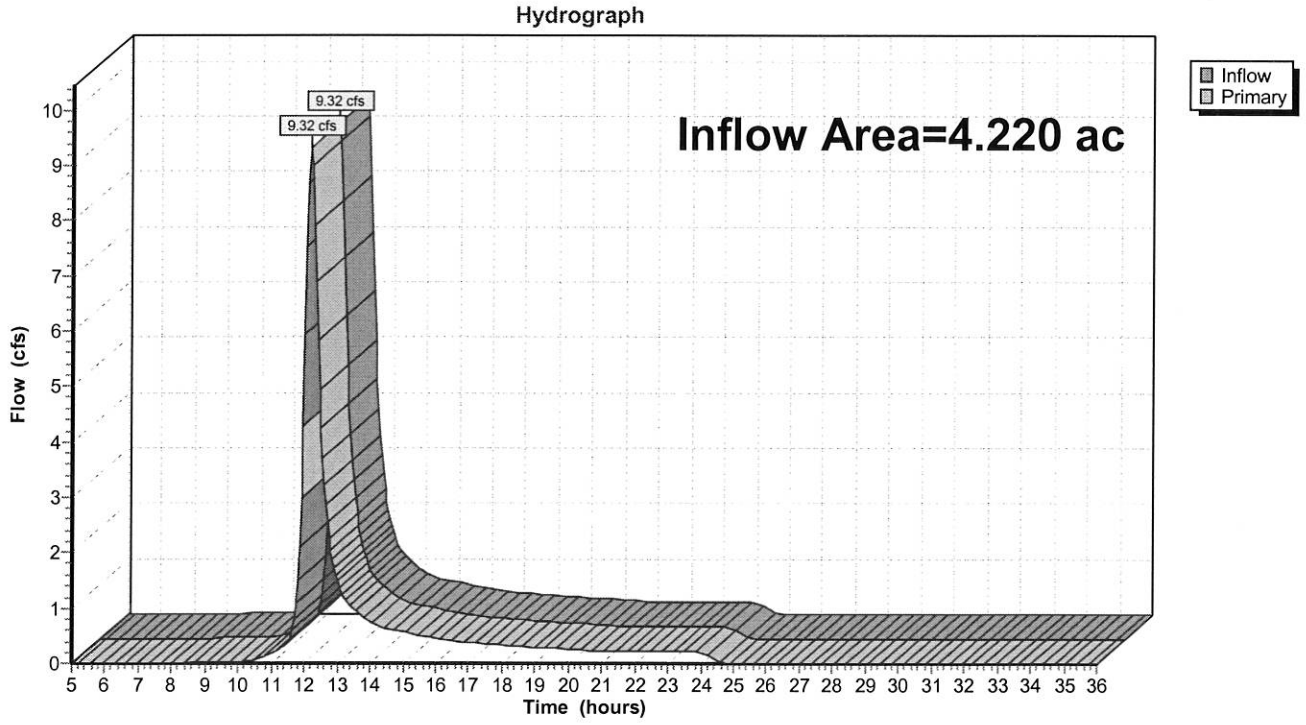


Summary for Link P-5L: West Discharge

Inflow Area = 4.220 ac, 3.55% Impervious, Inflow Depth = 2.50" for 100-yr event
Inflow = 9.32 cfs @ 12.18 hrs, Volume= 0.880 af
Primary = 9.32 cfs @ 12.18 hrs, Volume= 0.880 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs

Link P-5L: West Discharge

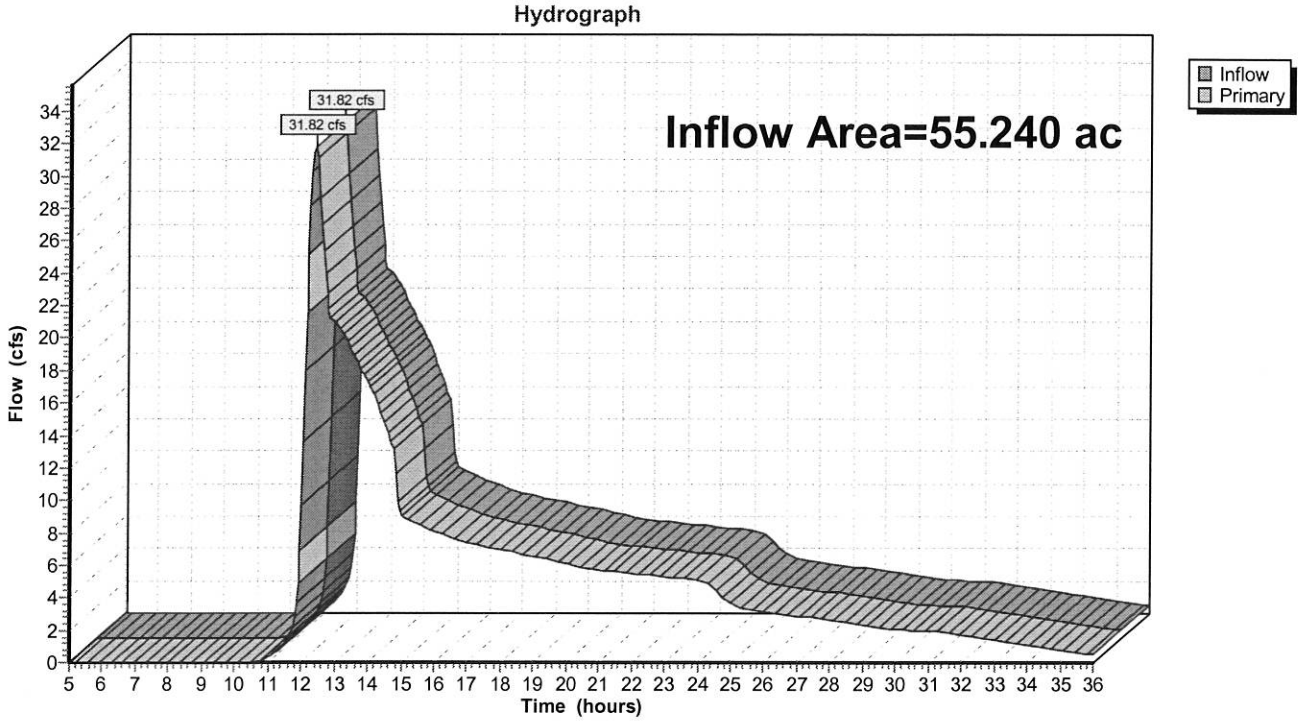


Summary for Link P-6L: Mid Site Discharge

Inflow Area = 55.240 ac, 29.20% Impervious, Inflow Depth > 2.61" for 100-yr event
Inflow = 31.82 cfs @ 12.40 hrs, Volume= 12.022 af
Primary = 31.82 cfs @ 12.40 hrs, Volume= 12.022 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs

Link P-6L: Mid Site Discharge

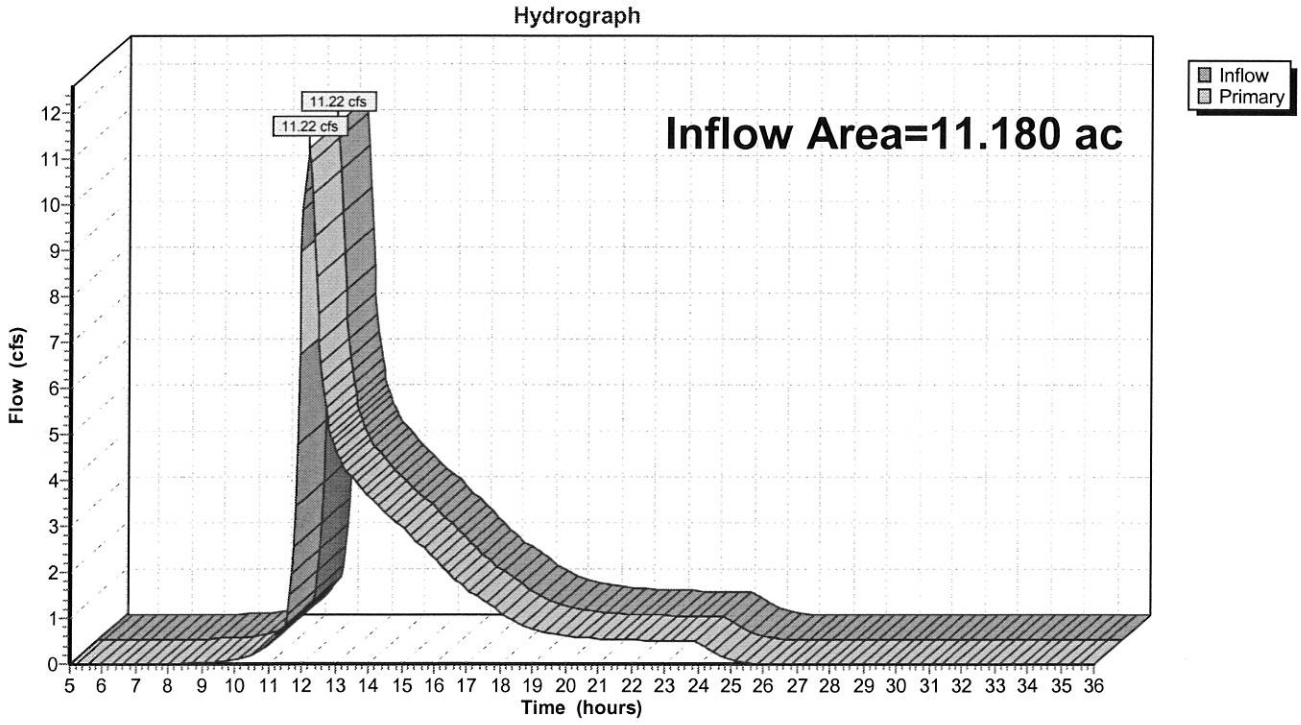


Summary for Link P-7L: Proposed Discharge (Site)

Inflow Area = 11.180 ac, 16.55% Impervious, Inflow Depth = 2.44" for 100-yr event
Inflow = 11.22 cfs @ 12.19 hrs, Volume= 2.278 af
Primary = 11.22 cfs @ 12.19 hrs, Volume= 2.278 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs

Link P-7L: Proposed Discharge (Site)

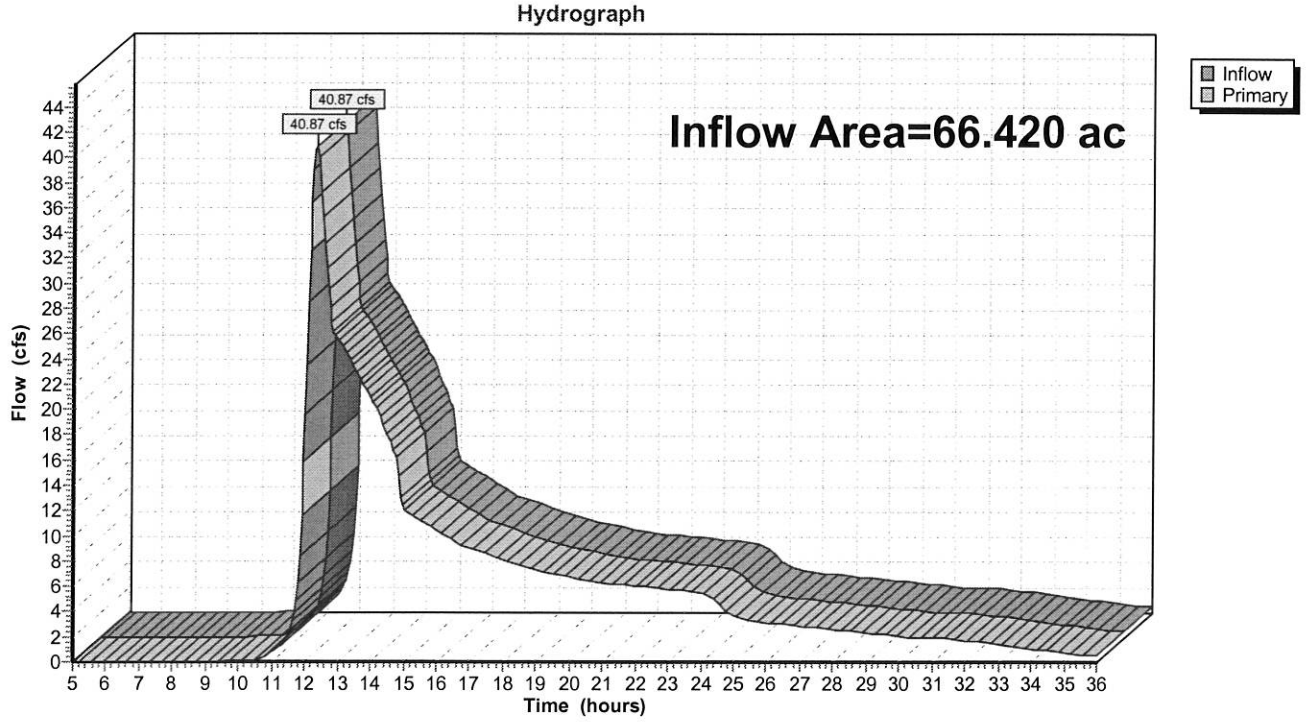


Summary for Link P-8L: Proposed Discharge Total

Inflow Area = 66.420 ac, 27.07% Impervious, Inflow Depth > 2.58" for 100-yr event
Inflow = 40.87 cfs @ 12.34 hrs, Volume= 14.299 af
Primary = 40.87 cfs @ 12.34 hrs, Volume= 14.299 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs

Link P-8L: Proposed Discharge Total



LAKE COUNTRY LUTHERAN ADDITION

SITE DEVELOPMENT PLANS

VILLAGE OF HARTLAND, WISCONSIN

ENGINEER:
TRIO ENGINEERING, LLC
4100 N CALHOUN ROAD, SUITE 300
BROOKFIELD, WI 53005
CONTACT: MATTHEW BAILEY, P.E.
PHONE: 262-790-1480
FAX: 262-790-1481
EMAIL: mbailey@trioeng.com

GENERAL NOTES

1. THE LATEST EDITIONS OF THE FOLLOWING DOCUMENTS AND ANY SUPPLEMENTS THERETO, SHALL GOVERN ALL CONSTRUCTION ITEMS ON THIS PLAN UNLESS OTHERWISE NOTED.

   -STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN, 6TH EDITION (SSSWCW)
   -THE WISCONSIN D.O.T. STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION, LATEST EDITION
   -WDNR STORMWATER RUNOFF TECHNICAL STANDARDS.
   -WISDOT PAL APPROVED EROSION CONTROL MEASURES LIST, LATEST EDITION.
   -VILLAGE OF HARTLAND TECHNICAL STANDARDS.

2. THE CONTRACTOR SHALL TAKE ALL MEASURES NECESSARY TO MINIMIZE EROSION, WATER POLLUTION AND SILTATION CAUSED BY CONSTRUCTION OF THIS PROJECT. EROSION CONTROL MEASURES SHALL BE IN ACCORDANCE WITH WISCONSIN DEPARTMENT OF NATURAL RESOURCES TECHNICAL STANDARDS.

3. EROSION CONTROL PLAN: PRIOR TO BEGINNING WORK, AN APPROVED EROSION CONTROL PLAN WILL BE PROVIDED BY THE ENGINEER. THE CONTRACTOR IS RESPONSIBLE FOR PROPERLY IMPLEMENTING THE APPROVED PLAN.

4. THE CONTRACTOR SHALL FIELD VERIFY THE ELEVATIONS OF THE BENCHMARKS PRIOR TO COMMENCING WORK. THE CONTRACTOR SHALL ALSO FIELD VERIFY LOCATION, ELEVATION AND SIZE OF EXISTING UTILITIES, AND VERIFY FLOOR, CURB OR PAVEMENT ELEVATIONS WHERE MATCHING INTO EXISTING WORK. THE CONTRACTOR SHALL FIELD VERIFY HORIZONTAL CONTROL BY REFERENCING SHOWN COORDINATES TO KNOWN PROPERTY LINES. NOTIFY ENGINEER OF DISCREPANCIES IN EITHER VERTICAL OR HORIZONTAL CONTROL PRIOR TO PROCEEDING WITH WORK.

5. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO BEGINNING CONSTRUCTION (CALL DIGGERS HOTLINE AT 800-242-8511). COST OF REPLACEMENT OR REPAIR OF EXISTING UTILITIES DAMAGED AS A RESULT OF THE CONTRACTOR'S OPERATION SHALL BE THE CONTRACTOR'S RESPONSIBILITY.

6. EXISTING UTILITY INFORMATION IS SHOWN FROM SURVEY WORK, FIELD OBSERVATIONS, AVAILABLE PUBLIC RECORDS, AND AS-BUILT DRAWINGS. EXACT LOCATIONS AND ELEVATIONS OF UTILITIES SHALL BE DETERMINED PRIOR TO INSTALLING NEW WORK. EXCAVATE TEST PITS AS REQUIRED.

7. PROPERTY CORNERS SHALL BE CAREFULLY PROTECTED UNTIL THEY HAVE BEEN REFERENCED BY A PROFESSIONAL LAND SURVEYOR. PROPERTY MONUMENTS DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

8. ENGINEER SHALL BE NOTIFIED 48 HOURS IN ADVANCE OF PERFORMING ANY CONSTRUCTION.

9. ALL TRENCHING SHALL BE PERFORMED ACCORDING TO OSHA STANDARDS.

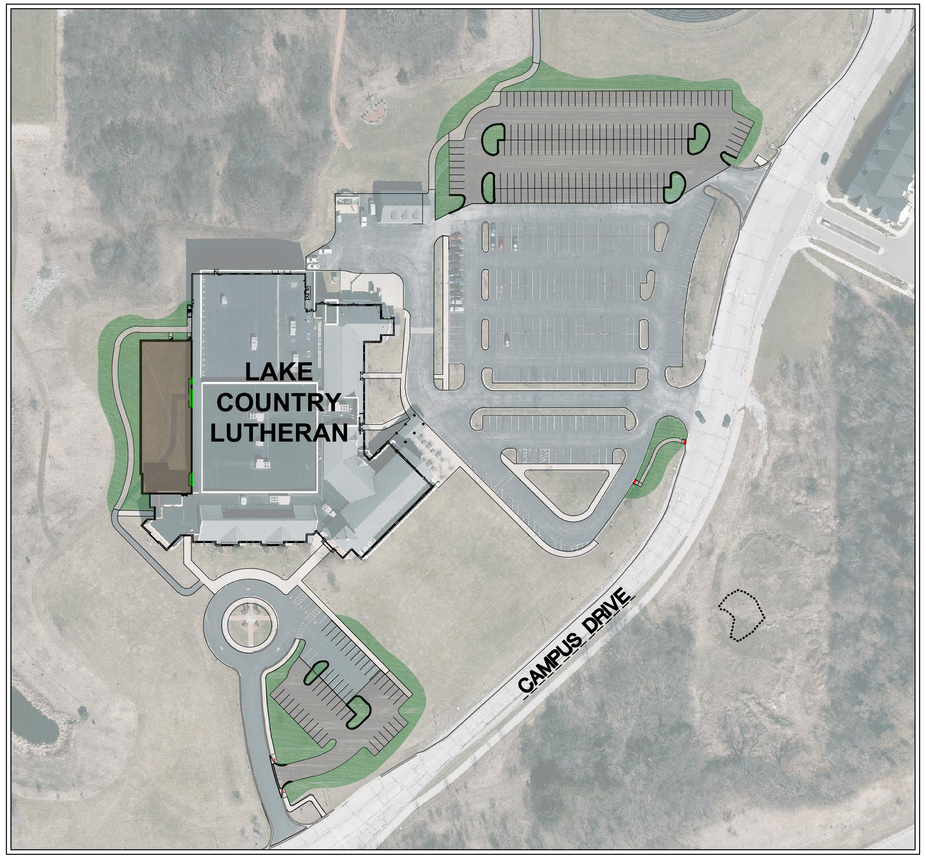
10. ALL ITEMS SHALL INCLUDE ALL THE NECESSARY MATERIALS AND LABOR TO COMPLETE THE ITEM IN PLACE.

11. THE CONTRACTOR SHALL CLEAN ALL ADJACENT STREETS OF ANY SEDIMENT OR DEBRIS BY SWEEPING BEFORE THE END OF THE WORKING DAY OR AS REQUIRED BY THE CITY OF PEWAUKEE.

12. THE CONTRACTOR MUST AND IS REQUIRED TO NOTIFY THE VILLAGE OF HARTLAND SEWER AND WATER UTILITY A MINIMUM OF 48 HOURS IN ADVANCE OF WATER MAIN FILLING, WATER MAIN FLUSHING, WATER MAIN TESTING AND WATER MAIN CONNECTIONS. NO CONNECTION SHALL BE MADE TO THE EXISTING WATER SYSTEM UNTIL SAFE SAMPLES FROM THE NEW MAIN HAVE BEEN OBTAINED.



LOCATION MAP
NOT TO SCALE



SITE PLAN
SCALE: 1" = 100'

SHEET INDEX

CIVIL		
T1	–	COVER SHEET
C0.1	–	EXISTING SITE PLAN
C1.0	–	PROPOSED SITE PLAN
C1.1	–	DETAILED SITE PLAN – SOUTH PARKING
C1.2	–	DETAILED SITE PLAN – BUILDING ADDITION
C1.3	–	DETAILED SITE PLAN – NORTH PARKING
C2.0	–	GRADING PLAN – SOUTH PARKING
C2.1	–	GRADING PLAN – BUILDING ADDITION
C2.2	–	GRADING PLAN – NORTH PARKING
C3.0	–	EROSION CONTROL PLAN
C4.0	–	CONSTRUCTION DETAILS

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EMAIL: jpudelko@trioeng.com

PROJECT:
LAKE COUNTRY LUTHERAN ADDITION
VILLAGE OF HARTLAND, WISCONSIN
BY: GROTH DESIGN GROUP
N58W61B1 COLUMBIA RD.
CEDARBURG, WI 53012

REVISION HISTORY

DATE	DESCRIPTION
3/21/2025	PRELIMINARY SUBMITTAL

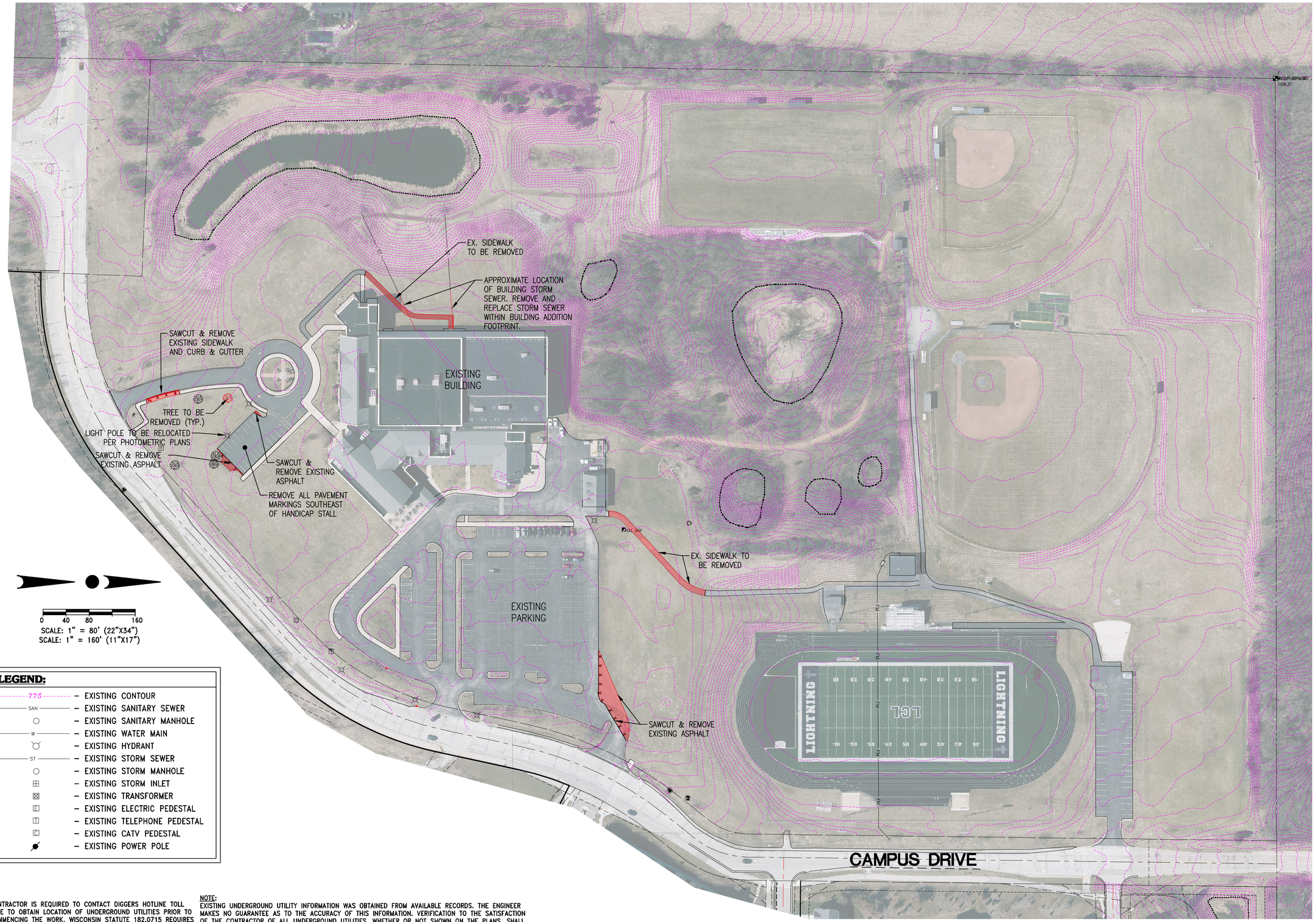
DATE:
MARCH 21, 2025

JOB NUMBER:
25-10-1092

DESCRIPTION:
COVER SHEET

SHEET
T1

X:\2025\25-10-1092 LAKE COUNTRY LUTHERAN ADDITION - HARTLAND\DRAWINGS\PRELIMINARY\LAKE COUNTRY LUTHERAN ADDITION_COVER AND DETAILS_22X34.DWG



0 40 80 160
SCALE: 1" = 80' (22"X34")
SCALE: 1" = 160' (11"X17")

LEGEND:

775	– EXISTING CONTOUR
SAN	– EXISTING SANITARY SEWER
	– EXISTING SANITARY MANHOLE
W	– EXISTING WATER MAIN
	– EXISTING HYDRANT
ST	– EXISTING STORM SEWER
	– EXISTING STORM MANHOLE
	– EXISTING STORM INLET
	– EXISTING TRANSFORMER
	– EXISTING ELECTRIC PEDESTAL
	– EXISTING TELEPHONE PEDESTAL
	– EXISTING CATV PEDESTAL
	– EXISTING POWER POLE

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CALL DIGGERS HOTLINE 1-800-242-8511

NOTE:
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BY: GROTH DESIGN GROUP
N53W6181 COLUMBIA RD.
CEDARBURG, WI 53012

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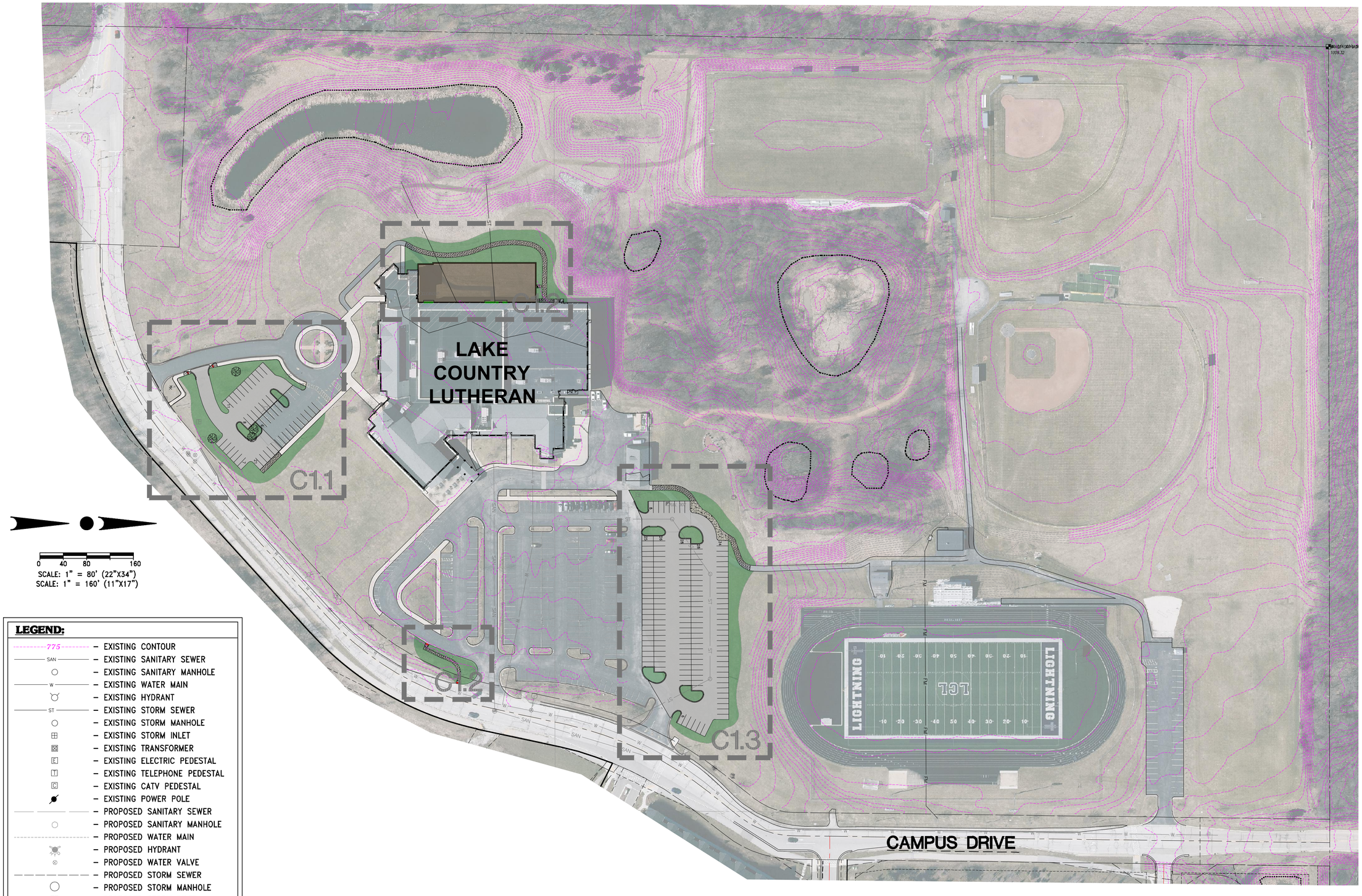
DATE:
MARCH 21, 2025

JOB NUMBER:
25-10-1092

DESCRIPTION:
EXISTING SITE PLAN

SHEET
C0.1

X:\2025\25-10-1092 LAKE COUNTRY LUTHERAN ADDITION - HARTLAND\DRAWINGS\PRELIMINARY\LAKE COUNTRY LUTHERAN ADDITION_EXIST AND PROPOSED SITE PLAN_22X34.DWG



0 40 80 160
SCALE: 1" = 80' (22"X34")
SCALE: 1" = 160' (11"X17")

LEGEND:

- 775 – EXISTING CONTOUR
- SAN – EXISTING SANITARY SEWER
- EXISTING SANITARY MANHOLE
- W – EXISTING WATER MAIN
- EXISTING HYDRANT
- ST – EXISTING STORM SEWER
- EXISTING STORM MANHOLE
- EXISTING STORM INLET
- EXISTING TRANSFORMER
- E – EXISTING ELECTRIC PEDESTAL
- T – EXISTING TELEPHONE PEDESTAL
- C – EXISTING CATV PEDESTAL
- EXISTING POWER POLE
- PROPOSED SANITARY SEWER
- PROPOSED SANITARY MANHOLE
- PROPOSED WATER MAIN
- PROPOSED HYDRANT
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- PROPOSED STORM SEWER
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- PROPOSED STORM END SECTION

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LAKE COUNTRY LUTHERAN ADDITION
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BY: GROTH DESIGN GROUP
N58W6181 COLUMBIA RD.
CEDARBURG, WI 53012

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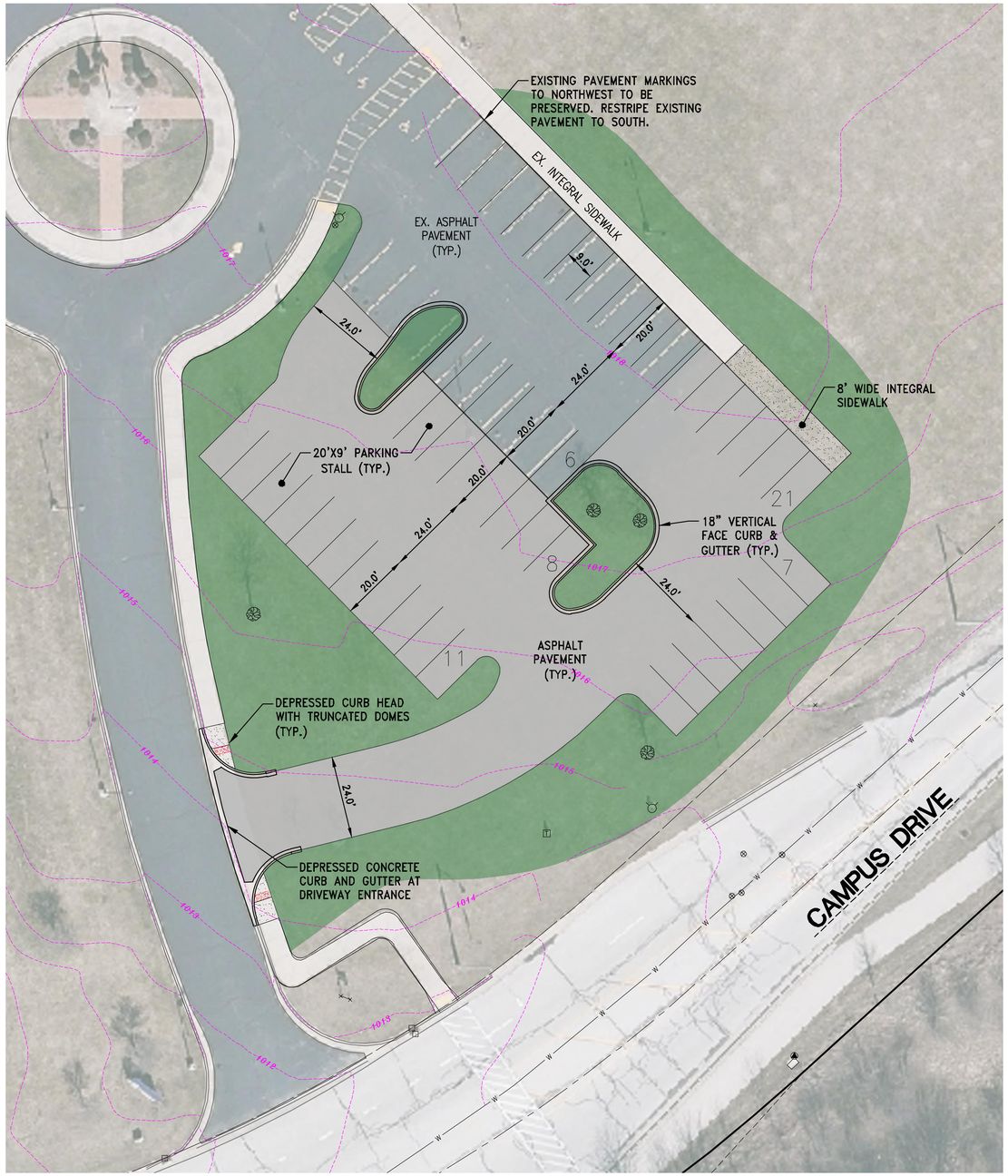
DATE:
MARCH 21, 2025

JOB NUMBER:
25-10-1092

DESCRIPTION:
PROPOSED SITE PLAN

SHEET
C1.0

X:\2025\25-10-1092 LAKE COUNTRY LUTHERAN ADDITION - HARTLAND\DRAWINGS\PRELIMINARY\LAKE COUNTRY LUTHERAN ADDITION_EXIST AND PROPOSED SITE PLAN_22X34.DWG



0 10 20 40
SCALE: 1" = 20' (22"X34")
SCALE: 1" = 40' (11"X17")

LEGEND:

- 775 – EXISTING CONTOUR
- SAN – EXISTING SANITARY SEWER
- EXISTING SANITARY MANHOLE
- W – EXISTING WATER MAIN
- EXISTING HYDRANT
- ST – EXISTING STORM SEWER
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PROJECT:
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VILLAGE OF HARTLAND, WISCONSIN
BY: GROTH DESIGN GROUP
N58W6181 COLUMBIA RD.
CEDARBURG, WI 53012

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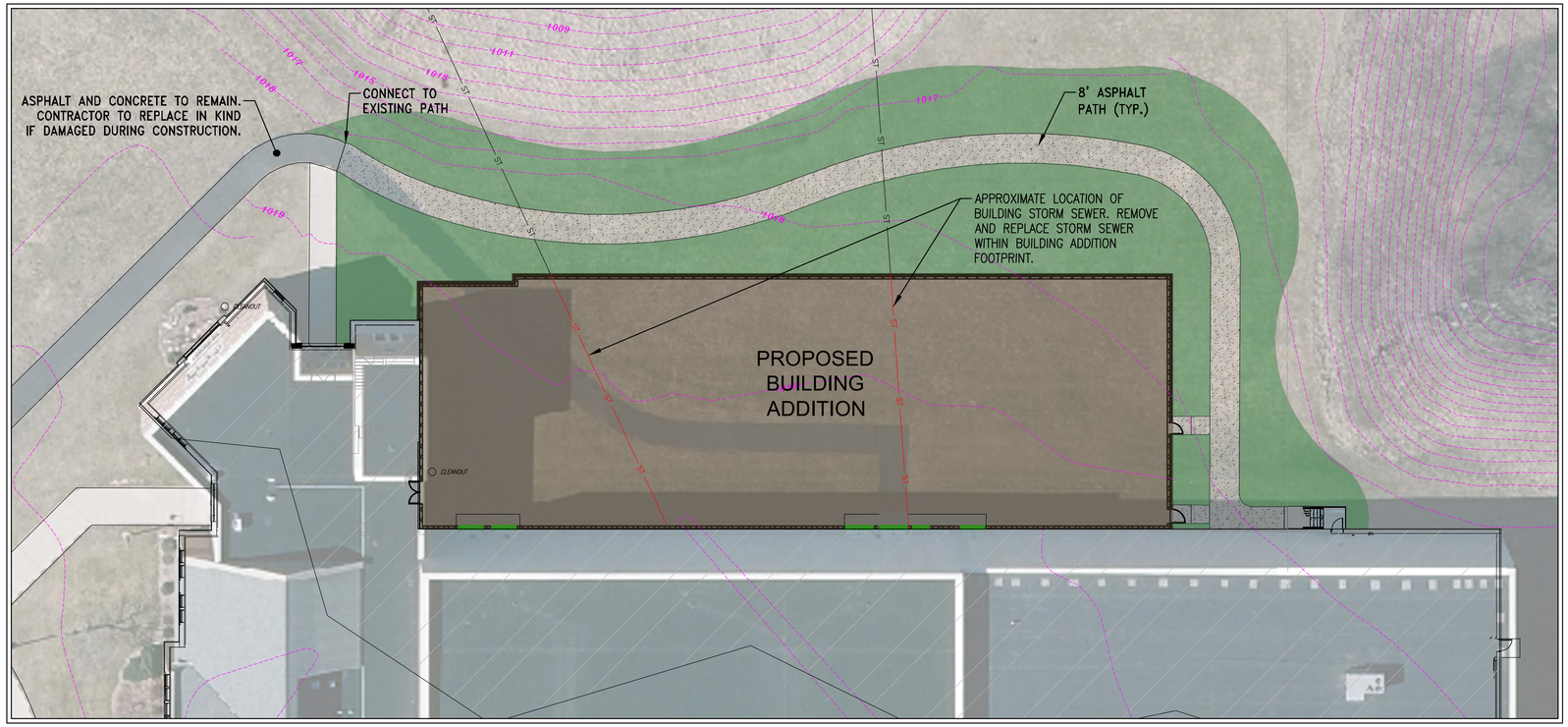
DATE:
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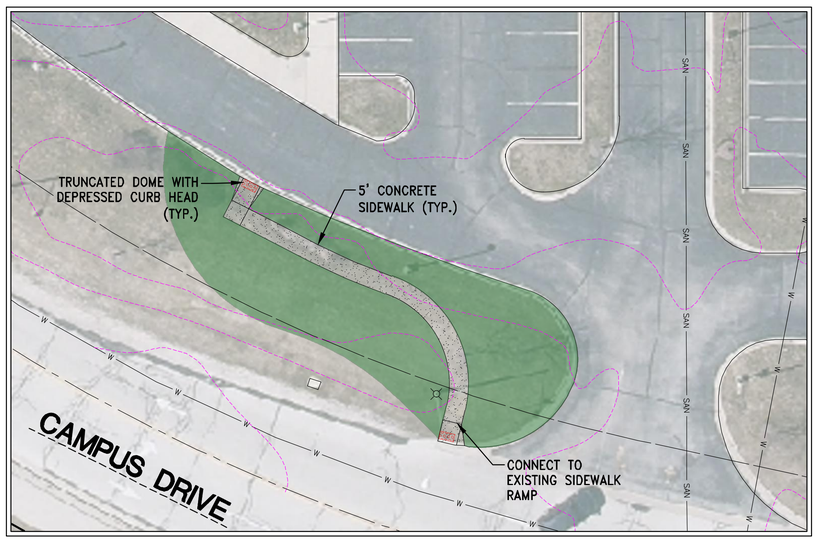
DESCRIPTION:
DETAILED SITE PLAN - SOUTH PARKING

SHEET
C1.1

X:\2025\25-10-1092 LAKE COUNTRY LUTHERAN ADDITION - HARTLAND\DRAWINGS\PRELIMINARY\LAKE COUNTRY LUTHERAN ADDITION_EXIST AND PROPOSED SITE PLAN_22X34.DWG



BUILDING ADDITION



SIDEWALK CONNECTION AT CAMPUS DRIVE

LEGEND:

- 775 – EXISTING CONTOUR
- SAN – EXISTING SANITARY SEWER
- ○ – EXISTING SANITARY MANHOLE
- W – EXISTING WATER MAIN
- ♉ – EXISTING HYDRANT
- ST – EXISTING STORM SEWER
- ○ – EXISTING STORM MANHOLE
- ⊞ – EXISTING STORM INLET
- ▨ – EXISTING TRANSFORMER
- ◧ – EXISTING ELECTRIC PEDESTAL
- ◫ – EXISTING TELEPHONE PEDESTAL
- ◫ – EXISTING CATV PEDESTAL
- ◢ – EXISTING POWER POLE
- – PROPOSED SANITARY SEWER
- ○ – PROPOSED SANITARY MANHOLE
- – PROPOSED WATER MAIN
- ♉ – PROPOSED HYDRANT
- ⊗ – PROPOSED WATER VALVE
- – PROPOSED STORM SEWER
- ◯ – PROPOSED STORM MANHOLE
- ⊞ – PROPOSED STORM INLET
- ◁ – PROPOSED STORM END SECTION

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SCALE: 1" = 20' (22"X34")
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PROJECT:
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BY: GROTH DESIGN GROUP
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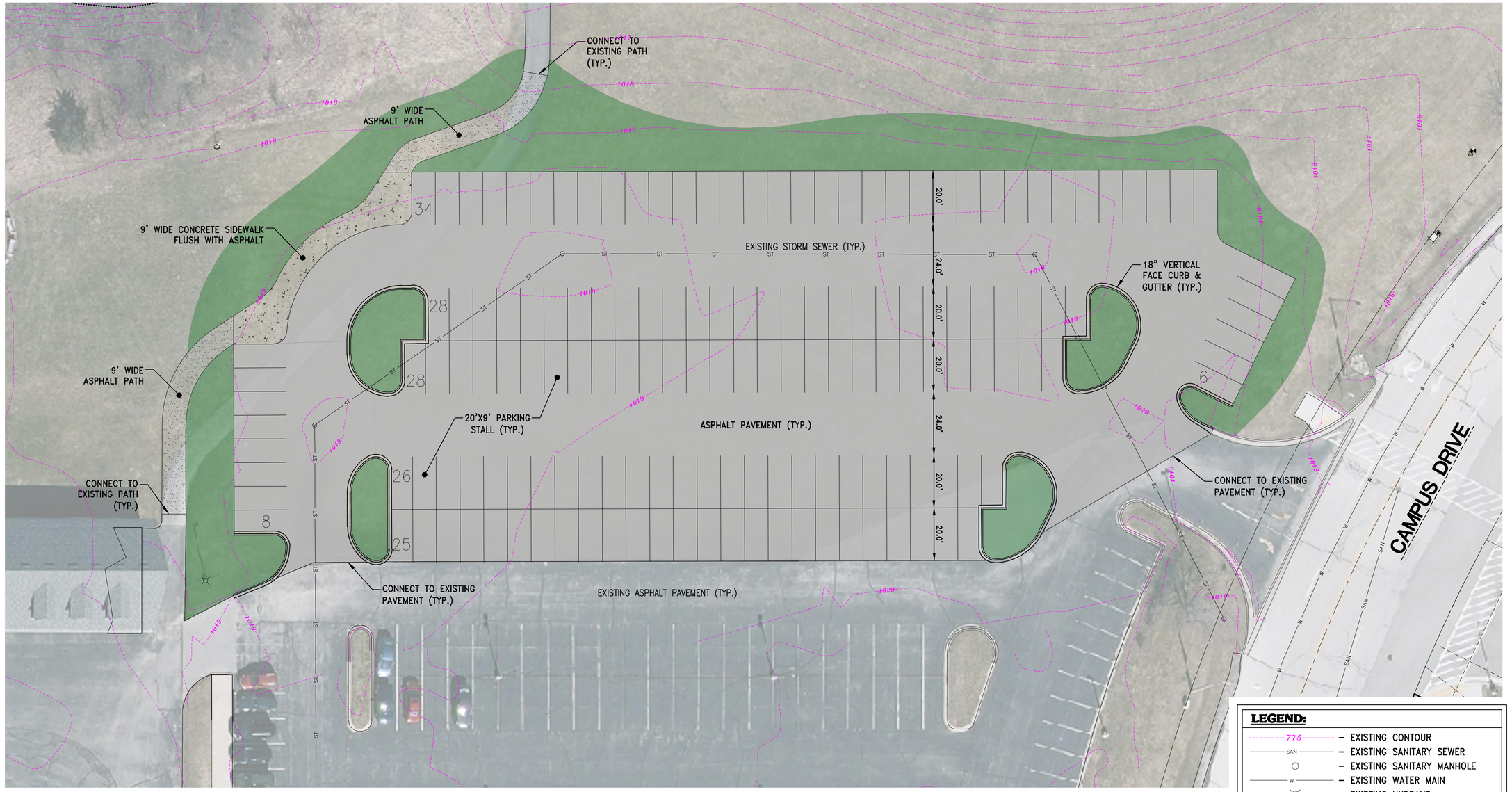
DATE:
MARCH 21, 2025

JOB NUMBER:
25-10-1092

DESCRIPTION:
DETAILED SITE PLAN - BUILDING ADDITION

SHEET
C1.2

X:\2025\25-10-1092 LAKE COUNTRY LUTHERAN ADDITION - HARTLAND\DRAWINGS\PRELIMINARY\LAKE COUNTRY LUTHERAN ADDITION_EXIST AND PROPOSED SITE PLAN_22X34.DWG



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0 10 20 40
SCALE: 1" = 20' (22"X34")
SCALE: 1" = 40' (11"X17")

LEGEND:

- 775 – EXISTING CONTOUR
- SAN – EXISTING SANITARY SEWER
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- ST – EXISTING STORM SEWER
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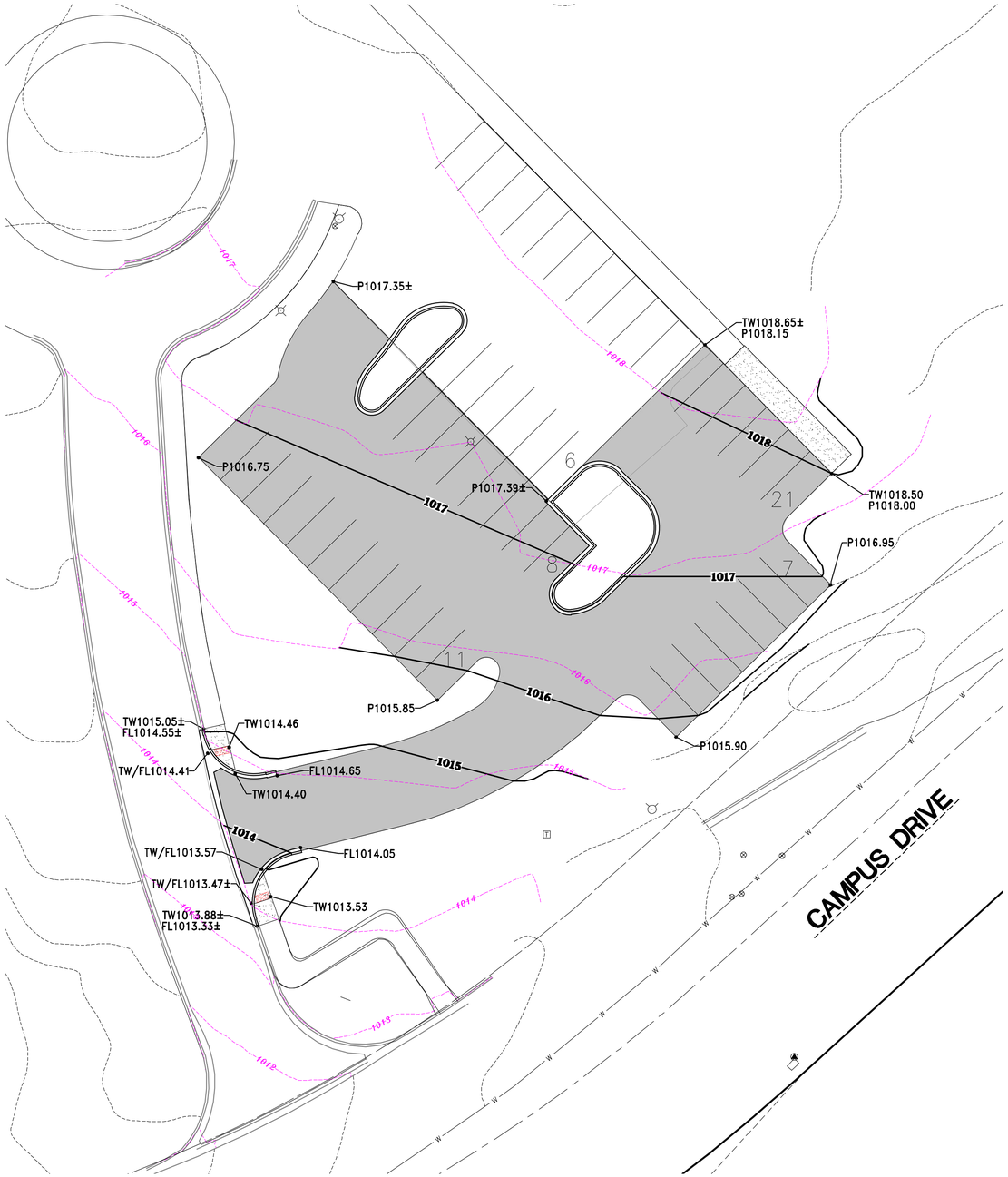
DATE:
MARCH 21, 2025

JOB NUMBER:
25-10-1092

DESCRIPTION:
DETAILED SITE PLAN - NORTH PARKING

SHEET
C1.3

X:\2025\25-10-1092 LAKE COUNTRY LUTHERAN ADDITION - HARTLAND\DRAWINGS\PRELIMINARY\LAKE COUNTRY LUTHERAN ADDITION_EXIST AND PROPOSED SITE PLAN_22X34.DWG



0 10 20 40

SCALE: 1" = 20' (22"X34")
SCALE: 1" = 40' (11"X17")

GRADE SPOT SHOT NOTE:
1. SPOT GRADE PREFIX REPRESENT THE SURFACE ELEVATION AT EACH SPECIFIC POINT. EACH ARE DEFINED AS FOLLOW: TOP OF SIDEWALK (TW), PAVEMENT (P), AND CURB & GUTTER FLANGE GRADE (FL) INDICATES AREAS WHERE SIDEWALK GRADE & PAVEMENT/FLANGE GRADES MATCH, AND WHERE CURB EXISTS, TOP OF CURB HEAD IS DEPRESSED AND MATCHES GRADE INDICATED.

LEGEND:

795	– EXISTING CONTOUR
795	– PROPOSED CONTOUR
←	– PROPOSED FLOW ARROW
P150.00	– PROPOSED SPOT ELEVATION
FFE XXX.X	– PROPOSED FIRST FLOOR ELEVATION

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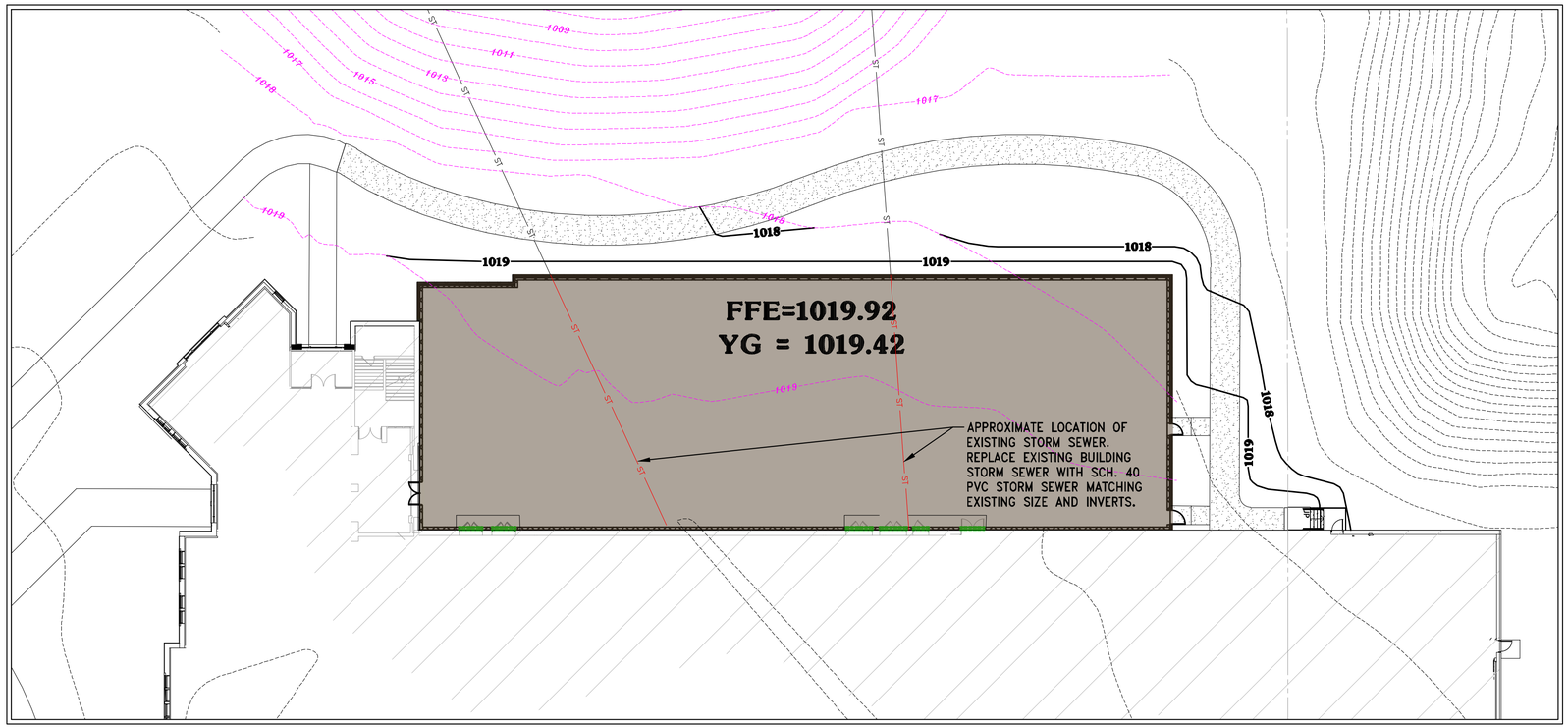
DATE:
MARCH 21, 2025

JOB NUMBER:
25-10-1092

DESCRIPTION:
GRADING PLAN - SOUTH PARKING

SHEET
C2.0

X:\2025\25-10-1092 LAKE COUNTRY LUTHERAN ADDITION - HARTLAND\DRAWINGS\PRELIMINARY\LAKE COUNTRY LUTHERAN ADDITION_GRADING AND EC_22X34.DWG



BUILDING ADDITION

0 10 20 40

SCALE: 1" = 20' (22"X34")
SCALE: 1" = 40' (11"X17")

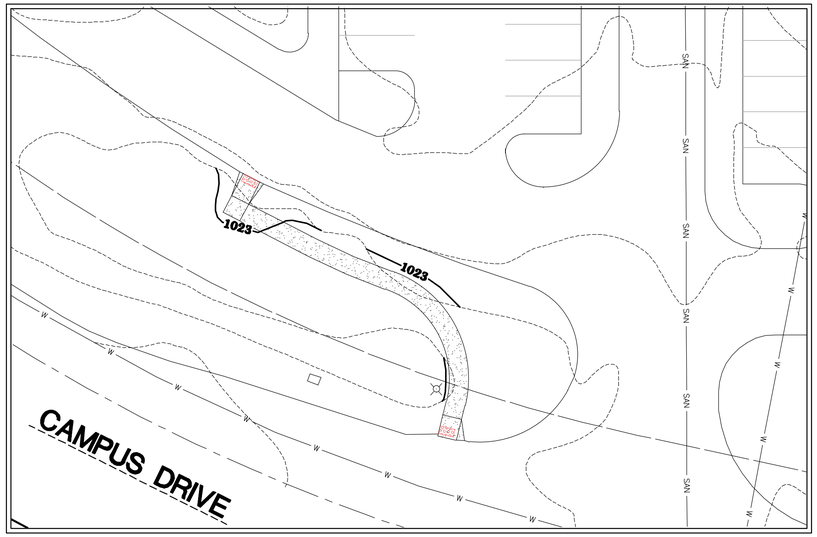
LEGEND:

795	– EXISTING CONTOUR
795	– PROPOSED CONTOUR
	– PROPOSED FLOW ARROW
P150.00	– PROPOSED SPOT ELEVATION
FFE XXX.X	– PROPOSED FIRST FLOOR ELEVATION

CONTRACTOR IS REQUIRED TO CONTACT DIGGERS HOTLINE TOLL FREE TO OBTAIN LOCATION OF UNDERGROUND UTILITIES PRIOR TO COMMENCING THE WORK. WISCONSIN STATUTE 182.0715 REQUIRES MIN. OF 3 WORK DAYS NOTICE BEFORE YOU EXCAVATE.

CALL DIGGERS HOTLINE 1-800-242-8511

NOTE:
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SIDEWALK CONNECTION AT CAMPUS DRIVE

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PROJECT:
LAKE COUNTRY LUTHERAN ADDITION
VILLAGE OF HARTLAND, WISCONSIN
BY: GROTH DESIGN GROUP
N58W6181 COLUMBIA RD.
CEDARBURG, WI 53012

REVISION HISTORY

DATE	DESCRIPTION
3/21/2025	PRELIMINARY SUBMITTAL

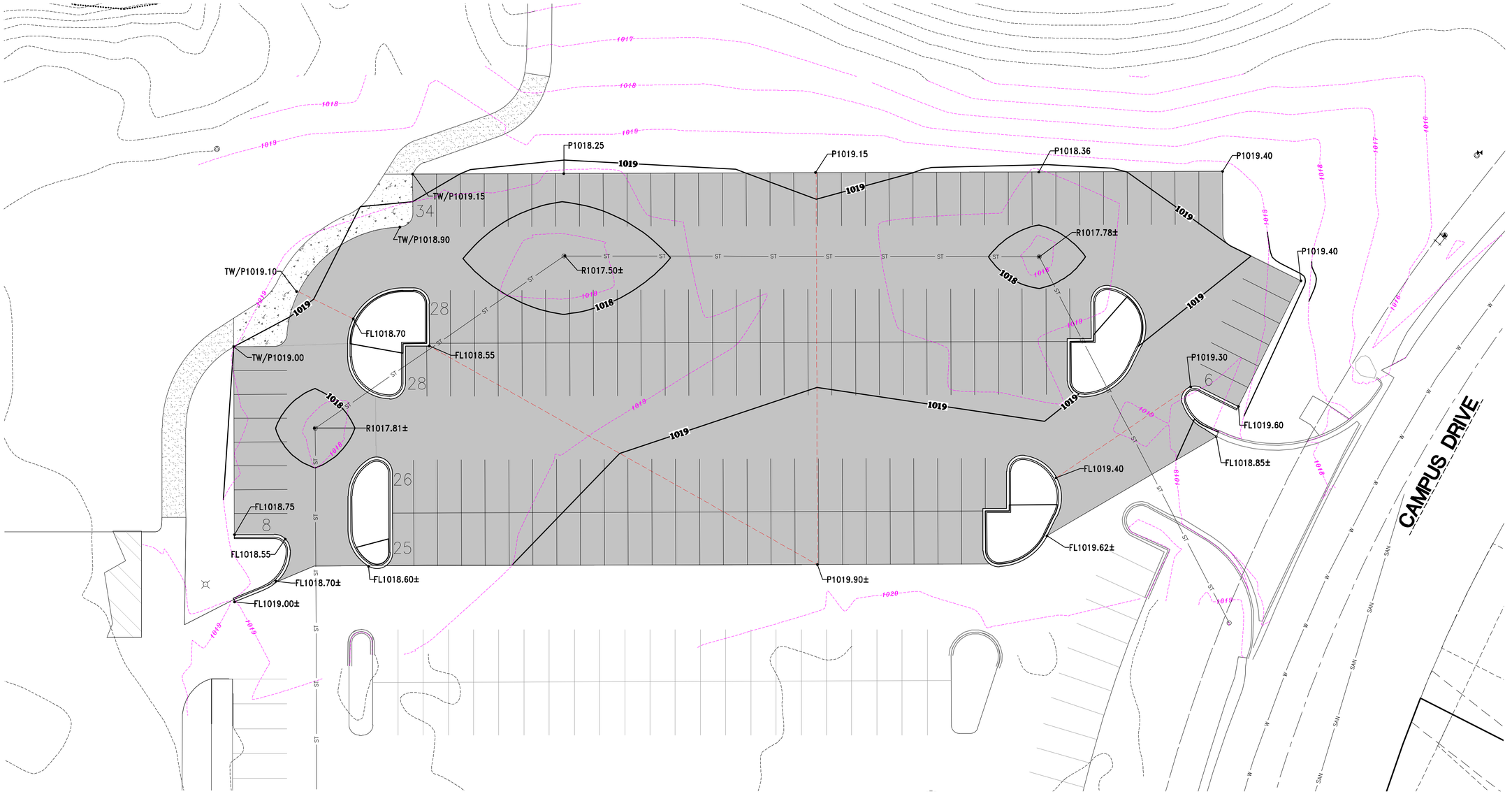
DATE:
MARCH 21, 2025

JOB NUMBER:
25-10-1092

DESCRIPTION:
GRADING PLAN - BUILDING ADDITION

SHEET
C2.1

X:\2025\25-10-1092 LAKE COUNTRY LUTHERAN ADDITION - HARTLAND\DRAWINGS\PRELIMINARY\LAKE COUNTRY LUTHERAN ADDITION_GRADING AND EC_22X34.DWG



LEGEND:

795	– EXISTING CONTOUR
795	– PROPOSED CONTOUR
	– PROPOSED FLOW ARROW
P150.00	– PROPOSED SPOT ELEVATION
FFE XXX.X	– PROPOSED FIRST FLOOR ELEVATION

GRADE SPOT SHOT NOTE:

1. SPOT GRADE PREFIX REPRESENT THE SURFACE ELEVATION AT EACH SPECIFIC POINT. EACH ARE DEFINED AS FOLLOW: TOP OF SIDEWALK (TW), PAVEMENT (P), AND CURB & GUTTER FLANGE GRADE (FL) INDICATES AREAS WHERE SIDEWALK GRADE & PAVEMENT/FLANGE GRADES MATCH, AND WHERE CURB EXISTS, TOP OF CURB HEAD IS DEPRESSED AND MATCHES GRADE INDICATED.

CONTRACTOR IS REQUIRED TO CONTACT DIGGERS HOTLINE TOLL FREE TO OBTAIN LOCATION OF UNDERGROUND UTILITIES PRIOR TO COMMENCING THE WORK. WISCONSIN STATUTE 182.0715 REQUIRES MIN. OF 3 WORK DAYS NOTICE BEFORE YOU EXCAVATE.
CALL DIGGERS HOTLINE 1-800-242-8511

NOTE:
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0 15 30 60
SCALE: 1" = 30' (22"X34")
SCALE: 1" = 60' (11"X17")

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PROJECT:
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VILLAGE OF HARTLAND, WISCONSIN
BY: GROTH DESIGN GROUP
N58W6181 COLUMBIA RD.
CEDARBURG, WI 53012

REVISION HISTORY

DATE	DESCRIPTION
3/21/2025	PRELIMINARY SUBMITTAL

DATE:
MARCH 21, 2025

JOB NUMBER:
25-10-1092

DESCRIPTION:
GRADING PLAN - NORTH PARKING

SHEET
C2.2

X:\2025\25-10-1092 LAKE COUNTRY LUTHERAN ADDITION - HARTLAND\DRAWINGS\PRELIMINARY\LAKE COUNTRY LUTHERAN ADDITION_GRADING AND EC_22X34.DWG

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NOTE:
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EROSION CONTROL NOTES:

1. ALL EROSION CONTROL METHODS SHALL BE INSTALLED IN ACCORDANCE WITH WDNR TECHNICAL STANDARDS AND VILLAGE OF HARTLAND STANDARDS AND REQUIREMENTS.
2. THE CONTRACTOR SHALL TAKE ALL MEASURES NECESSARY TO MINIMIZE EROSION, WATER POLLUTION AND SILTATION CAUSED BY CONSTRUCTION OF THIS PROJECT. EROSION CONTROL MEASURES SHALL BE IN ACCORDANCE WITH WISCONSIN DEPARTMENT OF NATURAL RESOURCES TECHNICAL STANDARDS.
3. EROSION CONTROL PLAN: PRIOR TO BEGINNING WORK, THE CONTRACTOR MAY BE REQUIRED TO SUBMIT AN EROSION AND SEDIMENT CONTROL PLAN, DETAILING SPECIFIC MEASURES THAT WILL BE USED IN THE VARIOUS STAGES OF CONSTRUCTION FOR APPROVAL BY THE ENGINEER.
4. IMPLEMENTATION: THE CONTRACTOR SHALL NOT BEGIN WORK UNTIL AFTER INITIAL EROSION AND SEDIMENT CONTROL DEVICES ARE IN PLACE AND APPROVED BY THE ENGINEER.
5. EROSION CONTROL MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING:
   A. DIVERT UPSTREAM RUNOFF FROM FLOWING THROUGH THE CONSTRUCTION SITE.
   B. PROTECT DOWNSTREAM OR ADJACENT WATERWAYS AND WETLANDS WITH SILT FENCE.
   C. DELAY STRIPPING TOPSOIL UNTIL REQUIRED FOR CONSTRUCTION.
   D. PLACE SILT FENCE OR EROSION CONTROL BALES IN DITCHES AND OTHER DRAINAGE WAYS TO COLLECT SEDIMENT AND TO SLOW THE VELOCITY OF RUNOFF.
   E. PROTECT STORM SEWER INLETS AND THE UPSTREAM END OF CULVERTS WITH SILT FENCE OR EROSION CONTROL BALES.
   F. PROMPT REMOVAL OF EXCAVATED MATERIAL.
   G. PROPER STORAGE OF BACKFILL AND BEDDING MATERIALS INCLUDING PLACING SILT FENCE OR EROSION CONTROL BALES ON THE DOWNSLOPE SIDES OF SPOIL PILES.
   H. CONSTRUCTION OF TRACKING PAD TO CONSTRUCTION SITE TO PREVENT SEDIMENT FROM BEING TRACKED ONTO ROADWAYS.
   I. PROMPT (SAME DAY) CLEANUP OF MATERIAL TRACKED ONTO ADJACENT STREETS.
   J. TIMELY RESTORATION OF DAMAGE SURFACE AREAS.
   K. ALL AREAS THAT WILL REMAIN DISTURBED AFTER OCTOBER
   L. MUST BE TEMPORARY SEEDED AS OF THAT DATE.
6. TEMPORARY EROSION CONTROL MEASURES.
   A. THE CONTRACTOR SHALL CONSTRUCT TEMPORARY EROSION CONTROL MEASURES, WHERE EROSION IS LIKELY TO BE A PROBLEM, PRIOR TO BEGINNING WORK ON THOSE SECTION(S) OF THE PROJECT. TEMPORARY EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL AFTER PERMANENT EROSION CONTROL, SUCH AS SEEDING OR SODDING, HAS BEEN ESTABLISHED.
   B. IN THE EVENT THE PERMANENT EROSION CONTROL MEASURES ARE NOT FULLY IMPLEMENTED IN CURRENT CONSTRUCTION SEASON, THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL NECESSARY TEMPORARY EROSION CONTROL MEASURES UNTIL AFTER PERMANENT MEASURES HAVE BEEN COMPLETED IN THE FOLLOWING YEAR.
7. ALL EXPOSED SOIL AREAS NOT DISTURBED FOR UP TO SEVEN DAYS MUST BE IMMEDIATELY RESTORED WITH SEED AND MULCH.
8. TRENCH DEWATERING SHALL BE IN ACCORDANCE WITH WDNR TECHNICAL STANDARDS.
9. INSTALL SILT FENCE IN ACCORDANCE WITH WDNR TECHNICAL STANDARD DETAILS
10. ALL RIP RAP AT PIPE OUTLETS SHALL BE 3'x5' MEDIUM RIP RAP OVER TYPE R FABRIC PER WDOT SPECIFICATIONS UNLESS OTHERWISE DESIGNATED.
11. EROSION CONTROL INSPECTION AND MAINTENANCE
    A. INSPECT EROSION CONTROL MEASURES WEEKLY AND AFTER SITE RECEIVES 0.5" OF RAIN IN A 24-HOUR PERIOD DURING CONSTRUCTION.
    B. REPAIR OR REPLACE EROSION CONTROLS THAT ARE DAMAGED OR FAILING.
12. ALL AREAS TO BE SEEDED AND MULCHED SHALL USE WDOT SEED MIXTURE NO. 20. MULCH SHALL APPLIED PER WDOT SPECIFICATIONS USING METHOD B FOR PLACEMENT.

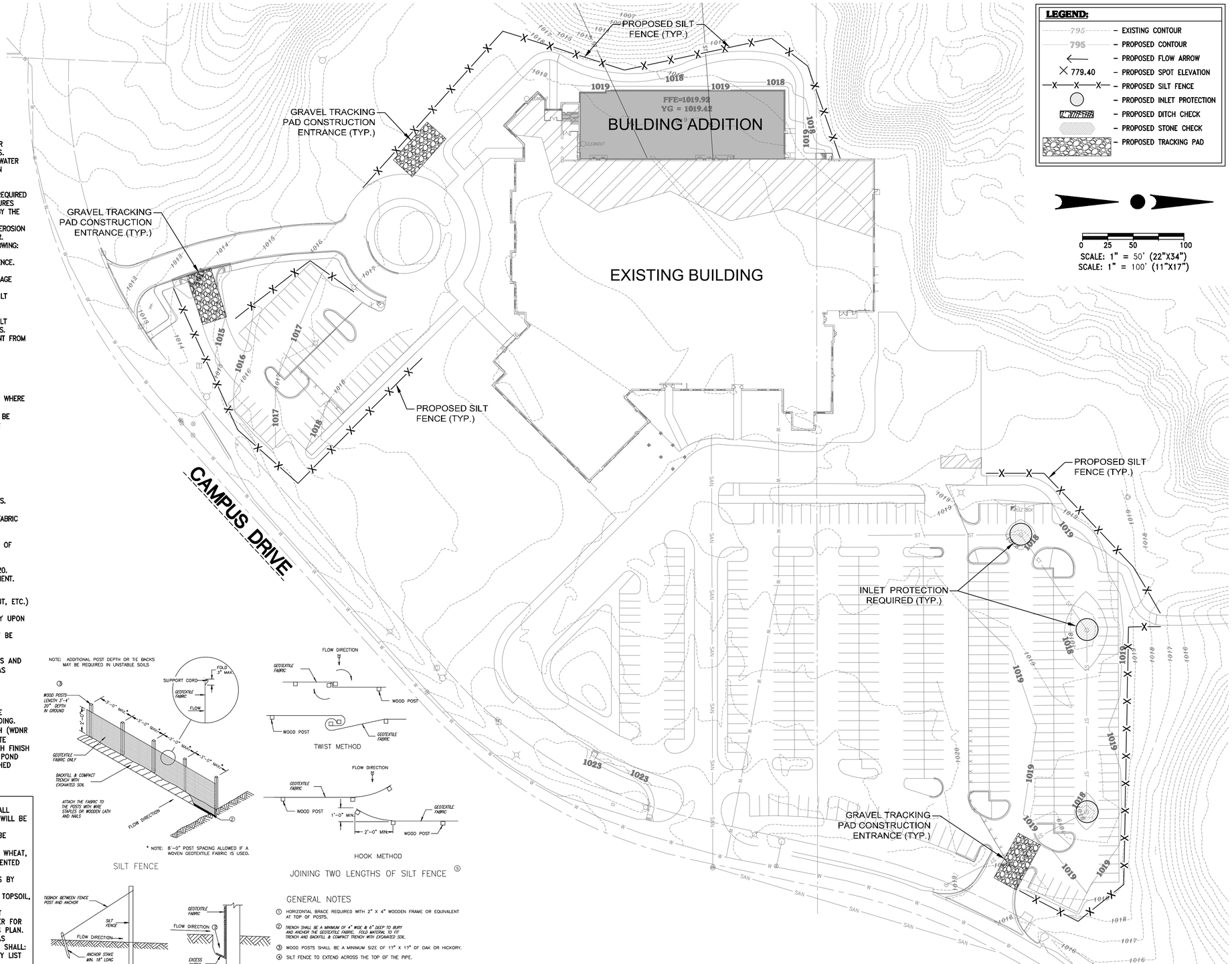
CONSTRUCTION SEQUENCE PLAN

1. APPLY FOR NECESSARY LOCAL PERMITS (EROSION CONTROL, NOTICE OF INTENT, ETC.)
2. INSTALL TRACKING PADS AND SILT FENCE PER PLAN.
3. STRIP TOPSOIL AND STOCKPILE. SEED AND STABILIZE STOCKPILES IMMEDIATELY UPON COMPLETION OF STOCKPILING.
   3.1. ALL EXPOSED SOIL AREAS NOT DISTURBED FOR UP TO SEVEN DAYS MUST BE IMMEDIATELY RESTORED WITH SEED AND MULCH.
4. BEGIN CONSTRUCTION OF SILT TRAP AND SEDIMENT SUMP. CONCURRENT WITH CONSTRUCTION OF THE SILT TRAP, BEGIN CONSTRUCTION OF DIVERSION BERMS AND SWALES (WITH DITCH CHECKS) TO DIRECT SITE RUNOFF TO THE SILT TRAP, AS INDICATED ON THE PLAN.
5. ROUGH GRADE SITE.
6. BEGIN BUILDING AND PARKING LOT CONSTRUCTION.
7. FINISH GRADE THE SITE.
8. INSTALL STONE BASE COURSE, CONSTRUCT CURB, AND PLACE BINDER COURSE PAVEMENT. NOTE THAT THIS STEP MAY BEGIN CONCURRENT WITH FINISH GRADING.
9. RESPREAD 6" OF TOPSOIL AND PLACE SEED (WDNR TECH STD. 1059), MULCH (WDNR TECH STD. 1058), MATTING (WDNR TECH STD. 1052 & 1053) AND OTHER SITE STABILIZERS AS NEEDED. NOTE THAT THIS STEP MAY BEGIN CONCURRENT WITH FINISH GRADING AND ROAD CONSTRUCTION. ALSO NOTE THAT ANY AREAS, SUCH AS POND SLOPES, THAT ARE FINISH GRADED AND TOPSOILED SHALL BE SEEDED, MULCHED AND/OR MATTED IMMEDIATELY AFTER TOPSOIL IS PLACED.
10. FINAL SURFACE OF PARKING LOT.

LATE SEASON STABILIZATION NOTES:

THE OBJECTIVE IS TO STABILIZE THE SITE WITH 70% VEGETATIVE COVERAGE OF ALL PERVIOUS DISTURBED AREAS BEFORE THE END OF THE GROWING SEASON. THIS WILL BE DONE BY SEEDING OF ALL DISTURBED AREAS WITH PERMANENT VEGETATION BY SEPTEMBER 15, 2023. IF THIS DEADLINE IS MISSED, THEN STABILIZATION WILL BE COMPLETED BY:

1. SEEDING OF ALL DISTURBED AREAS WITH TEMPORARY SEED MIX (OATS, WINTER WHEAT, ANNUAL RYE) BY OCTOBER 15. PERMANENT SEED MIX MUST THEN BE IMPLEMENTED BY JUNE 1 OF THE FOLLOWING YEAR.
2. IF THE OCTOBER 15 DEADLINE IS MISSED, COVERAGE OF ALL DISTURBED AREAS BY NOVEMBER 1 WITH:
   a. TOPSOIL, SEED, AND THE MATERIAL CALLED FOR ON THIS PLAN, WHERE TOPSOIL, SEED, AND EROSION CONTROL MATTING IS CALLED FOR.
   b. TOPSOIL, SEED, AND TYPE A SOIL STABILIZER FROM THE WDOT PRODUCT ACCEPTABILITY LIST OR OTHER METHOD APPROVED BY THE CITY ENGINEER FOR ALL AREAS WHERE SEED, TOPSOIL, AND MULCH IS CALLED FOR ON THIS PLAN.
3. IF THE NOVEMBER 1 DEADLINE HAS BEEN MISSED, AND THE CITY ENGINEER HAS DETERMINED THAT IT IS INFEASIBLE TO PLACE TOPSOIL, THE PERMIT APPLICANT SHALL:
   a. APPLY TYPE A SOIL STABILIZER FROM THE WDOT PRODUCT ACCEPTABILITY LIST TO ALL DISTURBED AREAS.
   b. INSTALL DITCH CHECKS IN ALL DITCHES WITH SLOPE GREATER THAN 0.5% AT INTERVALS SUCH THAT THE TOP OF THE DOWNHILL DITCH CHECK IS AT THE ELEVATION OF THE FOOT OF THE UPHILL DITCH CHECK. DITCH CHECKS SHALL BE EITHER:
      i. TRIANGULAR FOAM-CORE
      ii. STONE INSTALLED PER THE WDNR TECHNICAL STANDARD
      iii. COMPOST-FILLED TUBES, OR
      iv. A COMPARABLE PRODUCT AS APPROVED BY THE CITY ENGINEER.



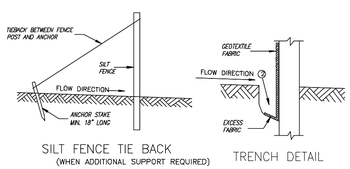
LEGEND:

- 795 – EXISTING CONTOUR
- 795 – PROPOSED CONTOUR
- – PROPOSED FLOW ARROW
- 779.40 – PROPOSED SPOT ELEVATION
- – PROPOSED SILT FENCE
- – PROPOSED INLET PROTECTION
- – PROPOSED DITCH CHECK
- – PROPOSED STONE CHECK
- – PROPOSED TRACKING PAD

0 25 50 100
SCALE: 1" = 50' (22"X34")
SCALE: 1" = 100' (11"X17")

SILT FENCE

JOINING TWO LENGTHS OF SILT FENCE ⑤



SILT FENCE TIE BACK
(WHEN ADDITIONAL SUPPORT REQUIRED)

TRENCH DETAIL

GENERAL NOTES

① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

② TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.

③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1?" X 1?" OF OAK OR HICKORY.

④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.

⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.

SILT FENCE INSTALLATION DETAIL
NO SCALE

This drawing based on Wisconsin Department of Transportation Standard Detail Drawing 8 E 9-6.

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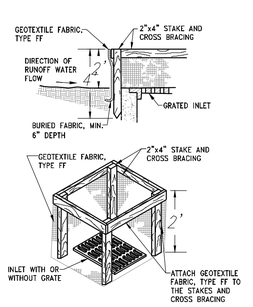
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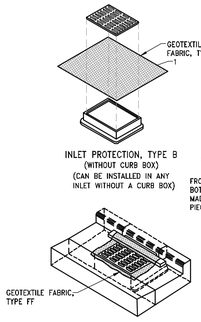
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EROSION CONTROL PLAN

SHEET
C3.0

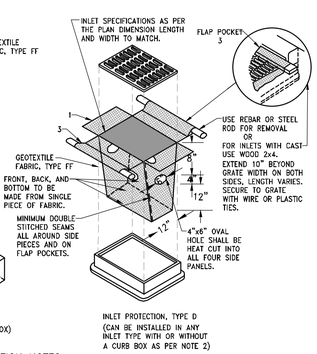
X:\2025\25-10-1092 LAKE COUNTRY LUTHERAN ADDITION - HARTLAND\DRAWINGS\PRELIMINARY\LAKE COUNTRY LUTHERAN ADDITION_GRADING AND EC_22X34.DWG



INLET PROTECTION, TYPE A



INLET PROTECTION, TYPE C (WITH CURB BOX)



INLET PROTECTION, TYPE D
(CAN BE INSTALLED IN ANY INLET TYPE WITH OR WITHOUT A CURB BOX AS PER NOTE 2)

GENERAL NOTES:

MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE DEPARTMENT'S EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE SUBSTITUTED.

WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

1. FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.

2. FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.

3. FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.

INSTALLATION NOTES:

TYPE B & C

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE. THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OT OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

TYPE D

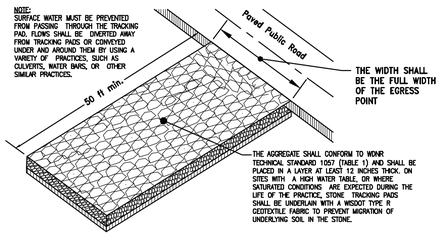
DO NOT INSTALL INLET PROTECTION TYPE D IN INLETS SHALLOWER THAN 30", MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE.

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE BOTTOM OF THE BAG.

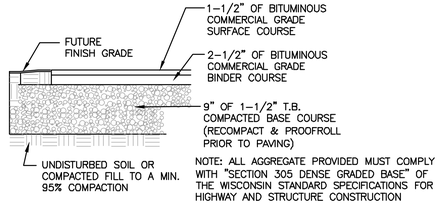
INLET PROTECTION DETAIL

NO SCALE



CONSTRUCTION ENTRANCE DETAIL

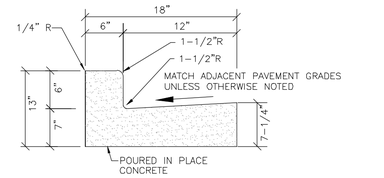
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NOTE: ALL AGGREGATE PROVIDED MUST COMPLY WITH "SECTION 305 DENSE GRADED BASE" OF THE WISCONSIN STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION

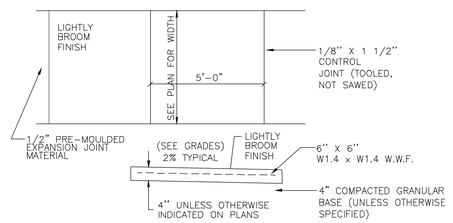
PARKING LOT ASPHALT PAVING DETAIL

NO SCALE



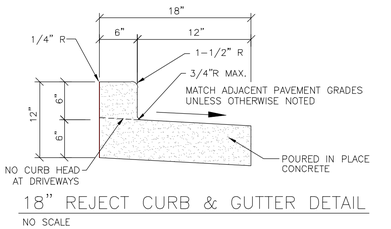
18" CATCH CONCRETE CURB & GUTTER

NO SCALE



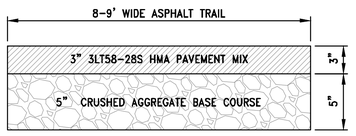
PRIVATE CONCRETE SIDEWALK

NO SCALE
NOTE: SEE C5.1 FOR PUBLIC SIDEWALK DETAIL.



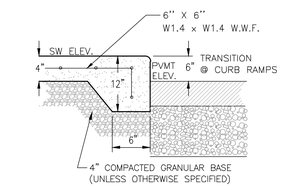
18" REJECT CURB & GUTTER DETAIL

NO SCALE



ASPHALT TRAIL CROSS SECTION

NO SCALE



INTEGRAL SIDEWALK & BARRIER CURB

NO SCALE

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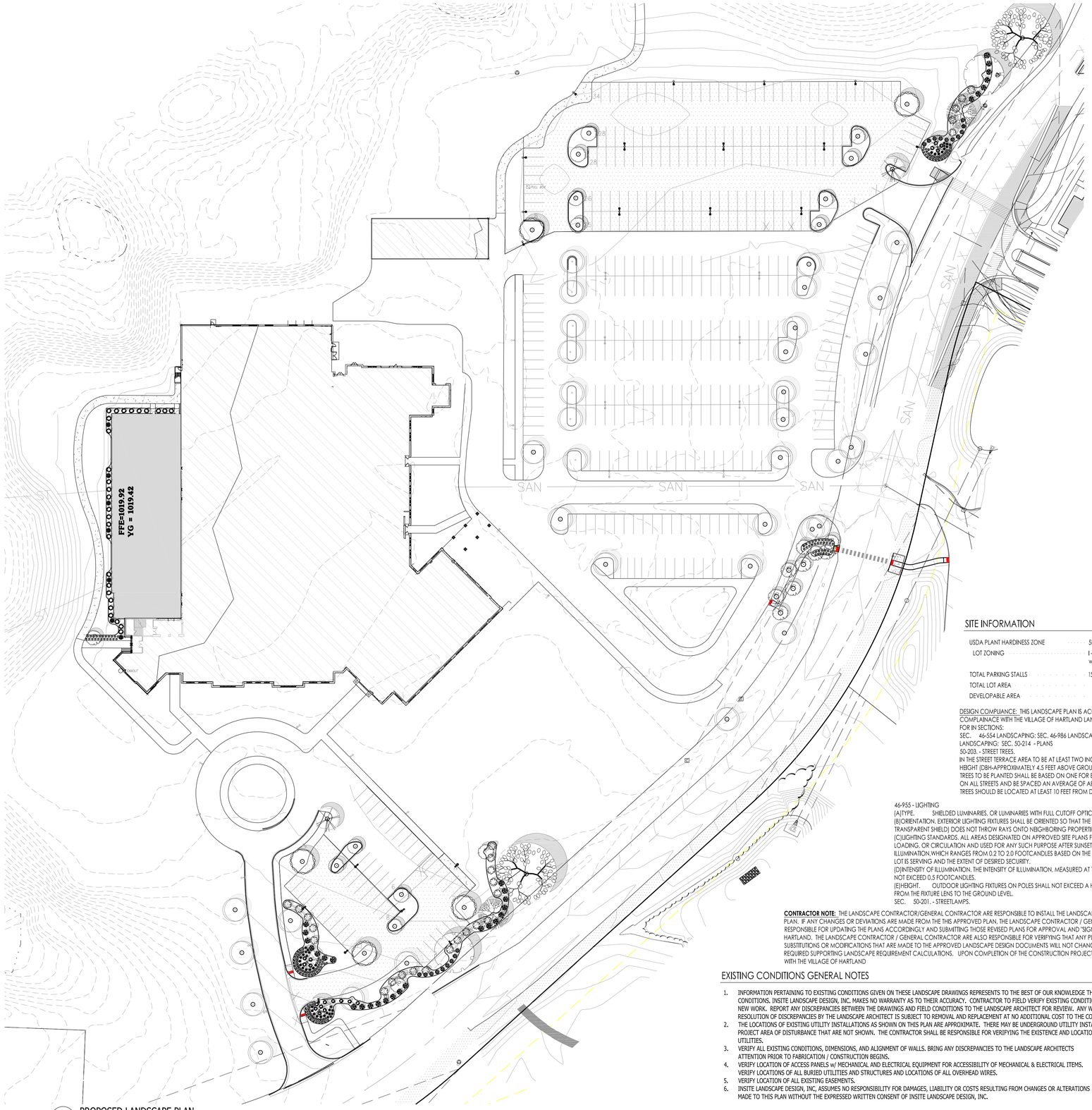
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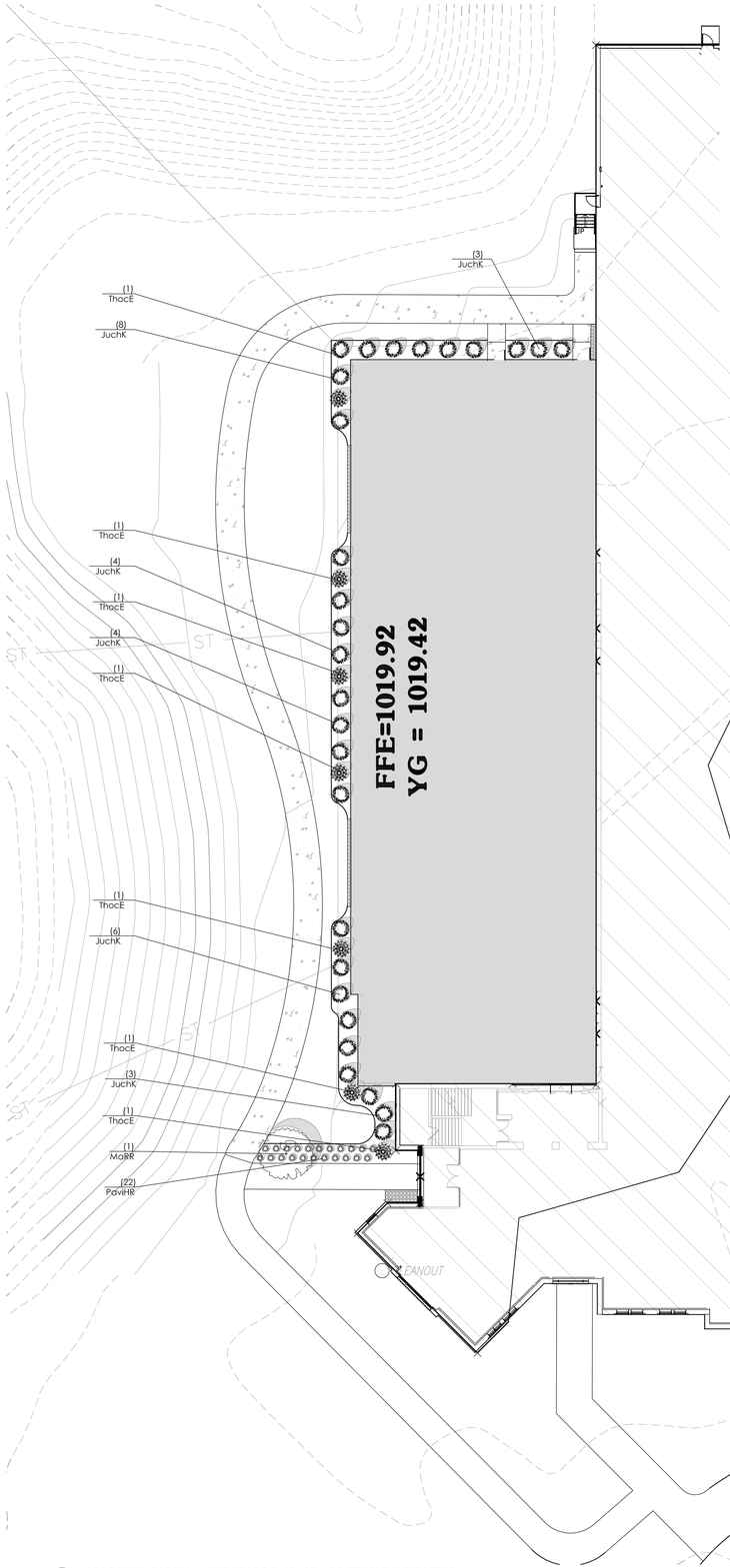
JOB NUMBER:
25-10-1092

DESCRIPTION:
CONSTRUCTION NOTES & DETAILS

SHEET
C4.0

X:\2025\25-10-1092 LAKE COUNTRY LUTHERAN ADDITION - HARTLAND\DRAWINGS\PRELIMINARY\LAKE COUNTRY LUTHERAN ADDITION_COVER AND DETAILS_22X34.DWG


FFE=1019.92
YG = 1019.42
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Proposed Plant Material Table - LSP1.2 at Addition Foundation

Broadleaf Deciduous Tree

Quantity	Code Name	Symbol	Scientific Name	Common Name	Planting Size	Comments
1	MaRR		Malus 'JFS-KW5'	Royal Raindrops Crabapple	1 1/2" Cal - B&B	1

Conifer Evergreen Tree

Quantity	Code Name	Symbol	Scientific Name	Common Name	Planting Size	Comments
7	ThocE		Thuja occidentalis 'Emerald'	Emerald Arborvitae	5' - 6' - B&B	4

Conifer Evergreen Shrub

Quantity	Code Name	Symbol	Scientific Name	Common Name	Planting Size	Comments
28	JuchK		Juniperus chinensis 'Kallay's Comapact'	Kallay's Compact Juniper	18" - 24" - B&B	5

Perennial Grass

Quantity	Code Name	Symbol	Scientific Name	Common Name	Planting Size	Comments
22	PaviHR		Panicum virgatum 'Hot Rod'	Hot Rod Switch Grass	1-Gal - Cont	6

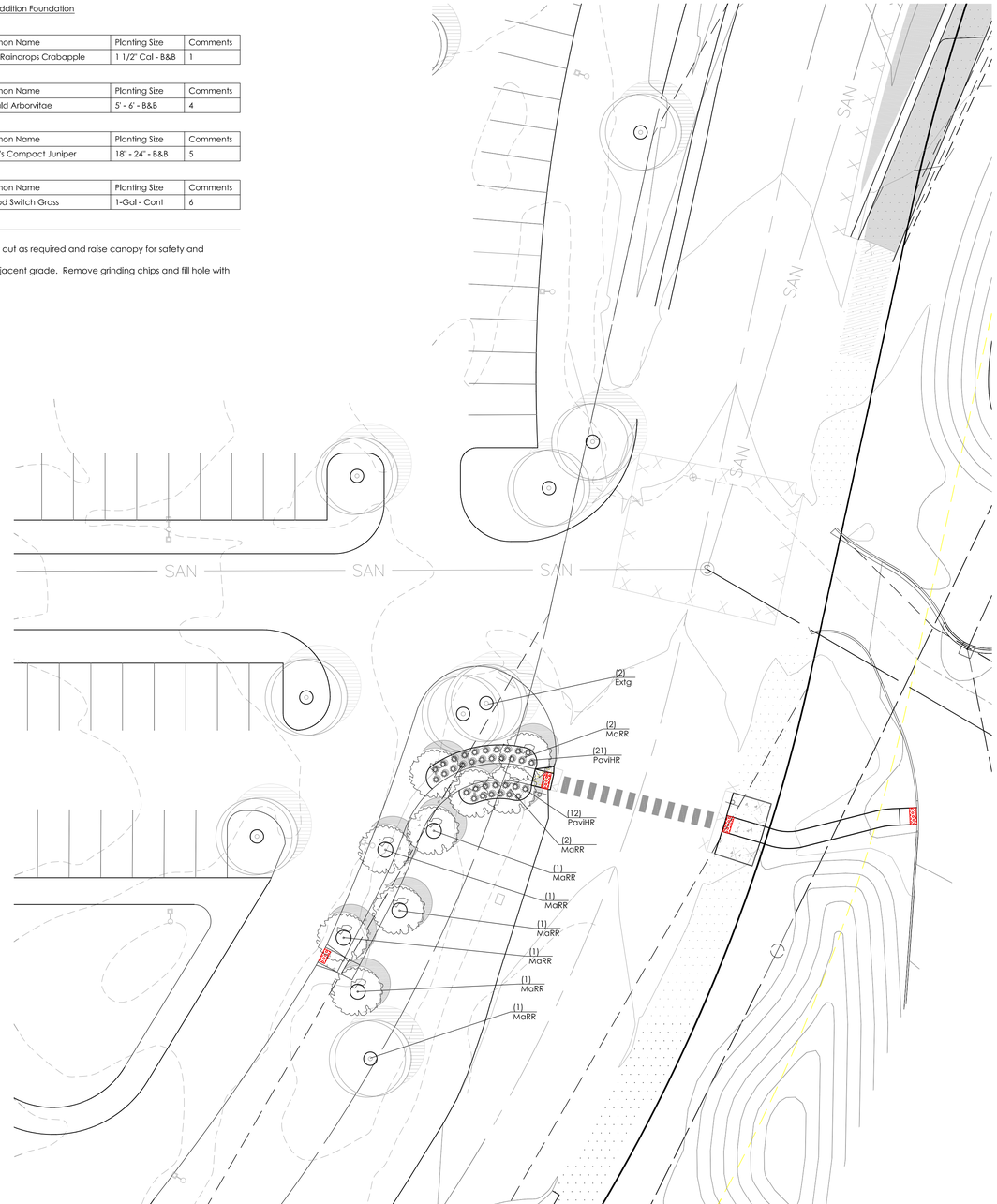
Comments

1. Straight central leader, full & even crown. Prune only after planting.
2. Prune existing tree, remove any dead, diseased or hazardous limbs. Thin out as required and raise canopy for safety and viability for both pedestrians and motorists.
3. Remove tree in its entirety and grind stump to a minimum of 6" below adjacent grade. Remove grinding chips and fill hole with topsoil. Sow with specified turf grass seed as required.
4. Evenly shaped upright tree/shrub with full branching to the ground.
5. Full, well rooted plant, evenly shaped.
6. Full, well rooted plant.
7. Male only

1 PROPOSED PARTIAL LANDSCAPE PLAN AT ADDITION FOUNDATION

SCALE: 1" = 20'-0"

North



Proposed Plant Material Table - LSP1.2 at New Pedestrian Walkway

Broadleaf Deciduous Tree

Quantity	Code Name	Symbol	Scientific Name	Common Name	Planting Size	Comments
9	MaRR		Malus 'JFS-KW5'	Royal Raindrops Crabapple	1 1/2" Cal - B&B	1
5	Extg		Existing to Remain	Existing to Remain	Existing	2

Grass

Quantity	Code Name	Symbol	Scientific Name	Common Name	Planting Size	Comments
34	PaviHR		Panicum virgatum 'Hot Rod'	Hot Rod Switch Grass	1-Gal - Cont	6

Comments

1. Straight central leader, full & even crown. Prune only after planting.
2. Prune existing tree, remove any dead, diseased or hazardous limbs. Thin out as required and raise canopy for safety and viability for both pedestrians and motorists.
3. Remove tree in its entirety and grind stump to a minimum of 6" below adjacent grade. Remove grinding chips and fill hole with topsoil. Sow with specified turf grass seed as required.
4. Evenly shaped upright tree with full branching to the ground.
5. Full, well rooted plant, evenly shaped.
6. Full, well rooted plant.
7. Male only

2 PROPOSED PARTIAL LANDSCAPE PLAN AT NEW PEDESTRIAN WALKWAY

SCALE: 1" = 20'-0"

North

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Project:

LAKE COUNTRY LUTHERAN -ADDITION

401 Campus Drive
Hartland, WI 53029

Issuance and Revisions:

Date	Number	Description
03/28/25		Plan Commission Submittal

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Sheet Title:

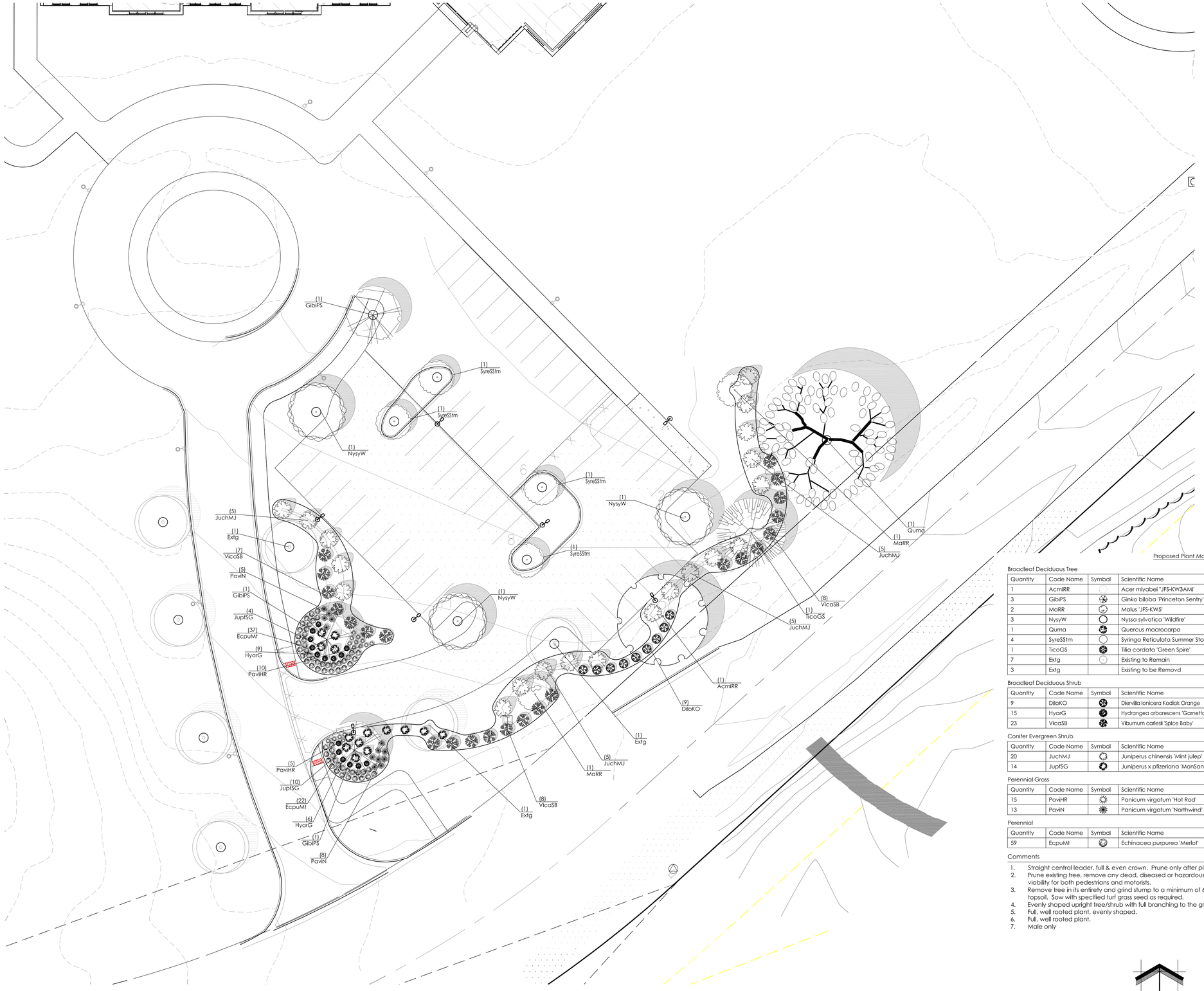
PROPOSED PARTIAL LANDSCAPE PLANS, AND PLANT MATERIAL TABLES

Date of Drawing:	03/28/25
Scale:	1" = 20'-0"
Drawn By:	MCD
Job Number:	L25-018
Sheet Number:	LSP1.2

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L25-018 - LAKE COUNTRY LUTHERAN - ADDITION - 03/28/2025



1 PROPOSED PARTIAL LANDSCAPE PLAN

SCALE: 1" = 20'-0"

North

Proposed Plant Material Table - LSP1.3

Broadleaf Deciduous Tree

Quantity	Code Name	Symbol	Scientific Name	Common Name	Planting Size	Comments
1	AcmiRR		Acer miyabei 'JFS-KW3AMI'	Rugged Ridge Maple	2"-Cal - B&B	1
3	GibiPS		Ginko biloba 'Princeton Sentry'	Princeton Sentry Maidenhair Tree	2"-Cal - B&B	1, 7
2	MaRR		Malus 'JFS-KWS'	Royal Raindrops Crabapple	2"-Cal - B&B	1
3	NysyW		Nyssa sylvatica 'Wildfire'	Wildfire Black Gum	2"-Cal - B&B	1
1	Quma		Quercus macrocarpa	Bur oak	2"-Cal - B&B	1
4	SyreSStm		Syringa Reticulata Summer Storm	Summer Storm Japanese Tree Lilac	2"-Cal - B&B	1
1	TicoGS		Tilia cordata 'Green Spire'	Green Spire Linden	2"-Cal - B&B	1
7	Extg		Existing to Remain	Existing to Remain	Existing	2
3	Extg		Existing to be Removd	Existing to be Removd	Existing	3

Broadleaf Deciduous Shrub

Quantity	Code Name	Symbol	Scientific Name	Common Name	Planting Size	Comments
9	DiloKO		Diervilla lonicera Kodiak Orange	Kodiak Orange Bush Honeysuckle Diervilla	18" - 24"- Cont	5
15	HyarG		Hydrangea arborescens 'Garretta'	Invincibelle Garretta Smooth Hydrangea	18" - Cont	5
23	VicaSB		Viburnum carlesii 'Spice Baby'	Spice Baby Viburnum	18" - 24"- Cont	5

Conifer Evergreen Shrub

Quantity	Code Name	Symbol	Scientific Name	Common Name	Planting Size	Comments
20	JuchMJ		Juniperus chinensis 'Mint julep'	Mint julep juniper	18" - 24" - B&B	5
14	JupfSG		Juniperus x pfizeriana 'MonSan'	Sea of Gold Juniper	18" - 24" - B&B	5

Perennial Grass

Quantity	Code Name	Symbol	Scientific Name	Common Name	Planting Size	Comments
15	PaviHR		Panicum virgatum 'Hot Rod'	Hot Rod Switch Grass	2-Gal - Cont	6
13	PaviN		Panicum virgatum 'Northwind'	Northwind Switch Grass	1-Gal - Cont	6

Perennial

Quantity	Code Name	Symbol	Scientific Name	Common Name	Planting Size	Comments
59	EcpuMt		Echinacea purpurea 'Merlot'	Merlot Coneflower	4 1/2" pot	6

Comments

1. Straight central leader, full & even crown. Prune only after planting.
2. Prune existing tree, remove any dead, diseased or hazardous limbs. Thin out as required and raise canopy for safety and viability for both pedestrians and motorists.
3. Remove tree in its entirety and grind stump to a minimum of 6" below adjacent grade. Remove grinding chips and fill hole with topsoil. Sow with specified turf grass seed as required.
4. Evenly shaped upright tree/shrub with full branching to the ground.
5. Full, well rooted plant, evenly shaped.
6. Full, well rooted plant.
7. Male only

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Project:

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Issuance and Revisions:

Date	Number	Description
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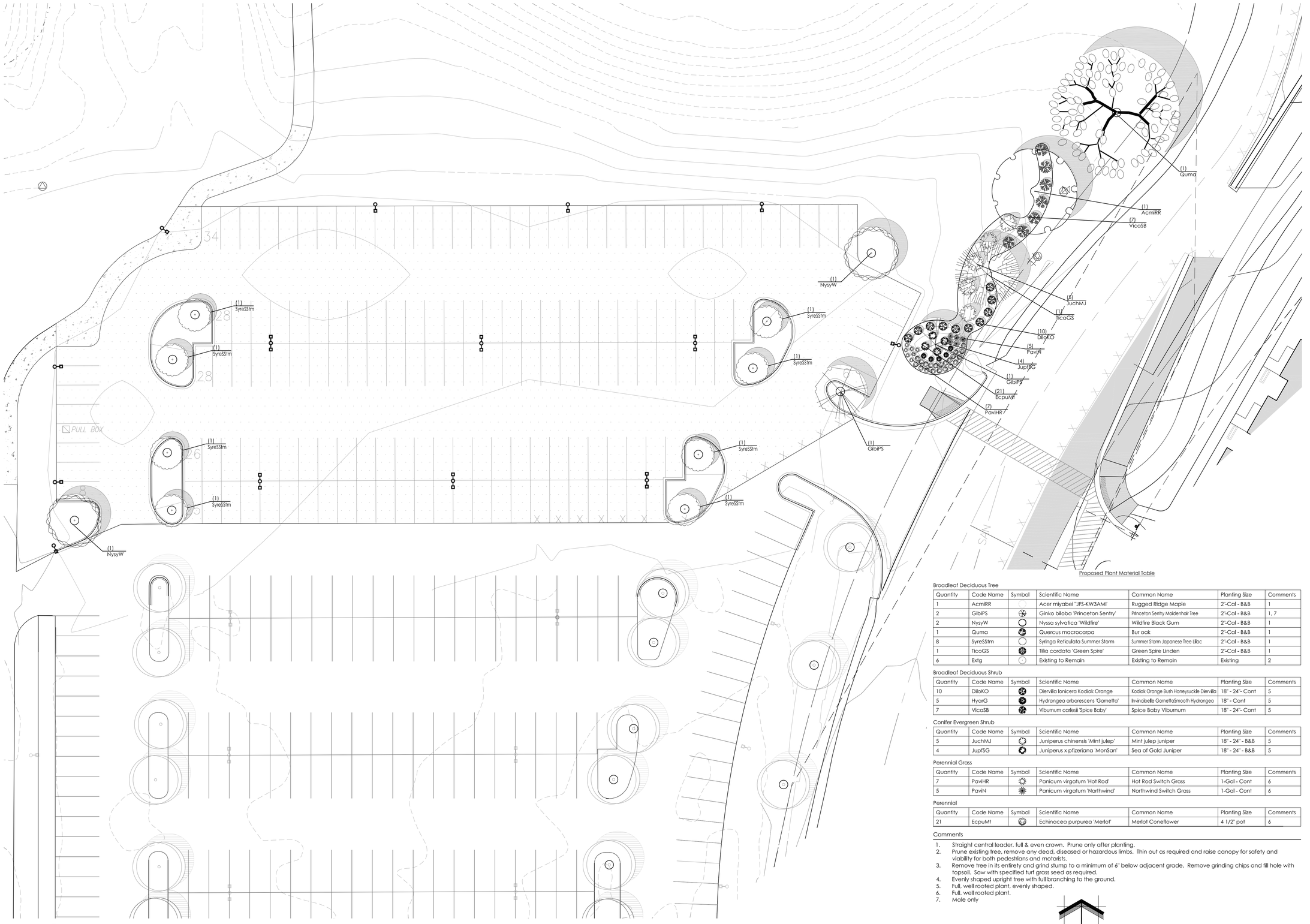
PROPOSED PARTIAL LANDSCAPE PLAN, AND PLANT MATERIAL TABLE

Date of Drawing:	03/28/25
Scale:	1" = 20'-0"
Drawn By:	MCD
Job Number:	L25-018
Sheet Number:	LSP1.3

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L25-018 - LAKE COUNTRY LUTHERAN - ADDITION - 03/28/2025



1 PROPOSED PARTIAL LANDSCAPE PLAN

SCALE: 1" = 20'-0"

North

Proposed Plant Material Table

Broadleaf Deciduous Tree

Quantity	Code Name	Symbol	Scientific Name	Common Name	Planting Size	Comments
1	AcmiRR		Acer miyabei 'JFS-KW3AMI'	Rugged Ridge Maple	2"-Cal - B&B	1
2	GlbiPS		Ginko biloba 'Princeton Sentry'	Princeton Sentry Maidenhair Tree	2"-Cal - B&B	1, 7
2	NysyW		Nyssa sylvatica 'Wildfire'	Wildfire Black Gum	2"-Cal - B&B	1
1	Quma		Quercus macrocarpa	Bur oak	2"-Cal - B&B	1
8	SyreSStm		Syringa Reticulata Summer Storm	Summer Storm Japanese Tree Lilac	2"-Cal - B&B	1
1	TicoGS		Tilia cordata 'Green Spire'	Green Spire Linden	2"-Cal - B&B	1
6	Extg		Existing to Remain	Existing to Remain	Existing	2

Broadleaf Deciduous Shrub

Quantity	Code Name	Symbol	Scientific Name	Common Name	Planting Size	Comments
10	DiloKO		Diervilla lonicera Kodiak Orange	Kodiak Orange Bush Honeysuckle Diervilla	18" - 24"- Cont	5
5	HyarG		Hydrangea arborescens 'Gametta'	Invincibelle GamettaSmooth Hydrangea	18" - Cont	5
7	VicaSB		Viburnum carlesii 'Spice Baby'	Spice Baby Viburnum	18" - 24"- Cont	5

Conifer Evergreen Shrub

Quantity	Code Name	Symbol	Scientific Name	Common Name	Planting Size	Comments
5	JuchMJ		Juniperus chinensis 'Mint julep'	Mint julep juniper	18" - 24" - B&B	5
4	JupfSG		Juniperus x pfizeriana 'MonSan'	Sea of Gold Juniper	18" - 24" - B&B	5

Perennial Grass

Quantity	Code Name	Symbol	Scientific Name	Common Name	Planting Size	Comments
7	PaviHR		Panicum virgatum 'Hot Rod'	Hot Rod Switch Grass	1-Gal - Cont	6
5	PaviN		Panicum virgatum 'Northwind'	Northwind Switch Grass	1-Gal - Cont	6

Perennial

Quantity	Code Name	Symbol	Scientific Name	Common Name	Planting Size	Comments
21	EcpuMf		Echinacea purpurea 'Merlot'	Merlot Coneflower	4 1/2" pot	6

Comments

1. Straight central leader, full & even crown. Prune only after planting.
2. Prune existing tree, remove any dead, diseased or hazardous limbs. Thin out as required and raise canopy for safety and viability for both pedestrians and motorists.
3. Remove tree in its entirety and grind stump to a minimum of 6" below adjacent grade. Remove grinding chips and fill hole with topsoil. Sow with specified turf grass seed as required.
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6. Full, well rooted plant.
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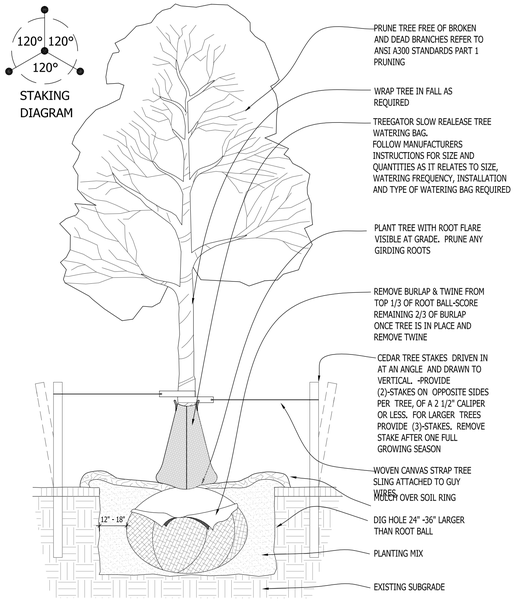
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Date of Drawing:	03/28/25
Scale:	1" = 20'-0"
Drawn By:	MCD
Job Number:	L25-018
Sheet Number:	LSP1.4

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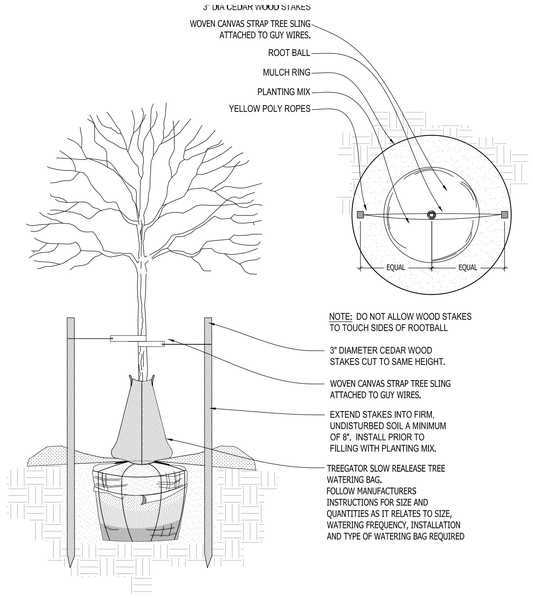
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L25-018 - LAKE COUNTRY LUTHERAN - ADDITION - 03/28/2025



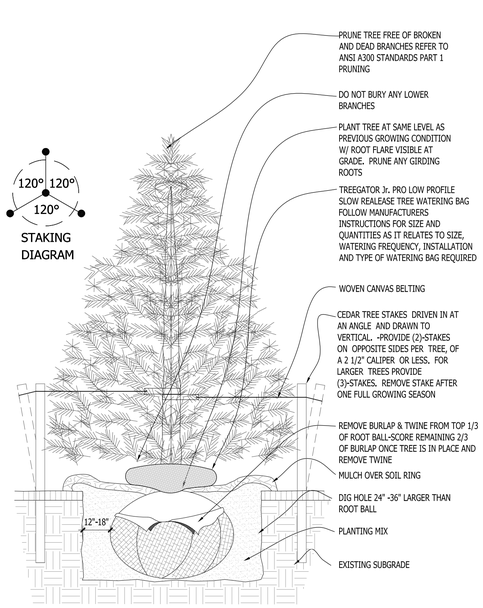
1 DECIDUOUS TREE PLANTING DETAIL

SCALE: NONE



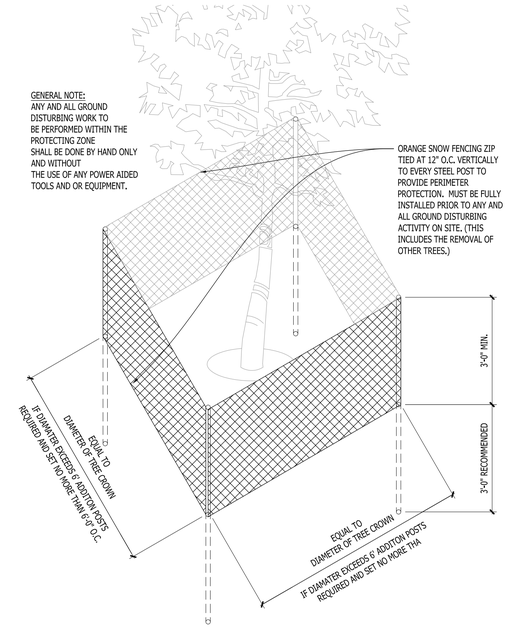
2 DECIDUOUS TREE STAKING PARKING ISLAND/RESTRICTED AREAS

SCALE: NONE



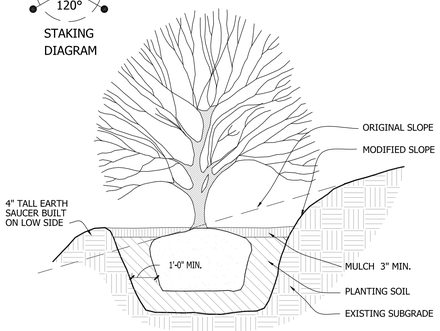
3 CONIFEROUS TREE PLANTING DETAIL

SCALE: NONE



4 EXISTING TREE PROTECTION DETAIL

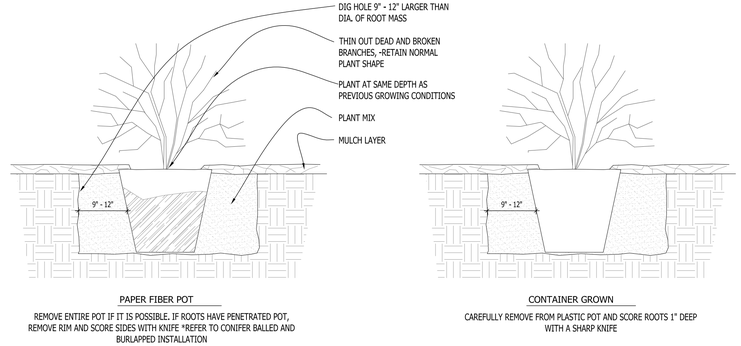
SCALE: NONE



5 SLOPE PLANTING DETAIL

SCALE: NONE

REFER TO TYPICAL DECIDUOUS TREE DETAIL FOR STAKING



PAPER FIBER POT

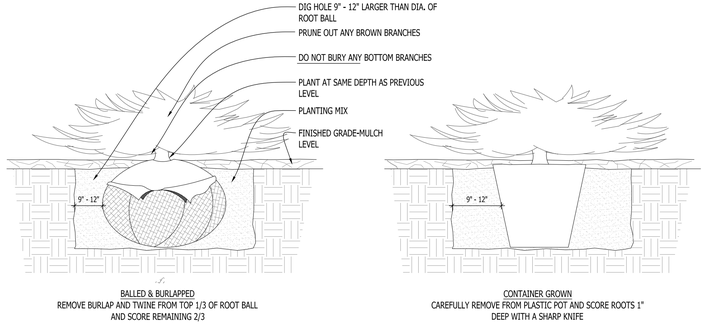
REMOVE ENTIRE POT IF IT IS POSSIBLE. IF ROOTS HAVE PENETRATED POT, REMOVE RIM AND SCORE SIDES WITH KNIFE *REFER TO CONIFER BALLED AND BURLAPPED INSTALLATION

CONTAINER GROWN

CAREFULLY REMOVE FROM PLASTIC POT AND SCORE ROOTS 1" DEEP WITH A SHARP KNIFE

6 DECIDUOUS SHRUB PLANTING DETAIL

SCALE: NONE



BALLED & BURLAPPED

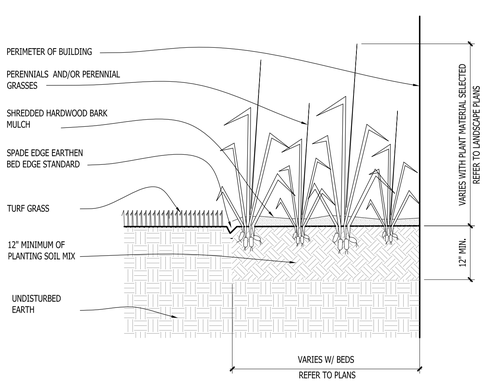
REMOVE BURLAP AND TWINE FROM TOP 1/3 OF ROOT BALL AND SCORE REMAINING 2/3

CONTAINER GROWN

CAREFULLY REMOVE FROM PLASTIC POT AND SCORE ROOTS 1" DEEP WITH A SHARP KNIFE

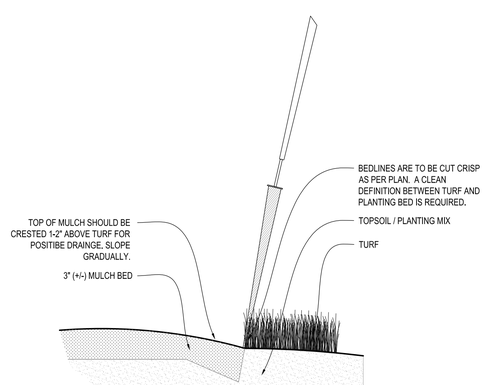
7 CONIFEROUS SHRUB PLANTING DETAIL

SCALE: NONE



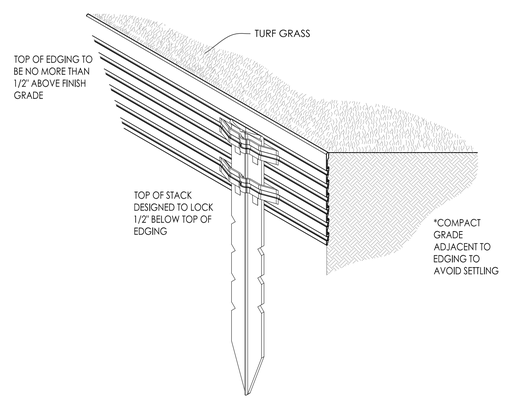
8 PERENNIAL BED PLANTING DETAIL

SCALE: NONE



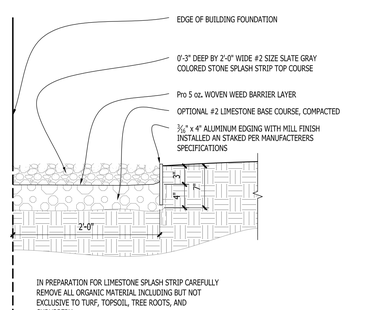
9 SPADE EDGE PLANT BED EDGE DETAIL

SCALE: NONE



10 METAL LANDSCAPE EDGING DETAIL

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



11 COMPACTED GRAVEL SPLASH STRIP

SCALE: 1" = 1'-0"

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Sheet Title:

PROPOSED LANDSCAPE PLAN, PLANTING DETAILS

Date of Drawing:	03/28/25
Scale:	As Noted
Drawn By:	MCD
Job Number:	L25-018

Sheet Number:

LSP1.5

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L25-018 - LAKE COUNTRY LUTHERAN - ADDITION - 03/28/2025

TO OBTAIN LOCATION OF PARTICIPANT'S UNDERGROUND FACILITIES BEFORE YOU DIG IN WISCONSIN

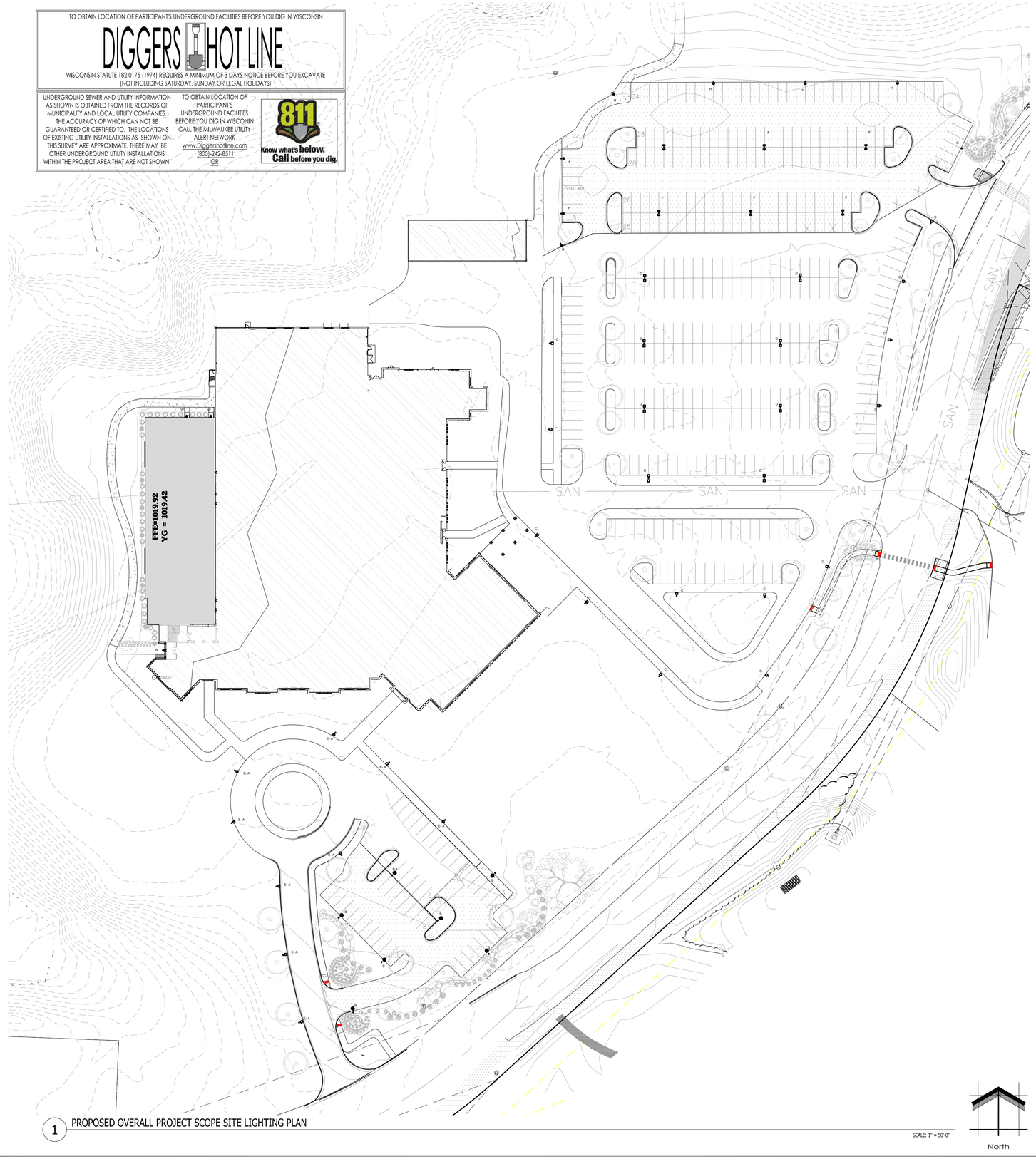
DIGGERS HOT LINE

WISCONSIN STATUTE 182.0175 (1974) REQUIRES A MINIMUM OF 3 DAYS NOTICE BEFORE YOU EXCAVATE (NOT INCLUDING SATURDAY, SUNDAY OR LEGAL HOLIDAYS)

UNDERGROUND SEWER AND UTILITY INFORMATION AS SHOWN IS OBTAINED FROM THE RECORDS OF MUNICIPALITY AND LOCAL UTILITY COMPANIES. THE ACCURACY OF WHICH CAN NOT BE GUARANTEED OR CERTIFIED TO. THE LOCATIONS OF EXISTING UTILITY INSTALLATIONS AS SHOWN ON THIS SURVEY ARE APPROXIMATE. THERE MAY BE OTHER UNDERGROUND UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.

TO OBTAIN LOCATION OF PARTICIPANT'S UNDERGROUND FACILITIES BEFORE YOU DIG IN WISCONIN CALL THE MILWAUKEE UTILITY ALERT NETWORK
www.Diggershotline.com
(800)-242-8511
OR

811 Know what's below. Call before you dig.



1 PROPOSED OVERALL PROJECT SCOPE SITE LIGHTING PLAN

SCALE: 1" = 50'-0"

North

LUMINAIRE SCHEDULE

Symbol	Label	Qty	Catalog Number	Description	Lamp	File	Lumens	LLF	Watts
○	E- A	9	FIXTURE E-A - EXISTING LOCATION & FOOTING - SHOWN FOR REFERENCE ONLY - ASSUMPTIONS WERE MADE						
●	B	7	EMM-E04 -LED-E1-T4	EPIC MODERN MEDIUM DECORATIVE LED LUMINAIRE (4) LIGHTBARS WITH AccuLED OPTICS - TYPE 4	(84) 4000K CCT, 70 CRI LEDs ABSOLUTE PHOTOMETRY IS BASED ON CALIBRATION FACTORS CREATED USING LAB LUMEN STANDARDS IN GONIOPHOTOMETER WITH TEST DISTANCE OF 28.75 FEET Hospitality, Hotel, Industrial, Institutional, Library, Manufacturing, Office, Parking, Parks, Pathway Pedestrian, Prison, Recreation, Residential, Retail, Roadway, Sidewalk, Site, Street, Substation, Utility Walkway, Warehouse, Wet Location	EMM-E04-LED--E1-T4.ies	Absolute	1.00	97.2
□	C	13	FIXTURE E-C - EXISTING LOCATION & FOOTING - SHOWN FOR REFERENCE ONLY - ASSUMPTIONS WERE MADE						
▫	D	8	FIXTURE E-D - EXISTING LOCATION & FOOTING - SHOWN FOR REFERENCE ONLY - ASSUMPTIONS WERE MADE						
▫	F	6	EACL01_F4AF750 _____ WITH ELS- -EAC-ABL-BLCK	EACL AREA LIGHT	LEDs	EACL01_F4AF 750_____- ELS-EAC-ABL- BLCK.ies	Absolute	1.00	244
▱	G	1	EACL01_D3AW740 _____ WITH ELS- -EAC-ABL-BLCK	EACL AREA LIGHT	LEDs	EACL01_D3A W740_____- ELS-EAC-ABL- BLCK.ies	Absolute	1.00	73
▱	H	7	EACL01_H4AF750 _____	EACL AREA LIGHT	LEDs	EACL01_H4AF 750_____.i es	Absolute	1.00	153
△	w	3	EWLS02_70AF740 _____-120- 277V	EWLS02 WALL PACK	LEDs	EWLS02_70A F740_____- 120-277V.ies	Absolute	1.00	52

STATISTICS

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Calc Zone #1	+	1.8 fc	33.1 fc	0.0 fc	N / A	N / A

LUMINAIRE NOTES

1. FIXTURE "E-A" (9) IS A EXISTING POLE LOCATION WITH EXISTING FOOTING - SHOWN FOR REFERENCE ONLY - ASSUMPTIONS WERE MADE.
2. FIXTURE "B-1" (10) IS A NEW POLE LOCATION w/ NEW FOOTING - ROLOCATE EXITING SHEPARDS HOOK FIXTURE (SINGLE HEAD AND TENON). EXISTING POLE IS TO BE INSTALLED ON A NEW 2'-6" (FIELD VERIFY TO MATCH EXISTING) REINFORCED POURED CONCRETE FOUNDATION .
3. FIXTURE "B" (6) IS A NEW POLE LOCATION w/ NEW FOOTING - NEW SHEPARDS HOOK FIXTURE (SINGLE HEAD AND TENON TO MATCH EXISTING). NEW POLE IS TO BE INSTALLED ON A NEW 2'-6" (FIELD VERIFY TO MATCH EXISTING) REINFORCED POURED CONCRETE FOUNDATION .
4. FIXTURE "C" (13) IS A EXISTING POLE LOCATION WITH EXISTING FOOTING - SHOWN FOR REFERENCE ONLY - ASSUMPTIONS WERE MADE.
5. FIXTURE "D" (8) IS A EXISTING POLE LOCATION WITH EXISTING FOOTING - SHOWN FOR REFERENCE ONLY - ASSUMPTIONS WERE MADE.
6. FIXTURE "F" (6) IS A NEW POLE LOCATION w/ NEW FOOTING - NEW FIXTURE (TWIN HEAD AND TENONS TO MATCH EXISTING). NEW POLE IS TO BE INSTALLED ON A NEW 2'-6" (FIELD VERIFY TO MATCH EXISTING) REINFORCED POURED CONCRETE FOUNDATION .
7. FIXTURE "G" (1) IS A NEW POLE LOCATION w/ NEW FOOTING - NEW FIXTURE (SINGLE HEAD AND TENON TO MATCH EXISTING). NEW POLE IS TO BE INSTALLED ON A NEW 2'-6" (FIELD VERIFY TO MATCH EXISTING) REINFORCED POURED CONCRETE FOUNDATION .
6. FIXTURE "H" (7) IS A NEW POLE LOCATION w/ NEW FOOTING - NEW FIXTURE (SINGLE HEAD AND TENON TO MATCH EXISTING). NEW POLE IS TO BE INSTALLED ON A NEW 2'-6" (FIELD VERIFY TO MATCH EXISTING) REINFORCED POURED CONCRETE FOUNDATION .
7. ALL PROPOSED FIXTURE HEADS ARE TO BE DARK-SKY COMPLIANT AND HAVE HARDWARE WITH IESNA FULL CUTOFF HOUSE SIDE SHIELDING WHERE REQUIRED. NEW PROPOSED POLE MOUNTED FIXTURES (HEADS AND TENONS) FINISH IS TO MATCH EXISTING W/ OPTIONAL PHOTOCELL CONTROL.
8. ALL NEW CONCRETE LIGHT POLE BASES ARE TO HAVE ALL EXPOSED FORM MARKS REMOVED, GROUND FLUSH AND THE SURFACE IS TO BE PROPERLY PREPARED TO RECEIVE A HAND TROWELED, MASONRY SKIM COAT OF APPROPRIATE THICKNESS TO ACHIEVE A DURABLE SURFACE AND LONG LASTING AESTHETIC.
9. ALL NEW PROPOSED AREA LIGHT POLES SHALL BE LOCATED 3-0" FROM BACK OF CURB TO THE EDGE OR FACE OF THE REINFORCED LIGHT POLE BASE, UNLESS NOTED OTHERWISE.
10. INSTALLATION CONTRACTOR TO REFER TO ELECTRICAL PLANS FOR CONDUIT ROUTING OF LIGHT POLES AND SIGNAGE LIGHTING CONTROL AND WIRING.
11. CONTRACTOR TO REFER TO REINFORCED LIGHT POLE BASE SECTION AND DETAIL FOR FURTHER INFORMATION.
12. PROPOSED POLE MOUNTED FIXTURES (HEADS AND TENONS) ARE TO HAVE A SILVER FINISH w/ OPTIONAL PHOTOCELL CONTROL.
13. ***ALL EXTERIOR FIXTURES, BOTH BUILDING MOUNTED AND POLE FIXTURES SHALL BE DESIGNED AND INSTALLED SUCH THE THE LIGHT EMITTED FROM THE LUMINARE AT AN ANGLE OF 90 DEGREES ROM VERTICAL (OR MORE) AND NO LIGHT SHALL TRESPASS ACROSS PARCEL BOUNDARIES INTO ADJACENT LOST, BUILDINGS OR STREETS IN EXCESS OF 1.0 FOOT CANDLE OR GREATER.***
14. ALL BUILDING MOUNTED LIGHT FIXTURES ARE TO BE COORDINATED WITH THE ARCHITECTURAL ELEVATIONS FOR EXACT MOUNTING HEIGHTS AND LOCATIONS.
15. FOR PURPOSES OF CALCULATING THE SITE POLE LIGHTING AND PHOTOMETRIC OUTPUT LUMINAIRE WERE PLACED AT 22'-0" ABOVE FINISHED FLOOR ELEVATION AND ALL BUILDING MOUNTED FLOOD LIGHTS COORDINATED WITH THE ARCHITECTURAL ELEVATIONS AND PLACED AT HEIGHTS SPECIFIED ON THE BUILDING ELEVATIONS.

THIS LIGHTING PLAN REPRESENTS ILLUMINATION LEVELS ARE CALCULATED VALUES INCLUDE DIRECT AND INTER-REFLECTED COMPONENT AND ILLUMINATION LEVELS CALCULATED FROM LABORATORY DATA TAKEN UNDER CONTROLLED CONDITIONS IN ACCORDANCE WITH THE ILLUMINATING ENGINEERING SOCIETY (IES) APPROVED METHODS. ACTUAL PERFORMANCE OF ANY MANUFACTURER'S LUMINAIRES MAY VARY DUE TO CHANGES IN ELECTRICAL VOLTAGE, TOLERANCE IN LAMPS/LED'S AND OTHER MAY VARY DUE TO CHANGES IN ELECTRICAL VOLTAGE. TOLERANCE IN LAMPS/LED'S AND OTHER VARIABLE FIELD CONDITIONS. CALCULATIONS DO NOT INCLUDE OBSTRUCTIONS SUCH AS BUILDINGS CURBS, LANDSCAPING, OR ANY OTHER ARCHITECTURAL ELEMENTS UNLESS NOTED.

PHOTOMETRIC PLAN GENERAL NOTES

1. BASED ON THE INFORMATION PROVIDED, ALL DIMENSIONS AND LUMINAIRE LOCATIONS SHOWN REPRESENT RECOMMENDED POLE PLACEMENTS AND LUMINAIRE ORIENTATION. THE ENGINEER AND/OR ARCHITECT MUST DETERMINE APPLICABILITY OF THE LAYOUT TO RELEVANT FIELD CONDITIONS.
2. THE DEPICTED ILLUMINATION RESULTS ARE BASED UPON ILLUMINATION MEASUREMENTS AS CALCULATED BY AN INDEPENDENT LABORATORY. LUMINAIRE CHARACTERISTICAL DATA WAS MEASURED UNDER CONTROLLED CONDITIONS IN ACCORDANCE WITH APPROVED ILLUMINATION ENGINEERING SOCIETY METHODS. ACTUAL ON-SITE PERFORMANCE OF ANY MANUFACTURER'S LUMINAIRES MAY VARY FROM LABORATORY TEST RESULTS DUE TO VARIATIONS IN: ELECTRICAL VOLTAGE, TOLERANCE IN LAMPS, AND OTHER VARIABLE FIELD CONDITIONS.
3. IF EXISTING LUMINAIRES ARE INCLUDED IN THIS REPORT, THEIR ILLUMINATION CHARACTERISTICS ARE BASED UPON A COMBINATION OF CUSTOMER'S PROVIDED SPECIFICATIONS & OUR BEST ESTIMATION.
4. *ALL EXISTING AND NEW CONCRETE LIGHT POLE BASES ARE TO HAVE ALL FORM MARKS REMOVED, GROUND FLUSH AND THE SURFACE IS TO BE PROPERLY PREPARED TO RECEIVE A HAND TROWELED, MASONRY SKIM COAT OF APPROPRIATE THICKNESS TO ACHIEVE A DURABLE SURFACE AND LONG LASTING AESTHETIC.*

EXISTING CONDITIONS GENERAL NOTES

1. INFORMATION PERTAINING TO EXISTING CONDITIONS GIVEN ON THESE ARCHITECTURAL DRAWINGS REPRESENTS TO THE BEST OF OUR KNOWLEDGE THE ACTUAL EXISTING FIELD CONDITIONS. INSITE LANDSCAPE DESIGN, INC. MAKES NO WARRANTY AS TO THEIR ACCURACY. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS IMPERATIVE TO THEIR NEW WORK. REPORT ANY DISCREPANCIES BETWEEN THE DRAWINGS AND FIELD CONDITIONS TO THE LANDSCAPE ARCHITECT FOR REVIEW. ANY WORK PERFORMED PRIOR TO RESOLUTION OF DISCREPANCIES BY THE LANDSCAPE ARCHITECT IS SUBJECT TO REMOVAL AND REPLACEMENT AT NO ADDITIONAL COST TO THE CONTRACT.
2. VERIFY LOCATION OF ALL EXISTING UNDERGROUND UTILITIES I.E. WATER, SEWER, ELECTRICAL, TELECOMUNICATION AND ACCESS PANELS FOR ALL UTLITIES AND ALL ASSOCIATED EQUIPMENT FOR ACCESSIBILITY OF THOSE ITEMS.
3. VERIFY ALL EXISTING CONDITIONS, DIMENSIONS, AND ALIGNMENT OF WALLS. BRING ANY DISCREPANCIES TO THE LANDSCAPE ARCHITECTS ATTENTION PRIOR TO FABRICATION / CONSTRUCTION BEGINS.

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Project:

LAKE COUNTRY LUTHERAN -ADDITION

401 Campus Drive
Hartland, WI 53029

Issuance and Revisions:

Date	Number	Description
03/28/25		Plan Commission Submittal

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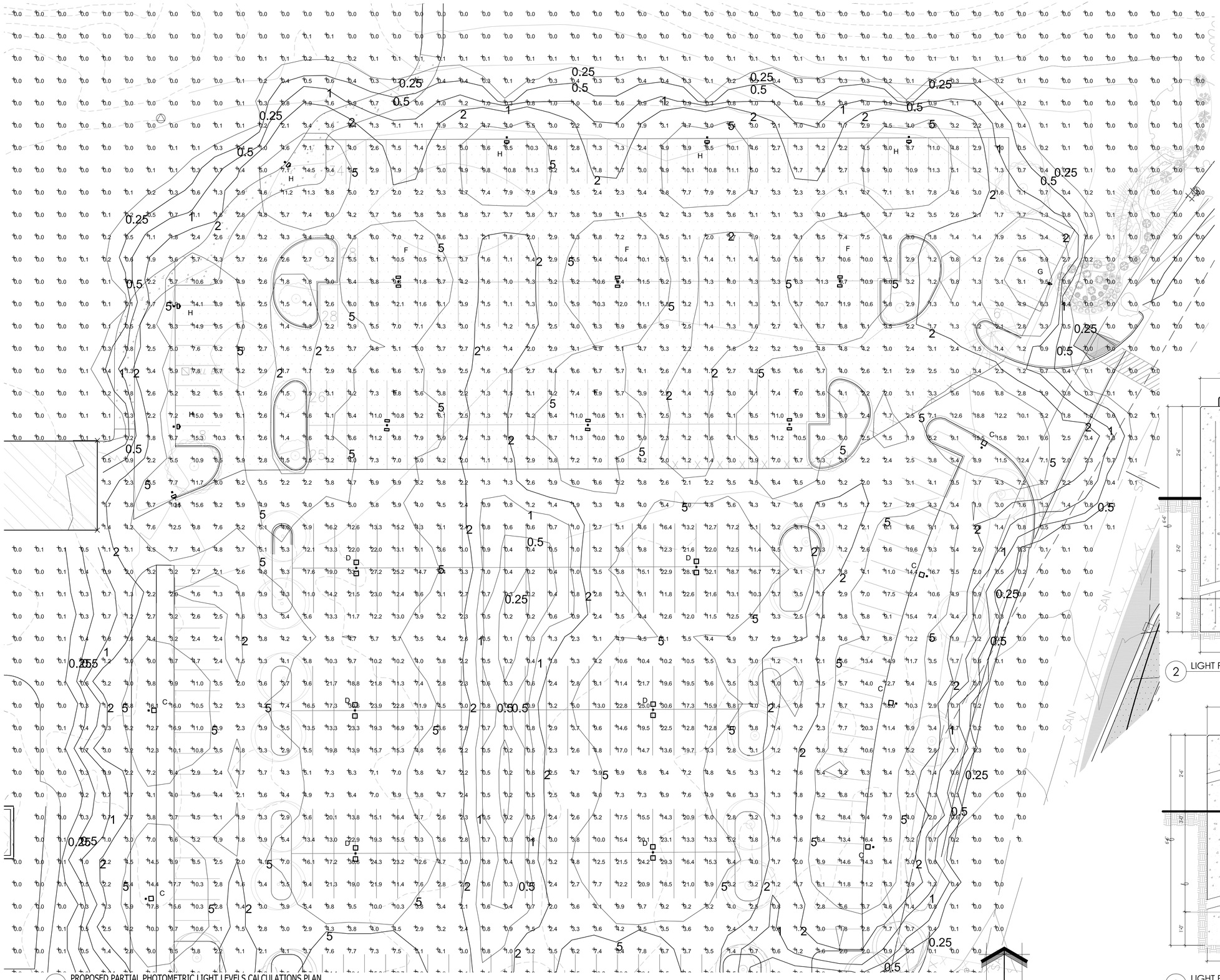
Sheet Title:

PROPOSED OVERALL PROJECT SCOPE SITE LIGHTING PLAN, GENERAL NOTES, AND LIGHT FIXTURE TABLE

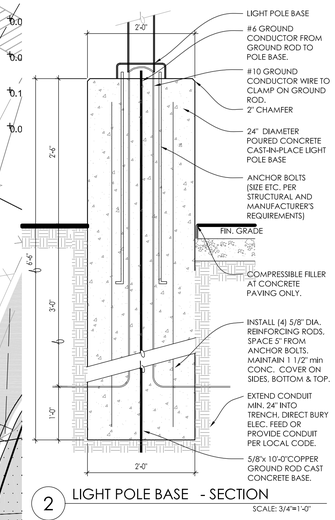
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Drawn By:	MCD
Job Number:	L25-018
Sheet Number:	PHO1.1

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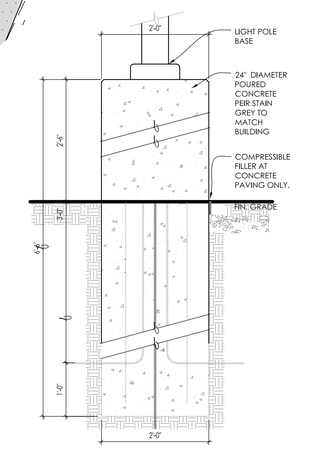
L25-018 - LAKE COUNTRY LUTHERAN - ADDITION - 03/28/2025



1 PROPOSED PARTIAL PHOTOMETRIC LIGHT LEVELS CALCULATIONS PLAN



2 LIGHT POLE BASE - SECTION
SCALE: 3/4"=1'-0"



3 LIGHT POLE BASE - ELEVATION
SCALE: 3/4"=1'-0"

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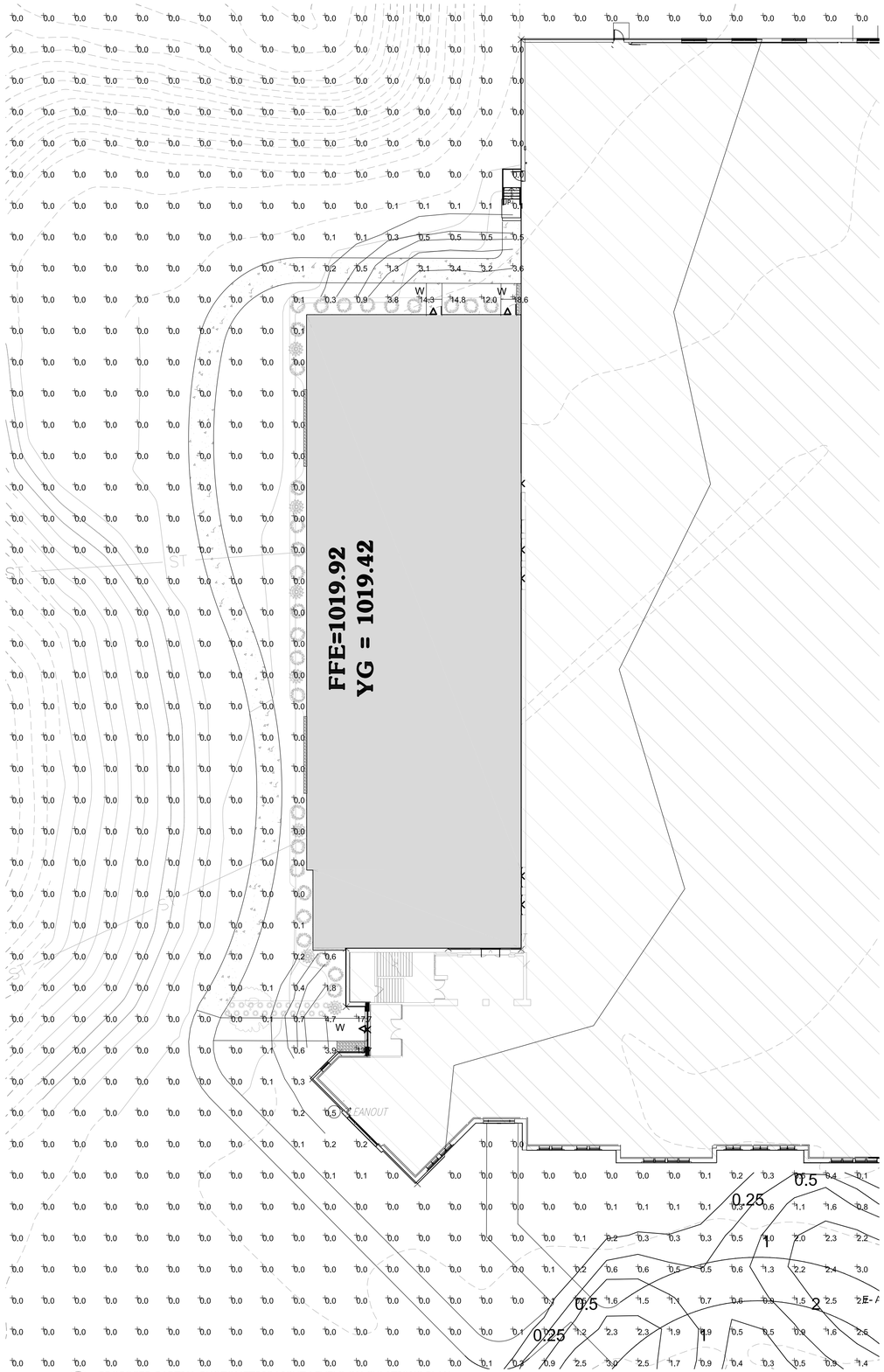
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PROPOSED PARTIAL PHOTOMETRIC LIGHT LEVEL CALCULATIONS PLAN,

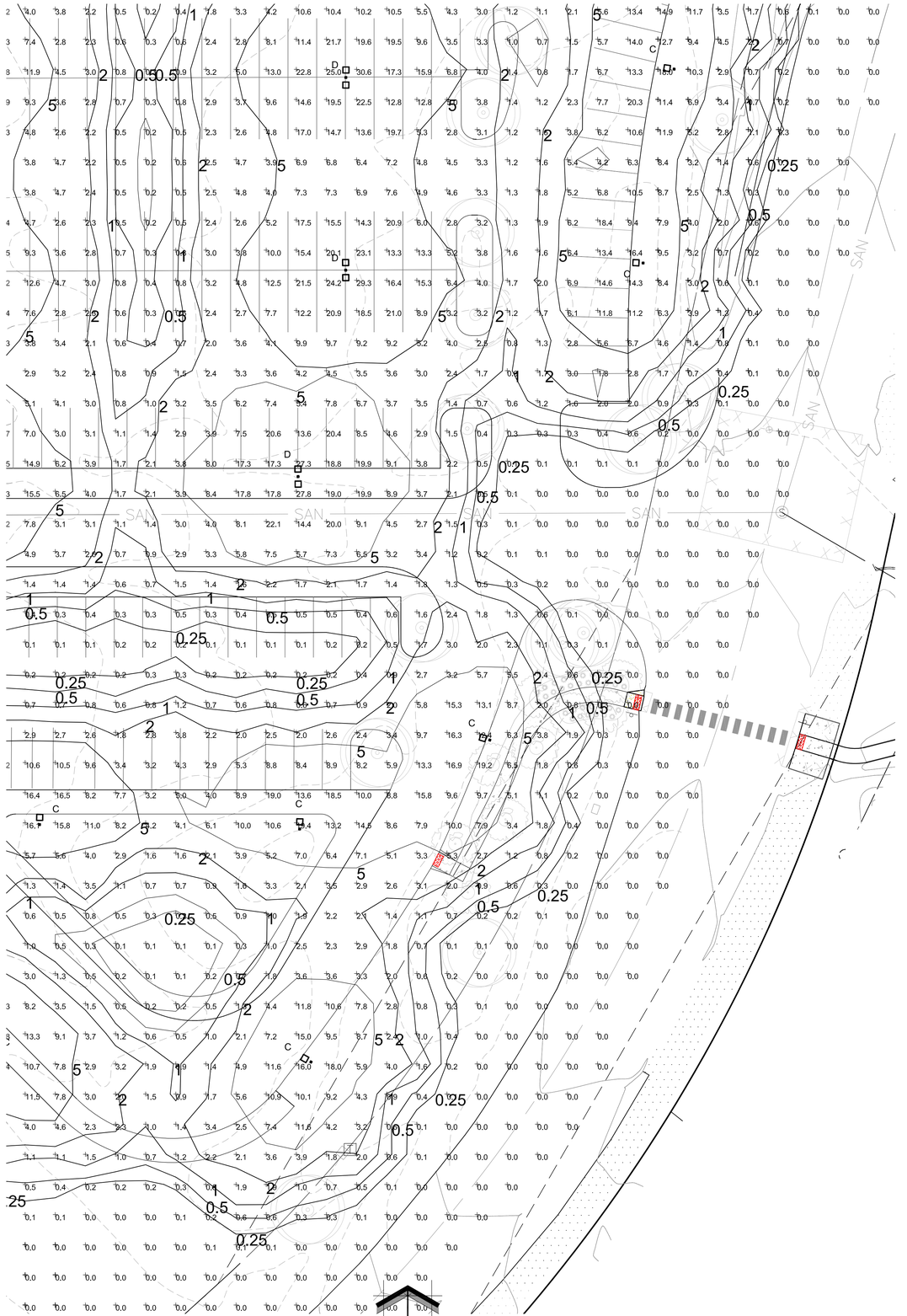
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Sheet Number:	PHO1.2

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1 PROPOSED PARTIAL PHOTOMETRIC LIGHT LEVELS CALCULATIONS PLAN



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Sheet Title:

PROPOSED PARTIAL PHOTOMETRIC LIGHT LEVEL CALCULATIONS PLAN,

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Drawn By:	MCD
Job Number:	L25-018
Sheet Number:	PHO1.3

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L25-018 - LAKE COUNTRY LUTHERAN - ADDITION - 03/28/2025



1 PROPOSED PARTIAL PHOTOMETRIC LIGHT LEVELS CALCULATIONS PLAN

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Sheet Number:	PHO1.4

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L25-018 - LAKE COUNTRY LUTHERAN - ADDITION - 03/28/2025

EVOLVE

CUSTOMER NAME
PROJECT NAME
DATE TYPE
CATALOG NUMBER



EWLS L Series
LED Wall Pack

The Evolve® LED L Series Wall Pack (EWLS), The Evolve LED L-Series Wall Pack, EWLS, is a designed replacement for 50W to 250W HID, while offering significant energy savings in a long-life LED wall pack. Two-screw housing design enables a fast and simplified installation. The low-watt Egress package is designed to meet recommended illuminance requirements for egress applications such as side and rear exit doors in commercial buildings. Available with Emergency Battery Backup option.

Construction

Housing:	Aluminum die cast enclosure. Integral heat sink for maximum heat transfer
Lens:	Impact resistant tempered glass
Paint:	Corrosion resistant polyester powder paint, minimum 2.0 mil thickness Color: Black, Dark Bronze, Gray & White (RAL & custom colors available) Optional = Coastal Finish
Weight:	8.6lbs (4 kg)

Optical System

Lumens:	1,700 to 7,000
Distribution:	Asymmetric Forward
Efficacy:	117- 148 LPW
CCT:	2700, 3000K, 4000K, 5000K
CRI:	≥70

Electrical

Input Voltage:	120-277V & 347V
Input Frequency:	50/60Hz
Power Factor:	> 90% at rated watts
Total Harmonic Distortion:	≤ 20% at rated watts

Surge Protection

Surge Protection	10kV/5kA (Standard) 3kV/1.5kA (EMBB)

*Per ANSI C136.2-2015

Lumen Maintenance

Projected Lxx per IES TM-21-11 at 25°C

LUMEN CODES	DISTRIBUTION	LXX/100 @ HOURS		
		25,000 HR	50,000 HR	60,000 HR
17, 25 & 40	AF	L99	L99	L99
70	AF	L94	L87	L85

Note: Projected Lxx based on LM80 (≥ 10,000 hour testing). Accepted industry tolerances apply to initial luminous flux and chromaticity maintenance measurements.

Luminaire Ambient Temperature Factor

AMBIENT TEMP (°C)	INITIAL FLUX FACTOR	AMBIENT TEMP (°C)	INITIAL FLUX FACTOR
10	1.02	30	0.99
20	1.01	40	0.98
25	1.00	50	0.97

Ratings

Operating Temperature:	-40°C to 50°C
Vibration:	3G per ANSI C136.31-2010
LM-79:	Testing in accordance with IESNA Standards

Controls

Dimming:	Standard - 0-10V
Sensors:	Photo Electric Sensors (PE) available Motion Sensor

Warranty

☐ 5 Year (Standard)

Emergency Battery Backup

Provides reliable emergency operations when there is a loss to normal power, supported by Independent Secondary Battery.

- Hold-Up Time: 90 minutes @ 1,400 lumens.
- Meet egress light level and uniformity requirements
- Not available in 347V.
- Operating Temperature (for EMBB models) 0° to 40°C
- 3kV/1.5kA surge protection for EMBB models.

Not all product variations listed on this page are DLC qualified. Visit www.designlights.org/search to confirm qualifications.

IP66 Optical

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EVOLVE
EWLS L Series
LED Wall Pack

CUSTOMER NAME
PROJECT NAME
DATE TYPE
CATALOG NUMBER

Ordering Information

EWLS 02	0	40	AF	70	40	N	3	CB	DKBZ	
PROD. ID	GEN	VOLTAGE	OPTIC CODE	DISTRIBUTION	CRI (MIN)	CCT	DIMMING	PE FUNCTION	MOUNTING	COLOR	OPTIONS
E = Evolve W = Wallpack LS = L-Series	02	0 = 120-277V 1 = 120V* 2 = 208V* 3 = 240V* 4 = 277V* 5 = 100-240V* 8 = 347V*	17 = 1,700 lm† 25 = 2,500 lm 40 = 4,000 lm 70 = 7,000 lm	AF = Asymmetric Forward	7 = 70	27 = 2700K† 30 = 3000K† 40 = 4000K 50 = 5000K	N = No External Dimming Leads D = External Dimming Leads‡	1 = None 3 = Button PE*	CB = Conduit Box Mount* FM* = Flush Mount	BLCK = Black DKBZ = Dark Bronze GRAY = Gray	EMBB = Emergency Battery Backup‡* H = Motion Sensor (Wallpacks)*,††,** XXX = Special Options W = Non-Graphical White Box

† Specify single wattage if Button PE option is selected
* Optic code 17 - Not offered in 120-277V, use 120-24.0V
† Select 2700K or 3000K CCT for IDA approved units
‡ Must be selected when ordering with Button PE, Motion Sensor, 347V or Emergency Battery Backup
* Not available with motion sensor
* Not available in 347V
* Button PE not available with EMBB. Button PE not available with H Motion Sensor. Motion sensor includes dusk-to-dawn control as well as motion control.
† WS Flirtt-100 (Sku# 19783-K) needed for programming sensor.
* Must select Controls "N" with Motion Sensor "H"

OPTIC CODE	DISTRIBUTION	TYPICAL INITIAL LUMENS			TYPICAL SYSTEM WATTAGE		IES RATINGS 2700K-5000K
		2700K	3000K	4000K/ 5000K	120-277V	347V	B-U-G
17	AF	1400	1600	1700	12	14	B1-U0-G0
25		2200	2400	2500	17	19	B1-U0-G1
40		3500	3800	4000	27	28	B1-U0-G1
70		6100	6700	7000	62	64	B2-U0-G1
EMBB	-	1300	1400	1450	-	-	B1-U0-G0

For additional information on EWLS IES files, please refer to LED.com

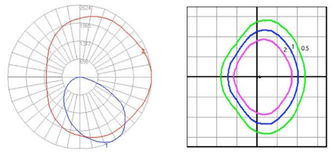
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EVOLVE
EWLS L Series
LED Wall Pack

CUSTOMER NAME
PROJECT NAME
DATE TYPE
CATALOG NUMBER

70AF
ASYMMETRIC FORWARD

7000 LUMEN
EWLS02_70AF750_ _ _-120-277V.ies

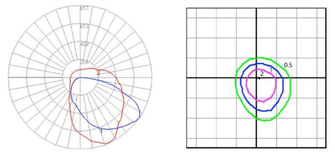


— Vertical plane through horizontal angle of Max. Cd at 0°
— Horizontal cone through vertical angle of Max. Cd at 27°

- Mounting Height at 10'
- Initial Footcandle at Grade
- Light Level: 0.5fc, 1fc, 2fc

EMBB Mode
ASYMMETRIC FORWARD

1400 LUMEN
EWLS02_EMBB_ _ _.ies



— Vertical plane through horizontal angle of Max. Cd at 295°
— Horizontal cone through vertical angle of Max. Cd at 55°

- Mounting Height at 10'
- Initial Footcandle at Grade
- Light Level: 0.5fc, 1fc, 2fc

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1 GE EVOLVE EWLS SERIES WALL PACK LUMINARIE

Project		Catalog #		Type	
Prepared by		Notes		Date	



Invue
Epic
Decorative Pendant Luminaire

Interactive Menu

- **Ordering Information** page 2
- **Accessory & Mounting Details** page 3
- **Installation Overview** page 9
- **Energy and Performance Data** page10
- **Optical Distributions** page 12

Product Certifications & Features

Light Attributes®

Product Specifications

OPTICAL
- Choice of eight patented, high-efficiency AccuLED Optix™ technology options and five wavestream optics
- Optics are IP66 enclosure rated
- 9 Correlated Color Temperature (CCT) options:
  - » 70 CRI: 2200K, 2700K, 3000K, 4000K, 3500K 5000K
  - » 80 CRI: 3000K, 4000K
  - » Amber for wildlife-friendly and observatory applications
- Optional field-installable shields for superior spill light control (discrete LEDs only):
  - » Single-piece snap-on square shields
  - » Multiple-piece configurable vertical perimeter shielding

ELECTRICAL
- 120-277V, 347-480V, 347V, and 480V; 50/60Hz
- Standard 0-10V dimming
- 10kV and 20kV surge protection options in series and parallel versions
- Standard 3-position terminal block
- Suitable for operation in -40°C to 40°C ambient environments

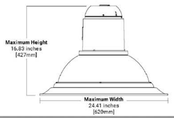
PHYSICAL CHARACTERISTICS
- Cast aluminum top housing attaches to cast aluminum mounting arm hub with four fasteners
- One-piece silicone gasket between casting and power wires seals out moisture and contaminants
- Continuous silicone gaskets are used to seal the lens and mechanical structures
- Tall fixture configurations feature a field-serviceable center section which can tilt to allow easy access to surge module, PCR, and FADC
- Heavy gauge precision spun aluminum shades offer superior surface finish and consistency in form
- Optional tenon-mount bishop arm for post top retrofits
  - » Full selection of compatible mounting arms available in accessories section
- Housing finished in 5-stage super TGIC polyester powder coat paint, 2.5 mil nominal thickness
- 7 standard color options, plus a wide range of custom colors (Consult your Cooper Lighting representative for custom color options)
- Approximate Weight: 26 lbs (tall), 21 lbs (short)
- Fixture EPA: 0.70 (tall), 0.50 (short)

CONTROLS
- Optional ANSI C136.10 7-pin receptacle for photocells or Networked Lighting Control (NLC) modules
- Optional Field-Adjustable Dimming Control Module (FADC)
  - » Enables manual adjustment of power consumption and lumen output. Factory preset to highest output level for option selected
  - » Allows a single fixture SKU to cover multiple field applications with manual adjustment at installation
- Optional 4-pin Zhaga Book 18 receptacle for integration of onboard sensors with DALI- and D4i-enabled drivers

COMPLIANCE
- DarkSky approved for 3000K CCT and warmer
- UL Wet Location rated

WARRANTY
- Five-year limited warranty. Consult website for details. www.cooperlighting.com/legal

Dimensional Details



See configurations for more detailed information.

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Epic

Ordering Information

SAMPLE ORDER NUMBER: **EMM2-HTN-SA1B-740-U-SWQ-TB-1-CL-GM**

Product Family *1	Housing	Light Engine	CRI/CCT	Voltage	Optic	Shade Type
EMWQ - Eric Modern EAA-EWAD - Eric Modern Bay American Art Condition *2 TAA-EWAD - Eric Modern Contemporary Trade Agreements Act Compliant *2	MSN - Short Housing *3,4,5 MTN - Tall Housing *3	Discrete Configurations: SA1A - 1 Light Square, 5,000lm Nominal SA1B - 1 Light Square, 5,365lm Nominal SA2A - 2 Light Square, 9,300lm Nominal SA2B - 2 Light Square, 10,730lm Nominal SA3A - 3 Light Square, 14,000lm Nominal SA3B - 3 Light Square, 16,095lm Nominal SA3B - 3 Light Square, 15,130lm Nominal Visual Comfort Configurations: VA1 - Wavestream, 5,365lm Nominal VA2 - Wavestream, 10,730lm Nominal VA3 - Wavestream, 16,095lm Nominal VA4 - Wavestream, 5,000lm Nominal VA5 - Wavestream, 10,000lm Nominal VA6 - Wavestream, 15,000lm Nominal VA7 - Wavestream, 15,130lm Nominal VA8 - Wavestream, 9,300lm Nominal *3,5 VA9 - Wavestream, 22,000lm Nominal *3,5	217 = 700lm, 2200K * 227 = 700lm, 2700K 237 = 700lm, 3000K 247 = 700lm, 4000K 257 = 700lm, 5000K 240 = 700lm, 4000K 250 = 700lm, 5000K E40 = 500lm, 4000K *,6 AWB = Amber, 567nm *,6	U = Universal (120-277V) H = High Voltage (347-480V) *1,4 8 = 347V * 7 = 277V * SW - Buswall Battery (277-480V) *1,4	Discrete Optics * T1 - Type I T2M - Type II Roadway T2M - Type II Wide T3 - Type III T4 - Type IV Wide T5W - Type V Round SM3 - Type V Square Medium SW3 - Type V Square Wide Visual Comfort Optics * CQ - Wavestream Concentrated MQ - Wavestream Medium WQ - Wavestream Wide RM - Wavestream Rectangular Optional WTX - Wavestream Type IV W *7	TB - Tall Bell FL - Flat CO - Cone

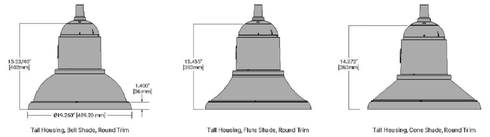
Trim Type	Mounting Options	Finish	Options (Add as Suffix)	Controls	Accessories (Order Separately)
0 = No Trim 1 = Round 2 = Flare	CL - Standard Mounting EA - Bishop Adapter A *8 EU - Bishop Adapter B *8	AP - Grey BZ - Bronze BK - Black DP - Dark Platinum LN - Graphite Metallic SN - Hartford Green (premium) WH - White SA/XXXX - RAL Number (premium)	1080P - Parallel 10kV MOV Surge Protective Device 1K4 - Series 10kV UL 1449 Surge Protective Device 2K4SP - Parallel 20kV MOV Surge Protective Device 2K4 - Series 20kV UL 1449 Surge Protective Device 2040 - Series 20kV UL 1449 Surge Protective Device + IEM Isolator HSS *9,*7 HA - 50° C High Ambient Temperature * GC - Coastal Construction * CDP-CDC - DALI Master Emergency Battery Pack, CDC Canada (Ambient Temp. 20° to 40°C) *9,*4,*7 XTB - No Terminal Block W - External wire tracks 20ft XXXXX - Special Configuration - contact factory quote/create 0XXXX - 1080y configuration - contact factory quote/create	PR - NEMA 3 PIN Twistlock Photocontrol Receptacle *9,*7 PR7 - NEMA 7-PIN Twistlock Photocontrol Receptacle *9,*7 PSC - Photocontrol Overlay Cap Included * NPC - 4-PIN Photocontrol, Multi-Tap, Included * LLPC - Long Life Photocontrol Included * FADC - Field Adjustable Dimming Controller * DALI - DALI Driver(s) - check with factory quotes team for availability * D4i - D4i Driver(s) - check with factory quotes team for availability * 24 - 4-pin EM&D Receptacle Zhaga Book * WPS2MH - WaveLinx Wireless Sensor, 7'-15' mounting height *,*9 WPS15MH - WaveLinx Wireless Sensor, 15'-40' mounting height *,*9 WLS2MH - WaveLinx Wireless Sensor with Bluetooth, 7'-15' mounting height *,*9 WLS15MH - WaveLinx Wireless Sensor with Bluetooth, 15'-40' mounting height *,*9 ZBC - Zhaga Book 18 shorting cap *9	DA1223 - 10kV Surge Module PSM2S - Nuvo Side Shield (Single) *,*9 PSMPS - Polymer Finish Shield Kit (5 Pieces) DALR1579 - Photocontrol Overlay Cap DALR1614 - NEMA Photocontrol - 120V DALR1618 - NEMA Photocontrol - 347/480V DALR1627 - NEMA Twistlock Photocontrol - 480V Mounting Accessories (Order Separately) MODERN VA6106-XX - Flat Bracket Bishop Wall Mount Arm VA6109-XX - Flat Bracket Bishop Pole Mount Arm VA6108-XX - Pair Two Tenon Mount Bishop Arms (for 2" OD Tenon) VA6103-XX - Bishop Wall Mount Arm VA6102-XX - Bishop Wall Mount Arm with Cross Rod VA6104-XX - Traditional Wall Mount Arm VA6105-XX - Bishop Single Pole Mount Arm 45° Offset VA6101-XX - Bishop Single Pole Mount Arm VA6107-XX - Bishop Twin Pole Mount Arm * VA6100-XX - Bishop Twin Pole Mount Arm with Cross Rods * VA6109-XX - Traditional Single Pole Mount Arm * VA6110-XX - Traditional Single Pole Mount Arm with Rounded Upper Bar * VA6118-XX - Traditional Single Pole Mount Arm with Rounded Lower Bar * VA6123-XX - Traditional Single Pole Mount Arm with 45° Upsweep * VA6124-XX - Traditional Single Pole Mount Arm with 45° Upper Bars * VA6125-XX - Traditional Single Pole Mount Arm with 45° Lower Bars * VA6126-XX - Traditional Twin Pole Mount Arm * VA6127-XX - Traditional Twin Pole Mount Arm with Rounded Upper Bars * VA6128-XX - Traditional Twin Pole Mount Arm with Rounded Lower Bars * VA6129-XX - Traditional Twin Pole Mount Arm with 45° Upper Bars * VA6121-XX - Traditional Twin Pole Mount Arm with 45° Lower Bars * VA6122-XX - Traditional Twin Pole Mount Arm with 45° Upper Straps * VA6123-XX - Mast Arm Adapter * VA6120-XX - Mast Arm Adapter *

NOTES:
1. Customer is responsible for engineering analysis to confirm pole and fixture compatibility for all applications. Refer to our white paper WP29 2021 EN for additional support information.
2. Design Lights Consortium® Qualified. Refer to www.designlights.org Qualified Products List under Family Models for details.
3. Not available with PR or PR7 Photocontrols or NLC.
4. Not available with 480V, 347V, 8 (347V) or 7 (277V) options are selected.
5. Not available with EA configuration (obsolete).
6. Not available with SA1A configuration (obsolete).
7. Not available with 0-10kV surge protection.
8. Not available with TB or TBW wireguards.
9. Not available with T1, T2M, SM3, or SW3 optics.
10. Trim not available with TB, TBW, SM3, or SW3 optics.
11. Trim not tested & UL/cUL listed with 0 mounting options.
12. Not available with PR7 option.
13. Must select EU or 1 in driver option.
14. Not available with 347V.
15. Not available with SA1A, SA1B, SA1B configurations.
16. Only offered with 0 (DALI) CCT.
17. Not available with WPS2MH (not available with VA1 and VA2). For SA configurations, Amber color available with SA1A and SA2B.
18. Only for use with 480V drivers (options 7 or H4). Not for use with ungrounded systems, impedance grounded systems or common Wye (Leg Delta and Three Phase Corner Grounded Delta systems).
19. Not available for use with PIR2 optic.
20. Not available with 347V, 480V, or 480V/347V compatibility.
21. EMBE Batteries required to be ordered field-configurable (Order EMBE-FxE) or HPCSS (20 Yr) for FLE-enabled 2-wire supply-Powered, WAC-led luminaires for CE (Bluetooth) access.
22. Factory-installed, retrofit adapter assembly for installation with existing competitor units. Consult your Cooper Lighting Solutions representative for details.
23. Not available with 0-10V dimming, 347V, 480V, or 480V/347V compatibility.
24. If EMBE batteries to be included in one, add -FE or -FET to prefix (ex: QEMBE-FE-NRT).

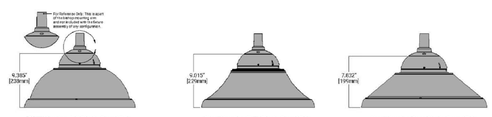
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Configurations

ROUND TRIM

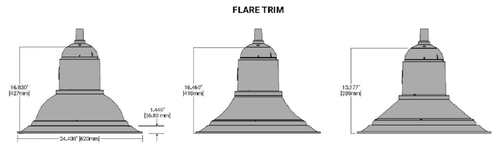


Tall Housing, Bell Shade, Round Trim
Tall Housing, Flute Shade, Round Trim
Tall Housing, Cone Shade, Round Trim

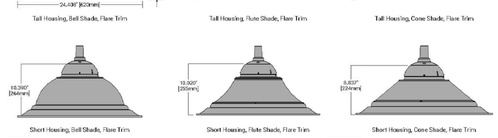


Short Housing, Bell Shade, Round Trim
Short Housing, Flute Shade, Round Trim
Short Housing, Cone Shade, Round Trim

FLARE TRIM



Tall Housing, Bell Shade, Flare Trim
Tall Housing, Flute Shade, Flare Trim
Tall Housing, Cone Shade, Flare Trim



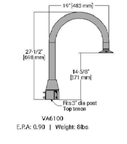
Short Housing, Bell Shade, Flare Trim
Short Housing, Flute Shade, Flare Trim
Short Housing, Cone Shade, Flare Trim

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Mounting Details

DESCRIPTION

POST TOP TENON MOUNT BISHOP ARM
Slipfits over 3" OD post top tenon



VA6100
E.P.A: 0.90 | Weight: 6lbs

BISHOP WALL MOUNT ARM
Mounts to wall with four stainless steel lag bolts (provided by other).

STANDARD VERSIONS



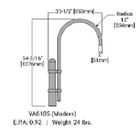
VA6101 (Modern)
E.P.A: 0.90 | Weight: 16 lbs.

CROSS ROD VERSIONS



VA6102 (Modern)
E.P.A: 0.55 | Weight: 17 lbs.

BISHOP SINGLE POLE MOUNT ARM
Slipfits over 4" round straight pole, or 4" O.D. by 6' tall round tenon.

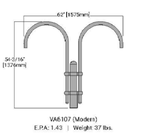


VA6105 (Modern)
E.P.A: 0.92 | Weight: 24 lbs.



VA6105 (Modern)
E.P.A: 0.92 | Weight: 23 lbs.

BISHOP TWIN POLE MOUNT ARM
Slipfits over 4" round straight pole, or 4" O.D. by 6' tall round tenon.



VA6107 (Modern)
E.P.A: 1.43 | Weight: 37 lbs.



VA6108 (Modern)
E.P.A: 1.55 | Weight: 39 lbs.

2 COOPER LIGHTING INVUE EPIC AREA LIGHT

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Landscape Consulting
& Master Planning Design Sevices
11525 W. North Avenue, Suite 1B
Wauwatosa, WI 53226
Tel (414) 476-1204
www.insitedesigninc.com
mdavis@insitedesigninc.com

Project:

LAKE COUNTRY LUTHERAN -ADDITION

401 Campus Drive
Hartland, WI 53029

Issuance and Revisions:

Date	Number	Description
03/28/25		Plan Commission Submittal

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Sheet Title:

PROPOSED LIGHT FIXTURES

Date of Drawing:	03/28/25
Scale:	NONE
Drawn By:	MCD
Job Number:	L25-018
Sheet Number:	PH01.5

L25-018 - LAKE COUNTRY LUTHERAN - ADDITION - 03/28/2025

EVOLVE

CUSTOMER NAME
PROJECT NAME
DATE ____ TYPE ____
CATALOG NUMBER



EACL® Series
LED Area Light/Compact Low Wattage

Current's EAL Series of Area Light Luminaires offer a wide range of optical patterns, color temperatures, lumen packages, and mounting configurations to optimize area light applications, as well as provide versatility in lighting design within the same form factor.

Construction

Housing:	Die-cast aluminum housing with integral heat sink for maximum heat transfer
Paint:	Corrosion resistant polyester powder paint, minimum 2.0 mil thickness Standard = Black, Dark Bronze Gray, White (RAL & custom colors available) Optional coastal finish available.
Weight:	18 lbs (8.16 kg) Max depending on configuration

Optical System

Lumens:	2,000 - 20,400
Distribution:	Asymmetric Forward Type IV Asymmetric Wide Type III Asymmetric Narrow/Auto Type II
Efficacy:	123 - 143 LPW
CCT:	3000K, 4000K, 5000K
CRI:	≥70

Electrical

Input Voltage:	120-277V & 347-480V
Input Frequency:	50/60Hz
Power Factor:	> 90% at rated watts
Total Harmonic Distortion:	< 20% at rated watts

Surge Protection*

TYPICAL (10 STRIKES)	ENHANCED (40 STRIKES)
☐ 6kV/3kA*	☐ 10kV/5kA*

*Per ANSI C136.2-2015

Warranty

☐ 5 Year (Standard)

Lumen Maintenance

Projected Lxx per IES TM-21-11 at 25°C

LUMEN CODES	LXX(10K) @ HOURS		
	25,000 HR	50,000 HR	60,000 HR
A2, A3, A4, B2, B3, B4, C2, C3, C4D2, D3, D4, E2, E3, E4, F2, F3, F4	L94	L90	L88
H2,H3, H4	L97	L96	L96

Note: Projected Lxx based on LM80 (≥ 10,000 hour testing). Accepted industry tolerances apply to initial luminous flux and lumen maintenance measurements.

Luminaire Ambient Temperature Factor

AMBIENT TEMP (°C)	INITIAL FLUX FACTOR	AMBIENT TEMP (°C)	INITIAL FLUX FACTOR
10	1.02	30	0.99
20	1.01	40	0.98
25	1.00	50	0.97

Ratings

Operating Temperature:	-40°C to 50°C
Vibration:	3G vibration per ANSI C136.31-2018
LM-79:	Testing in accordance with IESNA Standards

Controls

Dimming:	Standard - 0-10V ☐ Optional - DALI (Option U) ☐
Sensors:	Photo Electric Sensors (PE) available LightGrid and Daintree Compatible

cULus LISTED

Not all product variations listed on this page are DLC-qualified. Visit www.designlights.org/search to confirm qualifications.

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EVOLVE
EACL® Series
LED Area Light/Compact Low Wattage

CUSTOMER NAME
PROJECT NAME
DATE ____ TYPE ____
CATALOG NUMBER

Ordering Information

EACL	01	0	F4	AF	7	50	N	D	D1	GRAY	
PROD. ID	GEN	VOLTAGE	OPTIC CODE	DISTRIBUTION	CRI (MIN.)	CCT	DIMMING[1]	CONTROLS	MOUNTING ARM	COLOR	OPTIONS
E = Evolve AG = Compact Area Light L = Low Voltage	01	0 = 120-277V[4] H = 347-480V[4] 1 = 120V 2 = 208V 3 = 240V 4 = 277V 5 = 480V D = 347V	Asy3000 lm Bxy5000 lm Csy7350 lm Dxy10000 lm Dxw10000 lm Exy12500 lm Fxy15000 lm Hxy20000 lm	AF = Asymmetric Forward ASY = Asymmetric Wide AW = Asymmetric Narrow/Auto	7 = 70	30 = 3000K[7] 40 = 4000K 50 = 5000K	N = Dimming thru PE receptacle D = External Dimming 1(0)-2(R) cable X = No External Dimming Leads	1 = None A = ANSI 7-pin PE receptacle (no control) D = ANSI 7-pin PE receptacle with shorting cap provided E = ANSI C136.41 7-pin with Non-Dimming PE Control[2] R = Knuckle Mount[3,4]	OA = Integral Slip-fitter for 1.25"-2" Pipe (1.660" OD - 2.375 in OD) D1 = Universal Mounting Arm, fitted for round or square pole mounting[5] K1 = Knuckle Slipfitter for 1.9 in - 2.3in. OD Tenon[6] S1 = Knuckle Slipfitter for 2.3in - 3.0in OD Tenon[6] W1 = Knuckle Wall Mount[4]	GRAY = Gray BLCK = Black BLGK = Black DKBZ = Dark Bronze WHTE = White	F = Fusing H8 = Motion Sensor w/ LightGrid H2 = Motion Sensor (Daintree)[8] H4 = Motion Sensor (Wattstopper) J = cULCanada L = Tool-Less Entry R= Enhanced Surge Protection (OVR7SKU) U = DALI dimming[9] V = 3-Position Terminal Block Y = Coastal Finish[10] XXX = Special Options

1 Not Available with Fusing, Must Choose a Discrete Voltage with "F" Option Code
2 Note Standard Dimming is 0-10V
3 PE Control only available for 120-277V, 347V or 480V Discrete Voltage.
4 Supplied with 25 leads
5 Supplied with 15/3 ft Cable
6 Restricted Arming Angle of 0-45°
7 Compatible with LightGrid Wireless Control Nodes, Not Compatible with Motion Sensor Control
8 H2 Sensor is not available in High Voltage (347V, 480V or 347-480V)
9 Recommended for installations within 750 feet from coast. Lead time varies, check with factory.
10 Select 3000K CCT for IDA approved fixtures.

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EVOLVE
EACL® Series
LED Area Light/Compact Low Wattage

CUSTOMER NAME
PROJECT NAME
DATE ____ TYPE ____
CATALOG NUMBER

OPTICAL CODE	DIST CODE	CLASSIFICATION	TYPICAL LUMENS		TYPICAL SYSTEM WATTAGE		BUG RATING	
			3000K	4000K &5000K	120-277V	347-480V	3000K	4000K &5000K
A4	AF	TYPE IV	2900	2903	21	23	B1-U0-G1	B1-U0-G1
B4			4900	4903	35	38	B1-U0-G1	B1-U0-G1
C4			7300	7390	55		B1-U0-G2	B2-U0-G2
D4			9800	9803	73		B2-U0-G2	B2-U0-G2
E4			12200	12200	95		B2-U0-G2	B2-U0-G2
F4			14700	14700	122		B2-U0-G2	B2-U0-G2
H4			19600	19600	153		B3-U0-G3	B3-U0-G3
A3	AW	TYPE III	2900	3000	21	23	B1-U0-G1	B1-U0-G1
B3			4900	5100	35	38	B1-U0-G1	B1-U0-G1
C3			7400	7690	55		B1-U0-G2	B1-U0-G2
D3			9900	10200	73		B2-U0-G2	B2-U0-G2
E3			12400	12700	95		B2-U0-G2	B2-U0-G2
F3			14900	15300	122		B2-U0-G2	B2-U0-G2
H3			19300	20400	153		B3-U0-G2	B3-U0-G2
A2	AN	TYPE II	2900	3000	21	23	B1-U0-G1	B1-U0-G1
B2			4900	5003	35	38	B1-U0-G1	B1-U0-G1
C2			7300	7590	55		B2-U0-G2	B2-U0-G2
D2			9800	10100	73		B2-U0-G2	B2-U0-G2
E2			13300	13600	95		B2-U0-G2	B2-U0-G2
F2			14700	15100	122		B3-U0-G2	B3-U0-G3
H2			19900	20300	153		B3-U0-G3	B3-U0-G3

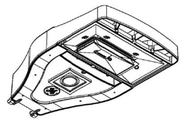
For additional information on Non-Shielded and Shielded EACL IES files, please refer to LED.com

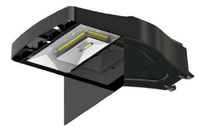
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EVOLVE
EACL® Series
LED Area Light/Compact Low Wattage

CUSTOMER NAME
PROJECT NAME
DATE ____ TYPE ____
CATALOG NUMBER





PE Accessories (To Be Order Separately)

SAP NUMBER	PART NUMBER	DESCRIPTION
91013552	WANS - 277	ANSI 136.41 Dimming PE Daintree Enabled, 105-305V
91013553	WANS9 - 480	ANSI 136.41 Dimming PE Daintree Enabled, 310-550V
93029237	PED-MV-LED-7	ANSI C136.41 Dimming PE, 120-277V
93029238	PED-347-LED-7	ANSI C136.41 Dimming PE, 347V
93029239	PED-480-LED-7	ANSI C136.41 Dimming PE, 480V

SAP NUMBER	PART NUMBER	DESCRIPTION
28299	PECOTL	STANDARD 120-277V
28294	PEOTL	STANDARD 480V
80436	PECOTL	STANDARD 347V
73251	SCCL-PECTL	Shorting cap

Back Light Shied

SHIELD ORIENTATIONS	CUTOFF DISTANCE	SHIELD ORDER LOGIC
Back	Long	ELS-EACL-RBL-BLCK

Current

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www.insitedesigninc.com
mdavis@insitedesigninc.com

Project:

LAKE COUNTRY LUTHERAN -ADDITION

401 Campus Drive
Hartland, WI 53029

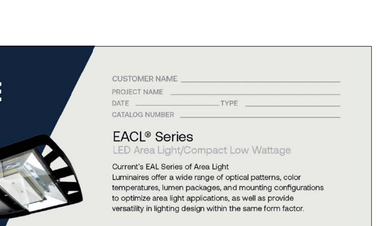
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1 GE EVOLVE EACL SERIES AREA LUMINARIES

EVOLVE
EACL Series Luminaires
Shielding Specification & Ordering Guide

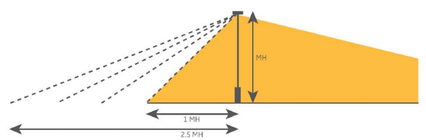


The next evolution of the **Evolve®** LED Area Light delivers even better trespass control. Current's exclusive reflective optical ring design produces superior vertical illuminace and efficiently directs the light without wasteful and unwelcomed light spill into neighboring properties. Due to the extensive variation of parking lot configurations coupled with tightening ordinances,

Current now offers a full array of shielding to accommodate challenging sites.

The shielding options available for the Evolve® Area Light focus on the following applications:

- Left & Right Cutoff
- Front Cutoff
- Backlight Control & B-U-G Improvement



Within each of the shielding families, there are multiple shielding cutoff levels that are categorized in mounting height (MH) increments. Current accommodates cutoff distance from the pole from 1MH to 2.5 MH in 0.5 MH increments. The shields that are listed are for the most common applications. Please contact the manufacturer if your need is not listed.

All shields can be installed easily in the field. The next evolution of the Evolve® LED Area Light and shielding options will help you meet any parking lot challenge.

Current

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2 GE EVOLVE EACL SERIES LUMINARIES SHEILDING

EVOLVE
EACL® Series
LED Area Light/Compact Low Wattage

CUSTOMER NAME
PROJECT NAME
DATE ____ TYPE ____
CATALOG NUMBER

PE Accessories (To Be Order Separately)

SAP NUMBER	PART NUMBER	DESCRIPTION
91013552	WANS - 277	ANSI 136.41 Dimming PE, Daintree Enabled, 105-305V
91013553	WANS9 - 480	ANSI 136.41 Dimming PE, Daintree Enabled, 310-550V
93029237	PED-MV-LED-7	ANSI C136.41 Dimming PE, 120-277V
93029238	PED-347-LED-7	ANSI C136.41 Dimming PE, 347V
93029239	PED-480-LED-7	ANSI C136.41 Dimming PE, 480V

SAP NUMBER	PART NUMBER	DESCRIPTION
28299	PECOTL	STANDARD 120-277V
28294	PEOTL	STANDARD 480V
80436	PECOTL	STANDARD 347V
73251	SCCL-PECTL	Shorting cap

Back Light Shied

SHIELD ORIENTATIONS	CUTOFF DISTANCE	SHIELD ORDER LOGIC
Back	Long	ELS-EACL-RBL-BLCK

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3 GE EVOLVE EACL SERIES LUMINARIES SHEILDING

EVOLVE
SSSE Series Poles
Square | Straight | Steel

Project Name ____
Date ____ Type ____
Notes ____

APPLICATIONS
Lighting installations for side and top mounting of luminaires with effective projected area (EPA) not exceeding maximum allowable loading of the specified pole in its installed geographic location.

CONSTRUCTION

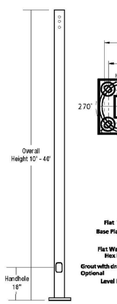
Shaft:	One-piece straight steel with square cross section, flat sides and minimum 0.23" radius on all corners; Minimum yield of 46,000 psi (ASTM-A500, Grade B); Longitudinal weld seam to appear flush with shaft side wall; Steel base plate with axial bolt circle slots welded to pole shaft having minimum yield of 36,000 psi (ASTM A36)
Base Cover:	Two-piece square aluminum base cover included standard
Pole Cap:	Pole shaft supplied with removable cover when applicable; Tenon and post-top configurations also available
Hand Hole:	Rectangular 3x5 steel hand hole frame (2.38" x 4.38" opening); Mounting provisions for grounding lug located behind gasketed cover
Anchor Bolts:	Four galvanized anchor bolts provided per pole with minimum yield of 55,000 psi (ASTM F1554). Galvanized hardware with two washers and two nuts per bolt for leveling
Anchor Bolt Part Numbers:	• 3/4 x 30 x 3 — TAB-30-M38 • 1 x 36 x 4 — TAB-36-M38

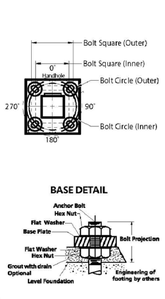
FINISH

- Durable thermoset polyester powder coat paint finish with nominal 3.0 mil thickness
- Powder paint prime applied over "white metal" steel substrate cleaned via mechanical shot blast method
- Decorative finish coat available in multiple standard colors; Custom colors available; RAL number preferable

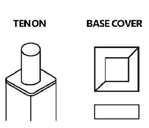
10 DAY - EVOLVE EXPRESS SHIP PROGRAM

- Ships in 10 days
- Limit of 15 poles





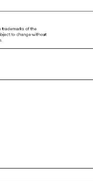
BASE DETAIL



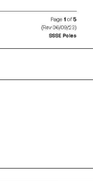
POLE CAP



TENON



BASE COVER



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4 GE EVOLVE SSSE SERIES POLES

EVOLVE
SSSE Series Poles
Square | Straight | Steel
Ordering Information

Project Name ____
Date ____ Type ____
Notes ____

Example: SSSE25-40A-2-E2-DKBZ-UL

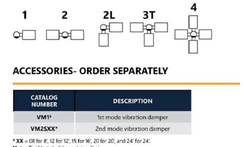
SSSE	20	40	B		E2	GRAY	
SERIES	HEIGHT	SHAFT	THICKNESS	MOUNTING	POLE DRILLING	FINISH	OPTIONS
SSSE = Evolve Square Straight Steel Pole	10 - 10 ft. 12 - 12 ft. 14 - 14 ft. 16 - 16 ft. 18 - 18 ft. 20 - 20 ft. 25 - 25 ft. 30 - 30 ft. 35 - 35 ft. 40 - 40 ft.	40 - 4" Square 40 - 4" Square 40 - 4" Square 40 - 4" Square 40 - 4" Square 40 - 4" Square 40 - 4" Square 40 - 4" Square 50 - 5" Square 60 - 6" Square 50 - 5" Square 60 - 6" Square 60 - 6" Square 60 - 6" Square	A = 0.125" A = 0.125" A = 0.125" A = 0.125" B = 0.188" A = 0.125" B = 0.188" A = 0.125" B = 0.188" C = .25" A = 0.125" B = 0.188" A = 0.125" B = 0.188" C = .25" A = 0.125" B = 0.188" C = .25" B = 0.188" B = 0.188" B = 0.188"	1 = Single arm mount 2 = Two fixtures at 180° 2L = Two fixtures at 90° 3T = Three fixtures at 90° 5Y = Three fixtures at 120° 4 = Four fixtures at 90° TA[1] = Tenon (2.38" OD x 4" Tall) TB[1] = Tenon (2.88" OD x 4" Tall) TC[1] = Tenon (3.5" OD x 6" Tall) TR[1] = Removable Tenon 2.38" x 4") OT = Open Top (includes pole cap)	E2 = Evolve Square UDP01 = 3/8in HDW range 1.69 - 2.24 UDP02 = 1/2in HDW range 1.69 - 2.24 UDP03 = 3/8in HDW range 2.25 - 2.99 UDP04 = 1/2in HDW range 2.25 - 2.99 UDP05 = 3/8in HDW range 3.00 - 3.75 UDP06 = 9/16in HDW range 3.00 - 3.75 UDP07 = 3/8in HDW range 3.76 - 4.49 UDP08 = 9/16in HDW range 3.76 - 4.49 UDP09 = 3/8in HDW range 4.50 - 5.49 UDP10 = 9/16in HDW range 4.50 - 5.49 UDP11 = 3/8in HDW range 5.50 - 6.00 UDP12 = 9/16in HDW range 5.50 - 6.00	DKBZ = Dark Bronze BLCK = Black GRAY = Gray *Contact factory for custom color options	GFI = 20 Amp GFCI Receptacle and Cover EHH[1] = Extra Handhole CS5[1] = 0.5" Coupling CS7[1] = 0.75" Coupling CS0[1] = 2" Coupling MPB[1] = Mid-pole Luminaire Bracket VM1 = 1st mode vibration damper VM2[1] = 2nd mode vibration damper LAB = Less Anchor Bolts UL = UL Certified

NOTES:
1. Removable tenon used in conjunction with side arm mounting. First specify desired arms.
2. Specify option location using MOUNTING ORIENTATION logic shown on this page.
3. Not available with VM1 - Mode 1 Vibration Damper
4. VM1 recommended on poles 20' and taller with EPA of less than 1. Field installed.
5. UDP is for mounting of most popular fixtures on the market.
6. Factory installed.

Indicates availability in the **EXS 10 Day Evolve Express Ship Program**

MOUNTING ORIENTATION

Denotes handhole location



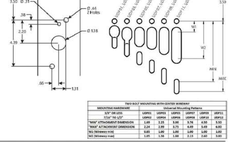
ACCESSORIES- ORDER SEPARATELY

CATALOG NUMBER	DESCRIPTION
VM1[1]	1st mode vibration damper
VM2SXX*	2nd mode vibration damper

* XX = 08 for 8', 12 for 12', 15 ft for 16', 20 for 20', and 24 for 24'.
Note: Field installed through handhole

DRILL PATTERNS

E2 UNIVERSAL DRILL PATTERN (UDP)



DRILLING ASSESSMENT	Universal Mounting Pattern					
SLOT TYPE/SIZE	UDP01	UDP02	UDP03	UDP04	UDP05	UDP06
"WIDE" ATTACHMENT DIMENSION	1.69	1.69	2.25	2.25	3.00	3.00
"WIDE" ATTACHMENT DIMENSION	2.24	2.24	2.99	2.99	3.75	3.75
"LONG" ATTACHMENT DIMENSION	3.31	3.31	3.31	3.31	3.31	3.31
Hole Diameter, in.	0.44	0.56	0.44	0.56	0.44	0.56

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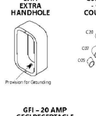
EVOLVE
SSSE Series Poles
Square | Straight | Steel
Ordering Information

Project Name ____
Date ____ Type ____
Notes ____

CATALOG NUMBER	HEIGHT		NOMINAL SHAFT DIMENSIONS	WALL THICKNESS	BOLT CIRCLE (SUGGESTED)	BOLT CIRCLE (RANGE)	BOLT SQUARE (RANGE)	BASE PLATE SQUARE	ANCHOR BOLT SIZE	BOLT PROJECTION	POLE WEIGHT
	FEET	METERS									
SSSE10-40A	10	3.0	4" square	0.125"	9"	8"-10"	5.66"-7.07"	9"	3/4"x30"x3"	3.5	77
SSSE12-40A	12	3.7	4" square	0.125"	9"	8"-10"	5.66"-7.07"	9"	3/4"x30"x3"	3.5	90
SSSE14-40A	14	4.3	4" square	0.125"	9"	8"-10"	5.66"-7.07"	9"	3/4"x30"x3"	3.5	103
SSSE16-40A	16	4.9	4" square	0.125"	9"	8"-10"	5.66"-7.07"	9"	3/4"x30"x3"	3.5	116
SSSE18-40A	18	5.5	4" square	0.125"	9"	8"-10"	5.66"-7.07"	9"	3/4"x30"x3"	3.5	129
SSSE20-40A	20	6.1	4" square	0.125"	9"	8"-10"	5.66"-7.07"	9"	3/4"x30"x3"	3.5	142
SSSE25-40A	25	7.6	4" square	0.125"	9"	8"-10"	5.66"-7.07"	9"	3/4"x30"x3"	3.5	175
SSSE14-40B	14	4.3	4" square	.188"	11"	10"-12"	7.07"-8.48"	10.50"	3/4"x30"x3"	3.5	152
SSSE16-40B	16	4.9	4" square	.188"	11"	10"-12"	7.07"-8.48"	10.50"	3/4"x30"x3"	3.5	171
SSSE18-40B	18	5.5	4" square	.188"	11"	10"-12"	7.07"-8.48"	10.50"	3/4"x30"x3"	3.5	190
SSSE20-40B	20	6.1	4" square	.188"	11"	10"-12"	7.07"-8.48"	10.50"	3/4"x30"x3"	3.5	209
SSSE25-40B	25	7.6	4" square	.188"	11"	10"-12"	7.07"-8.48"	10.50"	3/4"x30"x3"	3.5	257
SSSE30-40B	30	9.1	4" square	.188"	11"	10"-12"	7.07"-8.48"	10.50"	3/4"x30"x3"	3.5	304
SSSE16-50B	16	4.9	5" square	.188"	11"	10.25"-11.25"	7.25"-9.37"	11.50"	1"x36"x4"	4.5	219
SSSE18-50B	18	5.5	5" square	.188"	11"	10.25"-11.25"	7.25"-9.37"	11.50"	1"x36"x4"	4.5	243
SSSE20-50B	20	6.1	5" square	.188"	11"	10.25"-11.25"	7.25"-9.37"	11.50"	1"x36"x4"	4.5	267
SSSE25-50B	25	7.6	5" square	.188"	11"	10.25"-11.25"	7.25"-9.37"	11.50"	1"x36"x4"	4.5	327
SSSE30-50B	30	9.1	5" square	.188"	11"	10.25"-11.25"	7.25"-9.37"	11.50"	1"x36"x4"	4.5	387
SSSE25-50C	25	7.6	5" square	.25"	11"	10.25"-11.25"	7.25"-9.37"	11.50"	1"x36"x4"	4.5	427
SSSE30-50C	30	9.1	5" square	.25"	11"	10.25"-11.25"	7.25"-9.37"	11.50"	1"x36"x4"	4.5	507
SSSE20-60B	20	6.1	6" square	.188"	12"	11.00"-13.21"	7.81"-9.37"	12.25"	1"x36"x4"	5.0	329
SSSE25-60B	25	7.6	6" square	.188"	12"	11.00"-13.21"	7.81"-9.37"	12.25"	1"x36"x4"	5.0	404
SSSE30-60B	30	9.1	6" square	.188"	12"	11.00"-13.21"	7.81"-9.37"	12.25"	1"x36"x4"	5.0	479
SSSE35-60B	35	10.7	6" square	.188"	12"	11.00"-13.21"	7.81"-9.37"	12.25"	1"x36"x4"	5.0	554
SSSE40-60B	40	12.2	6" square	.188"	12"	11.00"-13.21"	7.81"-9.37"	12.25"	1"x36"x4"	5.0	629

NOTES:
1. Factory supplied template must be used when setting anchor bolts. Current will deny any claims for incorrect anchorage placement resulting from failure to use factory supplied template and anchor bolts.

EHH EXTRA HANDHOLE



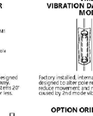
CS5 - CS7 C20 - COUPLING

VM1 - VIBRATION DAMPER 1ST MODE



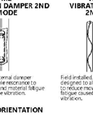
Field Installed Pole Top damper designed to reduce pole top deflection or sway. VM1 is recommended for pole lengths 20' and taller with a total EPA of 1.0 or less.

VM2 - VIBRATION DAMPER 2ND MODE



Factory installed, internal dampner designed to allow pole response to reduce movement and material fatigue caused by 2nd mode vibration.

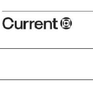
VM2SXX - VIBRATION DAMPER 2ND MODE



Field installed, internal dampner designed to allow pole response to reduce movement and material fatigue caused by 2nd mode vibration.

Example:
Option CS5 should be ordered as CS5-40A-2-E2-DKBZ-UL
1.5" coupling on the handhole side of pole, 15 feet up from the pole base if 1 spacing required between option. Consult factory for other configurations.

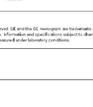
GFI - 20 AMP GFCI RECEPTACLE & COVER



MPB - MID POLE BRACKET



OPTION ORIENTATION



Follow the logic below when ordering location specific options. For each option, indicate its orientation (in degrees) and its height (in feet).

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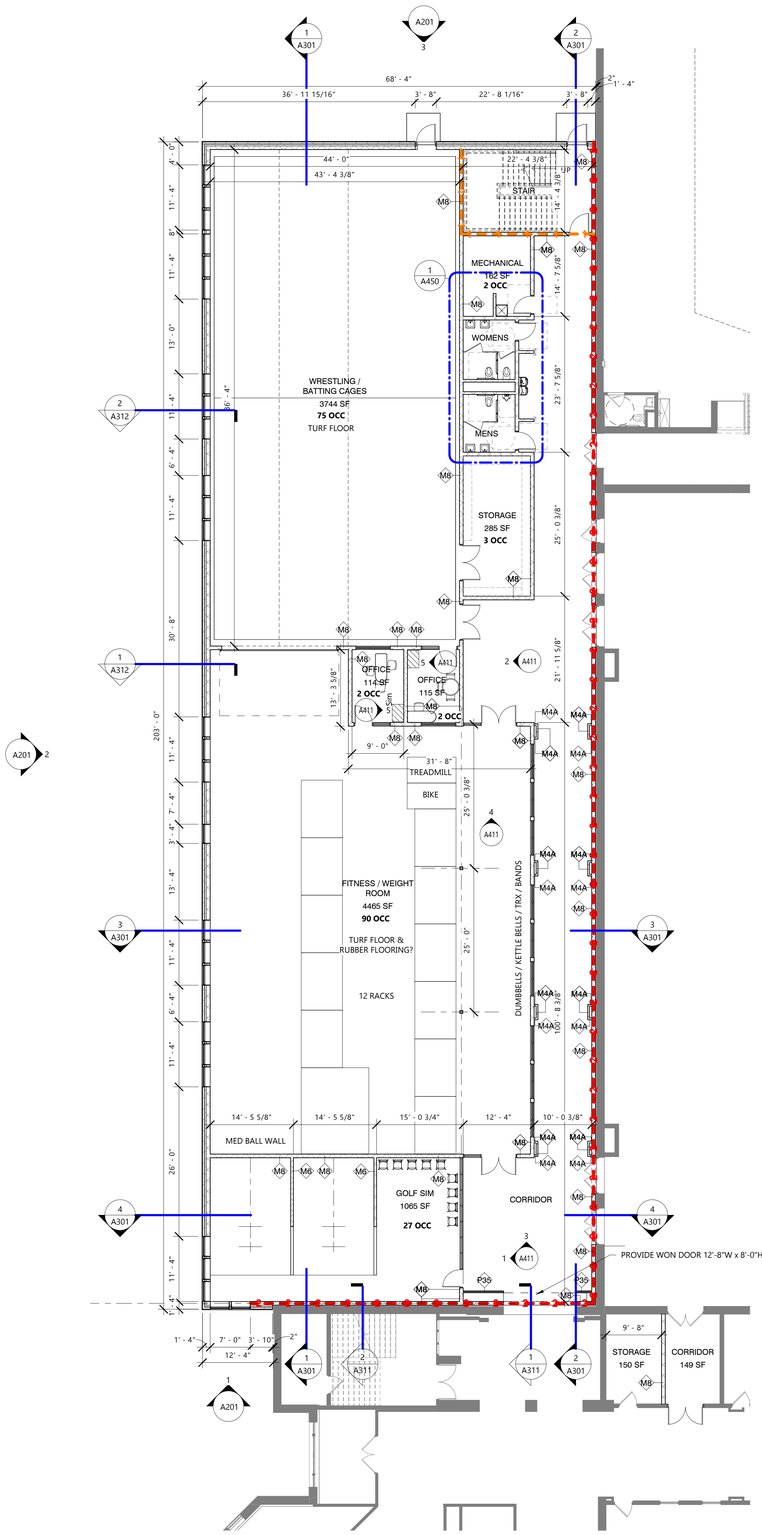
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Sheet Title:

PROPOSED LIGHT FIXTURES

Date of Drawing:	03/28/25
Scale:	NONE
Drawn By:	MCD
Job Number:	L25-018
Sheet Number:	PH01.6

L25-018 - LAKE COUNTRY LUTHERAN - ADDITION - 03/28/2025



1 LEVEL 1 - FLOOR PLAN - ADDITION

3/32" = 1'-0"

3/28/2025 3:49:48 PM

FLOOR PLAN GENERAL NOTES:

A. SEE WALL SCHEDULE FOR WALL ASSEMBLY INFORMATION NOTE: SEE SECTIONS AND ELEVATIONS FOR CHANGES IN MATERIALS/WALL TYPES/ACCENT-ELEMENTS THAT MAY NOT BE INDICATED AT PLAN CUT.

B. SEE 1 / A003 FOR TYPICAL DIMENSIONS OF DOOR OPENING FROM ADJACENT WALL.

C. PROVIDE BLOCKING AT ALL MILLWORK AND WALL HUNG ELEMENTS IN WALLS. CONTRACTOR TO COORDINATE W/ OWNER REPRESENTATIVE FOR FINAL LOCATIONS OF OWNER-FURNISHED EQUIPMENT. SEE DETAIL 13 / A002 . ALL WOOD BLOCKING TO BE FIRE-RETARDANT TREATED WOOD IN BUILDINGS OF NONCOMBUSTIBLE CONSTRUCTION (IBC TYPE I & II) AND IN RATED WALLS IN BUILDINGS OF COMBUSTIBLE CONSTRUCTION (IBC TYPE III, IV, & V).

D. PROVIDE CORNER GUARDS AS SHOWN GRAPHICALLY. SEE FINISH PLAN FOR COLORS & TYPES. ALL OUTSIDE CORNERS NOT SHOWN RECEIVING CORNER GUARDS ARE TO BE VERIFIED WITH ARCHITECT DURING BIDDING

E. ALL INTERIOR PLAN DIMENSIONS ARE TO FACE OF INTERIOR FINISH OF WALL, U.N.O. SEE DETAIL 23 / A002 FOR MORE INFORMATION.

F. ALL EXTERIOR DIMENSIONS ARE PER DETAIL 22 / A002, U.N.O.

G. ALL VERTICAL DIMENSIONS TO BE ABOVE FINISH FLOOR (A.F.F.) U.N.O.

H. ALL DOORS USED IN CONJUNCTION WITH EXITS SHALL BE ARRANGED TO READILY OPEN WITHOUT THE USE OF A KEY OR SPECIAL KNOWLEDGE FROM THE SIDE OF EGRESS.

I. A THERMAL BREAK IN THE CONCRETE FLOOR SLAB IS REQUIRED AT ALL EXTERIOR DOOR LOCATIONS. SEE DOOR DETAILS FOR MORE INFORMATION

J. ALL PARTITION PENETRATIONS SHALL BE FIELD VERIFIED, BRACED, AND SEALED TO MEET REQUIRED RATINGS. UTILIZE UL-APPROVED METHODS

K. PROVIDE PROPER PREPARATION TO ALL SURFACES TO RECEIVE NEW FINISHES

L. ALL ROOMS TO RECEIVE ROOM AND NUMBER SIGNAGE ADJACENT TO DOOR, COORDINATE BLOCKING REQUIREMENTS WITH SIGN VENDOR.

M. WHERE FLOOR DRAINS ARE REQUIRED (SEE PLUMBING) PITCH CONCRETE SLAB TO DRAINS 1/8" PER FOOT, TYP, UNLESS NOTED OTHERWISE.

N. ALL GYPSUM BOARD INTERIOR SURFACES TO RECEIVE A LEVEL 4 FINISH AND PRIME COAT FOR FUTURE PAINTING APPLICATION

O. ALL PARTITIONS TO BE TYPE P1 AND EXTEND TO THE UNDERSIDE OF FLOOR/ROOF DECK ABOVE UNLESS NOTED OTHERWISE

FLOOR PLAN - SYMBOL KEY

EXISTING WALL TO REMAIN
EXISTING DOOR TO REMAIN
REMOVED WALL
REMOVED DOOR
NEW WALL
NEW DOOR
WALL TYPE TAG. SEE WALL TYPES SHEET FOR ADDITIONAL INFORMATION
DOOR TAG
WINDOW TAG
MILLWORK. SEE INTERIOR ELEVATIONS AND DETAILS
FE-# FIRE EXTINGUISHERS

FE-1 - RECESSED CABINET
FE-2 - SEMI-RECESSED CABINET
FE-3 - SURFACE MOUNTED CABINET
FE-4 - SURFACE MOUNTED EXTINGUISHER ONLY

PP PUSH PAD DOOR ACTUATOR
TS TOUCHLESS SENSOR DOOR ACTUATOR
CR CARD READER
CJ CONTROL JOINT

KEYED FLOOR PLAN NOTES - ATHLETIC ADDITION	
TAG #	DESCRIPTION

GROTH Design Group

N58 W6181 COLUMBIA RD.
P.O. BOX 332
CEDARBURG, WISCONSIN 53012

PH. (262) 377-8001
FX. (262) 377-8003

PROJECT

LAKE COUNTRY LUTHERAN HIGH SCHOOL

BUILDING ADDITION

401 CAMPUS DR HARTLAND, WI 53029

ISSUE

NO. REV. DATE DESCRIPTION

PROGRESS DOCUMENTS

These documents reflect progress and intent and may be subject to change, including additional detail. These are not final construction documents and should not be used for final bidding or construction-related purposes.

PROJECT INFO

Date
XX.XX.XXXX

Project No.
16.0XX

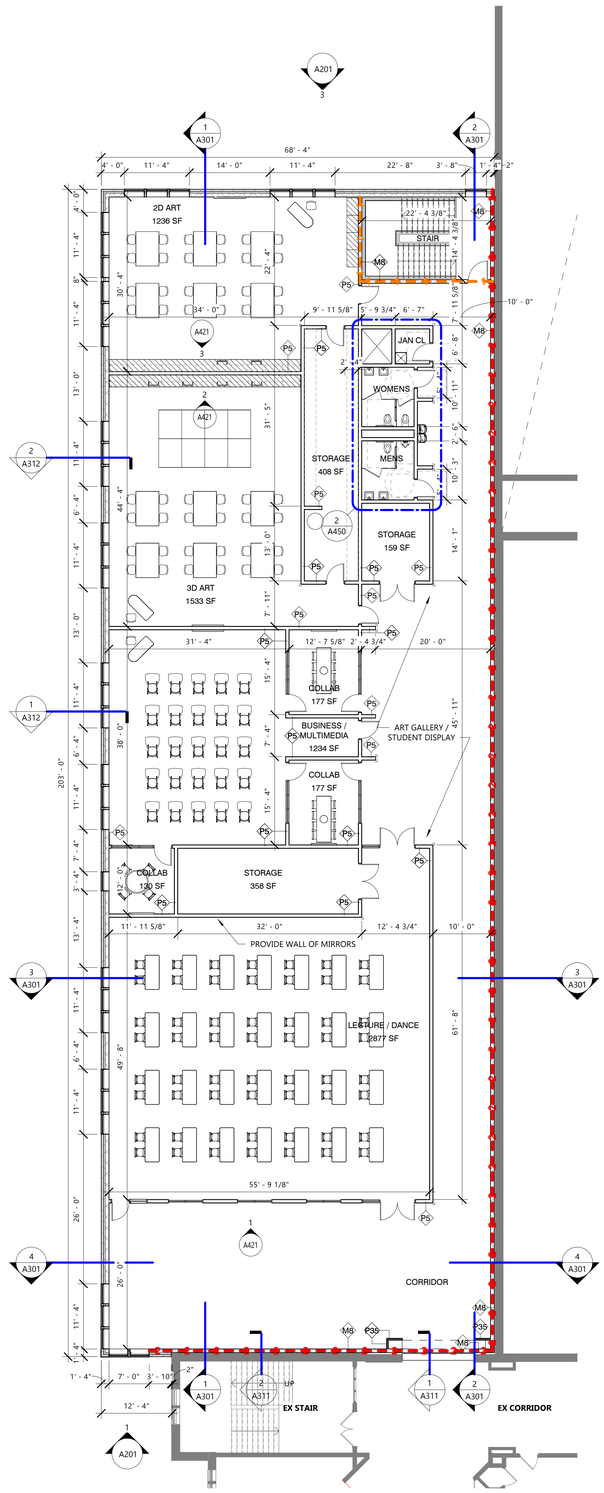
SHEET TITLE

FLOOR PLAN - LEVEL 1 - ADDITION

2025-0328_VILLAGE SUBMITTAL

A101.1

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1 A201 A102.1 LEVEL 2 - FLOOR PLAN - ADDITION

3/32" = 1'-0"

3/28/2025 3:49:51 PM

FLOOR PLAN GENERAL NOTES:

A. SEE WALL SCHEDULE FOR WALL ASSEMBLY INFORMATION. NOTE: SEE SECTIONS AND ELEVATIONS FOR CHANGES IN MATERIALS/WALL TYPES/ACCENT-ELEMENTS THAT MAY NOT BE INDICATED AT PLAN CUT.

B. SEE 1 / A003 FOR TYPICAL DIMENSIONS OF DOOR OPENING FROM ADJACENT WALL.

C. PROVIDE BLOCKING AT ALL MILLWORK AND WALL HUNG ELEMENTS IN WALLS. CONTRACTOR TO COORDINATE W/ OWNER REPRESENTATIVE FOR FINAL LOCATIONS OF OWNER-FURNISHED EQUIPMENT. SEE DETAIL 13 / A002 . ALL WOOD BLOCKING TO BE FIRE-RETARDANT TREATED WOOD IN BUILDINGS OF NONCOMBUSTIBLE CONSTRUCTION (IBC TYPE I & II) AND IN RATED WALLS IN BUILDINGS OF COMBUSTIBLE CONSTRUCTION (IBC TYPE III, IV, & V).

D. PROVIDE CORNER GUARDS AS SHOWN GRAPHICALLY. SEE FINISH PLAN FOR COLORS & TYPES. ALL OUTSIDE CORNERS NOT SHOWN RECEIVING CORNER GUARDS ARE TO BE VERIFIED WITH ARCHITECT DURING BIDDING

E. ALL INTERIOR PLAN DIMENSIONS ARE TO FACE OF INTERIOR FINISH OF WALL, U.N.O. SEE DETAIL 23 / A002 FOR MORE INFORMATION.

F. ALL EXTERIOR DIMENSIONS ARE PER DETAIL 22 / A002, U.N.O.

G. ALL VERTICAL DIMENSIONS TO BE ABOVE FINISH FLOOR (A.F.F.) U.N.O.

H. ALL DOORS USED IN CONJUNCTION WITH EXITS SHALL BE ARRANGED TO READILY OPEN WITHOUT THE USE OF A KEY OR SPECIAL KNOWLEDGE FROM THE SIDE OF EGRESS.

I. A THERMAL BREAK IN THE CONCRETE FLOOR SLAB IS REQUIRED AT ALL EXTERIOR DOOR LOCATIONS: SEE DOOR DETAILS FOR MORE INFORMATION

J. ALL PARTITION PENETRATIONS SHALL BE FIELD VERIFIED, BRACED, AND SEALED TO MEET REQUIRED RATINGS. UTILIZE UL-APPROVED METHODS

K. PROVIDE PROPER PREPARATION TO ALL SURFACES TO RECEIVE NEW FINISHES

L. ALL ROOMS TO RECEIVE ROOM AND NUMBER SIGNAGE ADJACENT TO DOOR, COORDINATE BLOCKING REQUIREMENTS WITH SIGN VENDOR.

M. WHERE FLOOR DRAINS ARE REQUIRED (SEE PLUMBING) PITCH CONCRETE SLAB TO DRAINS 1/8" PER FOOT, TYP, UNLESS NOTED OTHERWISE.

N. ALL GYPSUM BOARD INTERIOR SURFACES TO RECEIVE A LEVEL 4 FINISH AND PRIME COAT FOR FUTURE PAINTING APPLICATION

O. ALL PARTITIONS TO BE TYPE P1 AND EXTEND TO THE UNDERSIDE OF FLOOR/ROOF DECK ABOVE UNLESS NOTED OTHERWISE

FLOOR PLAN - SYMBOL KEY

EXISTING WALL TO REMAIN — EXISTING DOOR TO REMAIN

REMOVED WALL — REMOVED DOOR

NEW WALL — NEW DOOR

1 WALL TYPE TAG. SEE WALL TYPES SHEET FOR ADDITIONAL INFORMATION

101.1 DOOR TAG — BL-3 WINDOW TAG

MILLWORK. SEE INTERIOR ELEVATIONS AND DETAILS

FE-# FIRE EXTINGUISHERS

FE-1 - RECESSED CABINET
FE-2 - SEMI-RECESSED CABINET
FE-3 - SURFACE MOUNTED CABINET
FE-4 - SURFACE MOUNTED EXTINGUISHER ONLY

PP PUSH PAD DOOR ACTUATOR

TS TOUCHLESS SENSOR DOOR ACTUATOR

CR CARD READER

CJ CONTROL JOINT

GROTH Design Group

N58 W6181 COLUMBIA RD.
P.O. BOX 332
CEDARBURG, WISCONSIN 53012

PH. (262) 377-8001
FX. (262) 377-8003

PROJECT

LAKE COUNTRY LUTHERAN HIGH SCHOOL

BUILDING ADDITION

401 CAMPUS DR HARTLAND, WI 53029

ISSUE

NO.	REV. DATE	DESCRIPTION

PROGRESS DOCUMENTS

These documents reflect progress and intent and may be subject to change, including additional detail. These are not final construction documents and should not be used for final bidding or construction-related purposes.

PROJECT INFO

Date
XX.XX.XXXX

Project No.
16.0XX

SHEET TITLE

FLOOR PLAN - LEVEL 2 - ADDITION

2025-0328_VILLAGE SUBMITTAL

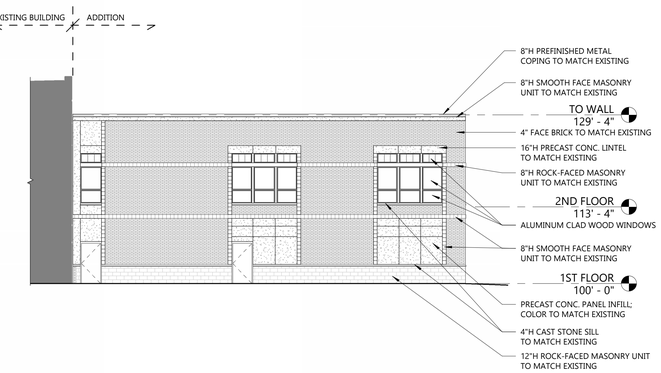
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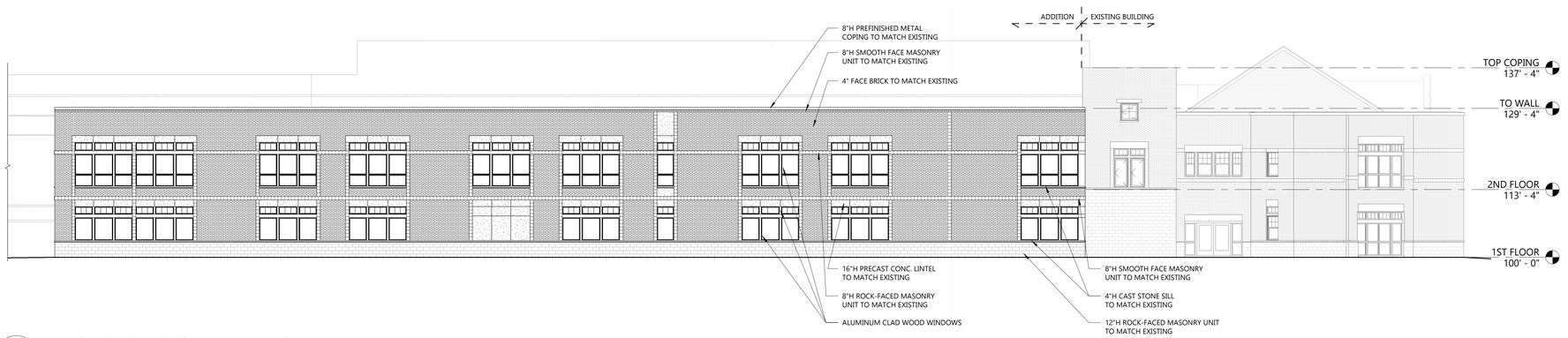


EXISTING BUILDING PHOTOS



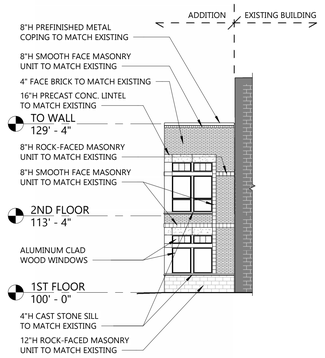
3 A100 A201 NORTH ELEVATION - ADDITION

3/32" = 1'-0"



2 A101.1 A201 WEST ELEVATION - ADDITION

3/32" = 1'-0"



1 A100 A201 SOUTH ELEVATION - ADDITION

3/32" = 1'-0"

GROTH Design Group

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CEDARBURG, WISCONSIN 53012

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FX. (262) 377-8003

PROJECT

LAKE COUNTRY LUTHERAN HIGH SCHOOL

BUILDING ADDITION

401 CAMPUS DR HARTLAND, WI 53029

ISSUE

NO. REV. DATE DESCRIPTION

PROGRESS DOCUMENTS

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PROJECT INFO

Date
XX.XX.XXXX

Project No.
16.0XX

SHEET TITLE

BUILDING ELEVATIONS

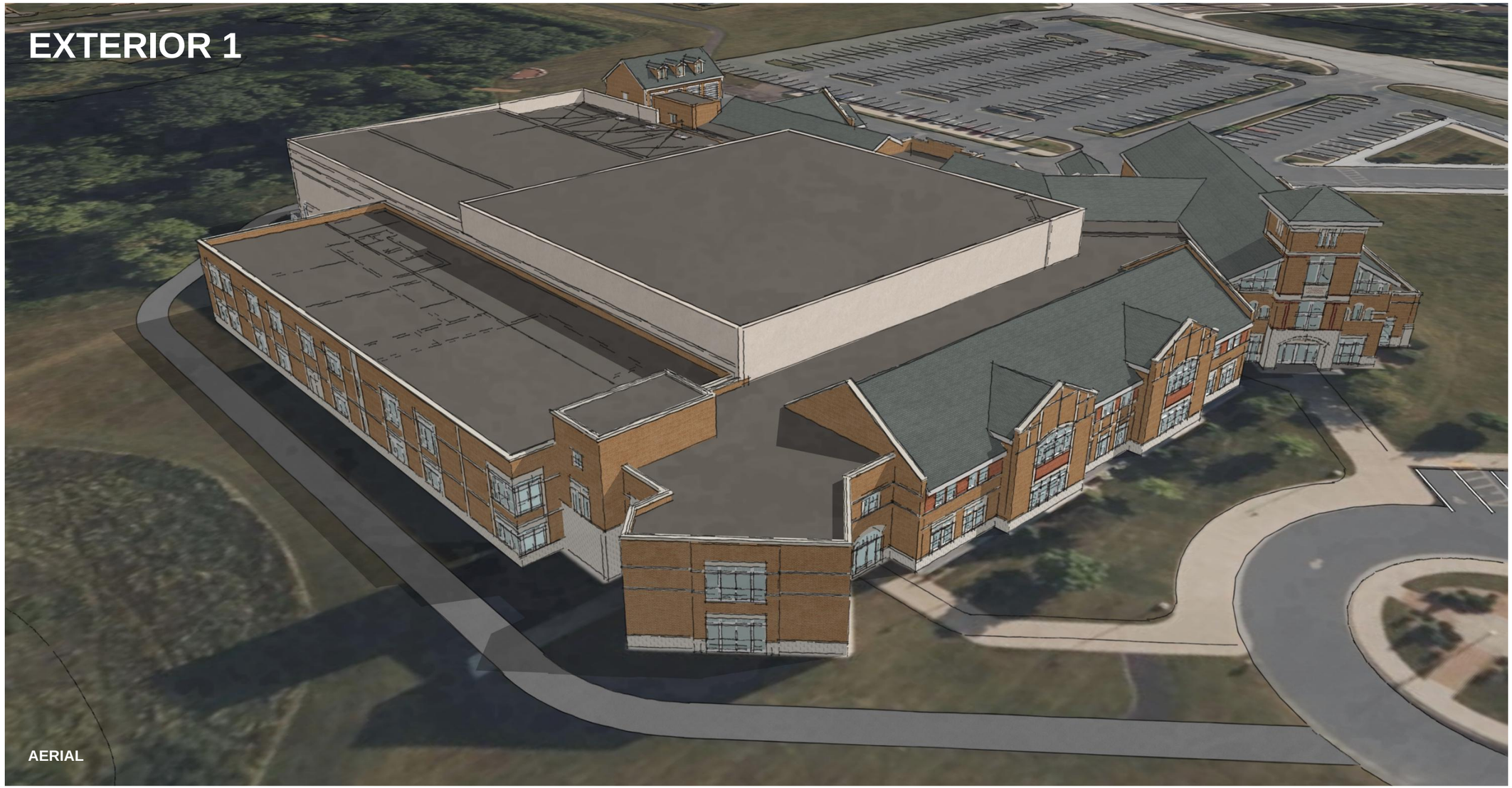
A201

2025-0328_VILLAGE SUBMITTAL

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EXTERIOR 1



AERIAL



PERSPECTIVE

Exterior Design
03.28.2025

LAKE COUNTRY LUTHERAN HS ADDITION - Hartland, WI

GROTH Design Group



ELEVATION - WEST
1/16" = 1'-0"



ELEVATION - NORTH
1/16" = 1'-0"

Artistic and/or computer renderings are not a contractual representation of the finished product and GROTH Design Group makes no warranties and representations that the depictions of such renderings will be replicated in the finished product. Client acknowledges and agrees that the terms of the contract, not the renderings shall control.

Exterior Design
03.28.2025

LAKE COUNTRY LUTHERAN HS ADDITION - Hartland, WI

GROTH Design Group

ZION EVANGELICAL LUTHERAN CHURCH
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HARTLAND, WI 53029

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W310N4958 OLD STEEPLE RD
HARTLAND, WI 53029-8529

BING YU AND XUERONG LIU
618 SCENIC RD
HARTLAND, WI 53029-1200

BRIAN NAHEY
5661 HIGHWAY 83
HARTLAND, WI 53029-8502

DANIEL & HEATHER KEENAN
609 CHERRY CT
HARTLAND, WI 53029-1219

DEIRDRE & KAMERON CARDOSA
559 WILD OAK RD
HARTLAND, WI 53029-1217

DOUGLAS & PATRICIA FOSSUM
526 LAKE COVE CT
SHOREVIEW, MN 55126-4009

GREGORY & NICOLE BRAZGEL
616 CHERRY CT
HARTLAND, WI 53029-1219

JAMES & MICHELLE HAYETT
W310N5012 OLD STEEPLE RD
HARTLAND, WI 53029

JAMIE & JEREMY PAPE
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HARTLAND, WI 53029-1217

JEFFERY & JUDITH SCHUBERT
W310N4932 OLD STEEPLE RD
HARTLAND, WI 53029

JOHN & MEG HANELY
556 WILD OAK RD
HARTLAND, WI 53029-1217

JULIANA HALL
610 SCENIC RD
HARTLAND, WI 53029-1200

JUSTIN & HEATHER HOPPER
551 WILD OAK RD
HARTLAND, WI 53029-1217

KYLE & RYLEE KOSIBOSKI
608 CHERRY CT
HARTLAND, WI 53029-1218

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MILWAUKEE, WI 53202-3144

LUTHERAN HIGH SCHOOL ASSOCIATION OF GREATER MILW
10427 W LINCOLN AVE STE 1300
MILWAUKEE, WI 53227-1263

MARIO & TERRI DOMACINOVICH
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MATTHEW & ALLIE MCDONNELL
613 CHERRY CT
HARTLAND, WI 53029-1219

NICOLAS & AMANDA LANGLOIS
N49W31079 OLD STEEPLE RD
HARTLAND, WI 53029-8533

PAUL ZANONI & ROMAINE VALERO
N49W31057 OLD STEEPLE RD
HARTLAND, WI 53029-8533

PHILIP & MARY HOVE
W310N4984 OLD STEEPLE RD
HARTLAND, WI 53029-8529

RANDY BURG
560 WILD OAK RD
HARTLAND, WI 53029-1217

STATE OF WI & DEPT. OF TRANSPORTATION
C/O DAVE KITZMAN PO BOX 798
WAUKESHA, WI 53187-0798

STEPHEN & LYNDA LEE PLACEWAY
W310N4953 OLD STEEPLE RD
HARTLAND, WI 53029-8530

SURVIVOR'S TRUST
W307N5276 ANDERSON RD
HARTLAND, WI 53029-1032

TORY & JEANA FRENCH
614 SCENIC RD
HARTLAND, WI 53029-1200

THOMAS & NANCY KINGSBURY
4515 HEWITTS POINT RD
OCONOMOWOC, WI 53066-3314

John T. Ford
Three Leaf Partners
504 W. Juneau Avenue
Milwaukee, WI 53203
jford@threeleafdevelopment.com
Direct: (414) 775-0857

April 21, 2025

Village of Hartland
210 Cottonwood Avenue
Hartland, WI 53029
(262) 367-2714

Re: Hartland Senior Development – PUD AMENDMENT
Lot 2 CSM 12091 3.76 Acres - Campus Drive, Hartland, WI

Dear Village of Hartland:

3LP Hartland Senior LLC ("Developer") proposes to modify the previously approved (October 28, 2024) PUD Development Agreement with the Village of Hartland. The full continuum of care Senior Housing development ("Project") remains located on Campus Drive across from Lake Country Lutheran High School on a portion of current Lot 2 (HAV0423981056). Developer is requesting the following two primary modifications to the previously approved development, in order to make this project financially feasible and able to move forward.

1. **ARCHITECTURAL MODIFICATIONS**

   a. Unit Count Increase
      i. Increase of total unit count +6 (from 118 to 124).
      ii. PUD previously allowed maximum of 120 units.

   b. Design Modifications
      i. 4th Floor – Independent Living – removal of rooftop clubroom + outdoor deck → convert to additional units.
      ii. Material Modifications

2. IMPACT FEE WAIVER REQUEST

a. In order to make this project financially feasible, Developer requests a waiver of all Impact & Sewer Connection Fees, EXCLUDING the Del-Hart Sewer Connection Fees.

Hartland Senior				
124 Units	**Village 2025 Estimate**		**Developer Request**	
Impact Fee	$	204,776		***WAIVER***
Village Sewer Connection Fees	$	490,770		***WAIVER***
Del-Hart Sewer Connection Fees	$	570,255	$	570,255
Total Fees	$	1,265,801	$	570,255
$/Unit	*$*	*10,208*	*$*	*4,599*

All other components of development remain unchanged, as previously approved.

This request and corresponding updated materials will be presented at the scheduled Hartland Plan Commission meeting on April 21, 2025. We look forward to further discussing the challenges this development has encountered since original approval, what we have done to mitigate portion of such, and why the above two requests are needed in order to make this project financially feasible for this community.

We appreciate the continued collaborative efforts with the Village of Hartland to make an Impact through Real Estate and bring another great development to the community.

Thank you,

John T. Ford
Chief Development Officer

Exhibit A – Updated Architectural Design Set

PLUNKETT RAYSICH
ARCHITECTS, LLP

HARTLAND SENIOR
HARTLAND PLAN COMMISSION MEETING 4-21-25



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04/14/25 **VIEW FROM CAMPUS DRIVE**

UNIT MATRIX

ROOM NAME	TYPE	COUNT
FLOOR 1		
MC-A.1	ADA	3
MC-A.2	ADA	8
MC-A.3	ADA	6
MC-A.4	ADA	1
MC-B	ADA	2
IL 1-BED A	B	4
IL 1-BED B	B	4
IL 2-BED A	B	6
IL 2-BED B	B	2
IL STUDIO	B	1
TOTAL		37

ROOM NAME	TYPE	COUNT
FLOOR 2		
AL-A.1	ADA	3
AL-A.2	ADA	8
AL-A.3	ADA	6
AL-A.4	ADA	1
AL-B	ADA	2
IL 1-BED A	B	4
IL-1 BED B	B	4
IL-1 BED C	B	1
IL-1 BED D	B	1
IL-1 BED E	B	1
IL-1 BED H	A	2
IL-2 BED A	B	6
IL-2 BED B	B	2
IL STUDIO	B	1
TOTAL		42

ROOM NAME	TYPE	COUNT
FLOOR 3		
IL 1-BED A	B	6
IL-1 BED B	B	4
IL-1 BED C	B	1
IL-1 BED D	B	1
IL-1 BED E	B	1
IL-1 BED F	B	1
IL-2 BED A	B	6
IL-2 BED B	B	2
IL STUDIO A	B	1
TOTAL		23

ROOM NAME	TYPE	COUNT
FLOOR 4		
IL 1-BED A	B	6
IL-1 BED B	B	4
IL-1 BED C	B	1
IL-1 BED D	B	1
IL-1 BED E	B	1
IL-2 BED A	B	6
IL-2 BED B	B	2
IL STUDIO A	B	1
TOTAL		22

MC		20
AL		20
IL		84

TOTAL UNITS 124

Unit Square Footage (Approx NSF)

MC-A.1/AL-A.1	332
MC-A.2/AL-A.2	320
MC-A.3/AL-A.3	351
MC-A.4/AL-A.4	332
MC-B/AL-B	494
IL STUDIO A	498
IL-I BED A	788
IL-I BED B	841
IL-I BED C	857
IL-I BED D	710
IL-I BED E	819
IL-I BED F	1001
IL-I BED H	788
IL-2 BED A	994
IL-2 BED B	1,145

Building Area

	Building 1 (IL Four Story)	Building 2 (MC/AL Two-Story)
Lower Level	28,677	10,352
First Floor	38,918	15,691
Second Floor	25,590	15,694
Third Floor	25,579	
Fourth Floor	25,589	
Total	**144,353**	**41,737**

Building Total **186,090 SF**

Required Parking:

Assisted & Memory Care (44 beds)	1 Space/5beds
	1 space/3 employees
	11 spaces
Independent Living (84-units)	1 space/unit
	84 spaces
Total required spaces	95 spaces

Proposed parking:

Surface Parking	
Standard spaces:	43 spaces
ADA Spaces	4 spaces
	47 spaces
Garage Parking:	70 spaces
Total Parking	**117 spaces**

PAVEMENT NOTE:
ALL DRIVE AISLES SHALL BE HEAVY DUTY ASPHALT PAVEMENT AND ALL PARKING STALLS SHALL BE STANDARD DUTY ASPHALT PAVEMENT

LEGEND:

- 850 – EXISTING CONTOUR
- SAN – EXISTING SANITARY SEWER
- EXISTING SANITARY MANHOLE
- W – EXISTING WATER MAIN
- EXISTING HYDRANT
- ST – EXISTING STORM SEWER
- EXISTING STORM MANHOLE
- EXISTING STORM INLET
- EXISTING TRANSFORMER
- EXISTING ELECTRIC PEDESTAL
- EXISTING TELEPHONE PEDESTAL
- EXISTING CATV PEDESTAL
- EXISTING POWER POLE
- PROPOSED SANITARY SEWER
- PROPOSED SANITARY MANHOLE
- PROPOSED FORCE MAIN
- PROPOSED WATER MAIN
- PROPOSED HYDRANT
- PROPOSED WATER VALVE
- PROPOSED STORM SEWER
- PROPOSED STORM MANHOLE
- PROPOSED STORM INLET
- PROPOSED STORM END SECTION



SCALE: 1" = 30' (22"X34")
SCALE: 1" = 60' (11"X17")

CONTRACTOR IS REQUIRED TO CONTACT DIGGERS HOTLINE TOLL FREE TO OBTAIN LOCATION OF UNDERGROUND UTILITIES PRIOR TO COMMENCING THE WORK. WISCONSIN STATUTE 182.0715 REQUIRES MIN. OF 3 WORK DAYS NOTICE BEFORE YOU EXCAVATE.
CALL DIGGERS HOTLINE 1-800-242-8511

NOTE:
EXISTING UNDERGROUND UTILITY INFORMATION WAS OBTAINED FROM AVAILABLE RECORDS. THE ENGINEER MAKES NO GUARANTEE AS TO THE ACCURACY OF THIS INFORMATION. VERIFICATION TO THE SATISFACTION OF THE CONTRACTOR OF ALL UNDERGROUND UTILITIES, WHETHER OR NOT SHOWN ON THE PLANS, SHALL BE ASSUMED AS A CONDITION OF THE CONTRACT. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES BETWEEN LOCATION OF UTILITIES IN THE FIELD AND LOCATIONS SHOWN ON THE PLANS.

WISCONSIN Matthew J. O'Connell E-40533 OCONNELL PROFESSIONAL ENGINEER
BAIRD

TRIO DESIGN • LAND SURVEYING CIVIL ENGINEERING
4100 N. CALHOUN RD., SUITE 300
BROOKFIELD, WI 53005
PHONE: (262) 790-1480
FAX: (262) 790-1481
EMAIL: jpudelko@trioeng.com

PROJECT:
HARTLAND SENIOR LIVING
VILLAGE OF HARTLAND, WISCONSIN

BY: THREE LEAF PARTNERS
504 W. JUNEAU AVE.
MILWAUKEE, WI 53203

REVISION HISTORY

DATE	DESCRIPTION
07/01/24	INITIAL SUBMITTAL
08/12/24	PC SUBMITTAL
10/09/24	FINAL PLAN SET
11/06/24	PER VILLAGE COMMENTS

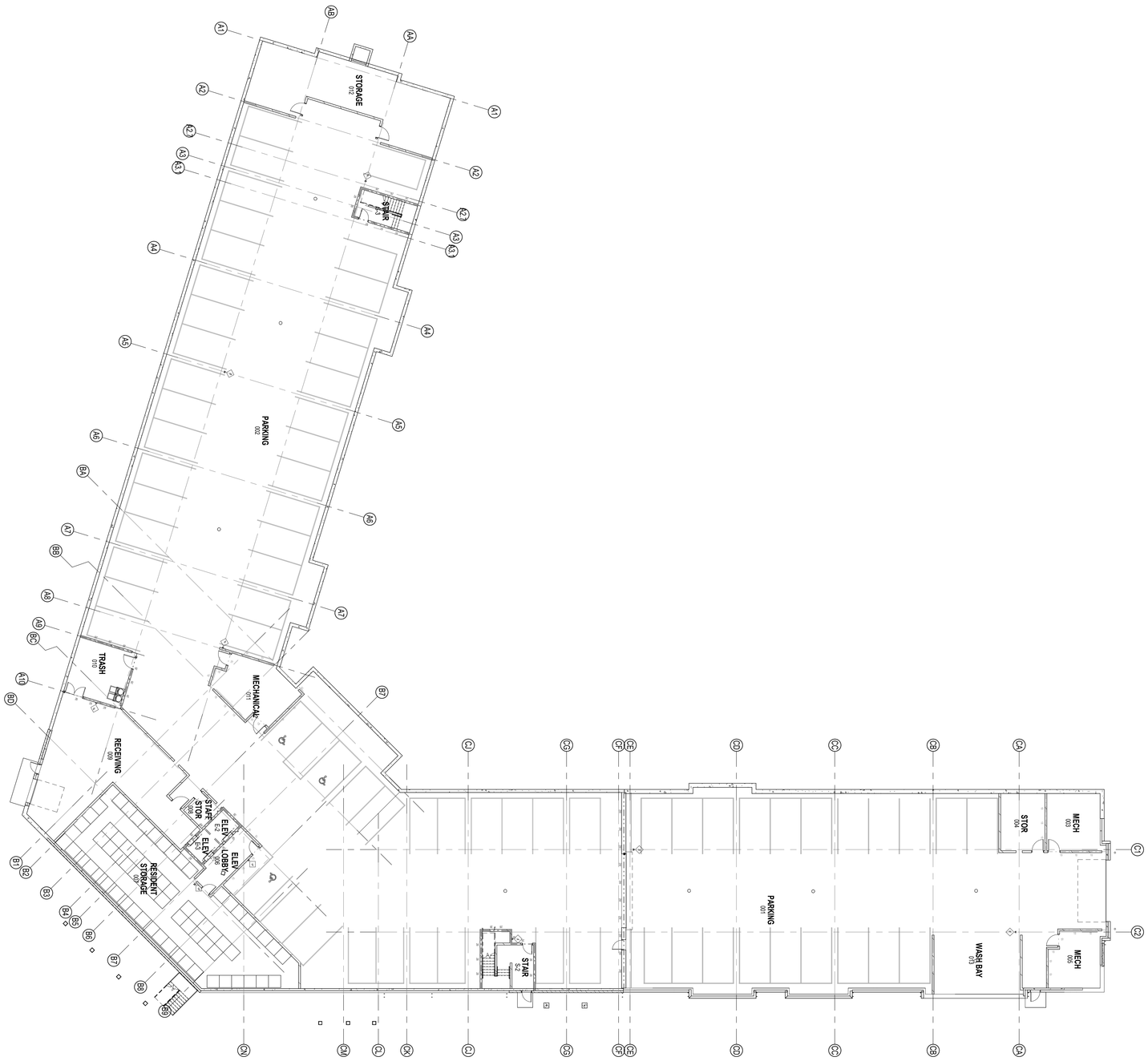
DATE:
NOVEMBER 6, 2024

JOB NUMBER:
24-29-1138

DESCRIPTION:
DETAILED SITE PLAN

SHEET
C1.2

X:\2024\24-29-1138 HARTLAND SENIOR LIVING FOR THREE LEAF\DRAWINGS\CONSTRUCTION PLANS\HARTLAND SEN. LIVING_CIVIL PLAN SET_22X34.DWG



TRUE NORTH

PLAN NORTH

1/16" = 1'-0"

LIFE SAFETY - OVERALL LOWER LEVEL FLOOR PLAN

NOT FOR CONSTRUCTION

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90% PRICE SET	
DATE	04/14/2025
JOB NO	240063-01
SHEET NO	A052

LIFE SAFETY OVERALL LOWER LEVEL

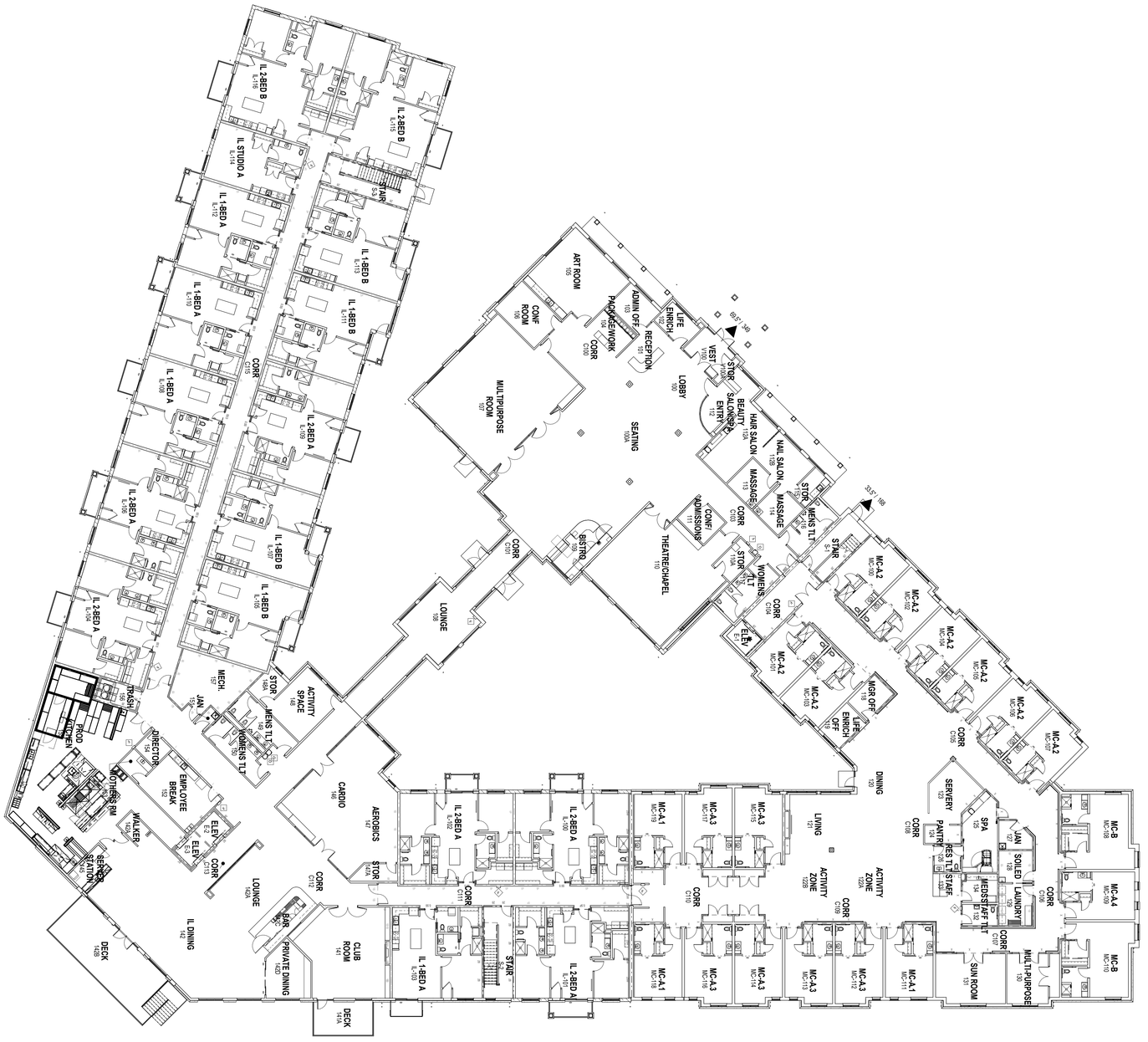
REVISIONS

THREE LEAF PARTNERS
HARTLAND SENIOR

CAMPUS DRIVE, HARTLAND, WISCONSIN

PLUNKETT RAYSICH ARCHITECTS, LLP

209 south water street, milwaukee, wisconsin 53204 t 414 359 3060
2310 crossroads drive, suite 2000, madison, wisconsin 53718 t 608 240 9000
1970 main street, suite 201, sarasota, florida 34236 t 941 444 8845
220 industrial boulevard, suite 101, austin, texas 78745 t 512 851 1900
327 E 4th street, suite 204, waterloo, iowa 50703 t 319 233 1163


IL 2-BED B IL-110
IL 2-BED B IL-113
IL STUDIO A IL-114
STAIR S-3
IL 1-BED A IL-112
IL 1-BED B IL-111
IL 1-BED A IL-110
CORR C115
IL 1-BED A IL-109
IL 2-BED A IL-108
IL 2-BED A IL-106
IL 1-BED B IL-107
IL 1-BED B IL-105
IL 2-BED A IL-104
TRASH 156
KITCHEN
PROD 155
DIRECTOR 154
MOTHERS RM 153
EMPLOYEE BREAK 152
WALKER 142A
SERVER STATION 145
DECK 142B
IL DINING 142
LOUNGE 142A
ELEV E-2
ELEV E-3
CORR C131
CORR C132
BAR 143
PRIVATE DINING 142D
MECH. 157
JAN 158
STOR 158A
MENS TLT 160
WOMENS TLT 159
ACTIVITY SPACE 148
CARDIO 146
AEROBICS 147
STOR 158N
CLUB ROOM 141
DECK 141A
CASUAL DINING 140
ART ROOM 105
CONF ROOM 106
ADMIN OFF 103
PACK/NETWORK 104
CORR C100
LIFE ENRICH 102
RECEPTION 101
LOBBY 100
VEST V100
STOR V100A
BEAUTY SALON ENTRY 112
HAIR SALON 112A
NAIL SALON 112B
MASSAGE 113
MASSAGE 114
STOR 115
MENS TLT 116
STAIR S-4
MULTIPURPOSE ROOM 107
SEATING 109
THEATRE/CHAPEL 110
CONF ADMISSIONS 111
CORR C101
BISTRO 300
STOR 110A
WOMENS TLT 117
ELEV E-1
CORR C104
CORR C103
LOUNGE 108
MC-A2 MC-102
MC-A2 MC-104
MC-A2 MC-106
MC-A2 MC-108
MC-A2 MC-109
MC-A2 MC-101
MC-A2 MC-103
MGR OFF 118
LIFE ENRICH 119
CORR C102
DINING 120
SERVERY 123
PANTRY 124
REST TLT STAFF 125
SPA 126
JAN 127
SOILED LAUNDRY 128
MEDS STAFF TLT 134
CORR C106
CORR C105
CORR C108
CORR C107
MULTI-PURPOSE 130
SUN ROOM 131
LIVING 121
ACTIVITY ZONE 122A
ACTIVITY ZONE 122B
MC-A1 MC-119
MC-A3 MC-117
MC-A3 MC-115
MC-A1 MC-118
MC-A3 MC-116
MC-A3 MC-114
MC-A3 MC-113
MC-A3 MC-112
MC-A1 MC-111
MC-B MC-105
MC-A4 MC-103
MC-B MC-110
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IL 2-BED A IL-100
IL 1-BED A IL-101
CORR C111
STAIR S-2
IL 2-BED A IL-103
CORR C110
CORR C109
CORR C112
STOR 158N
CORR C113
CORR C114
CORR C116
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CORR C135
CORR

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TRUE NORTH

PLAN NORTH

1/16" = 1'-0"

LIFE SAFETY - OVERALL SECOND FLOOR PLAN

NOT FOR CONSTRUCTION

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99% PRICE SET

DATE: 04/14/2025

JOB NO. 2409534.01

SHEET NO. A054

LIFE SAFETY OVERALL SECOND FLOOR PLAN

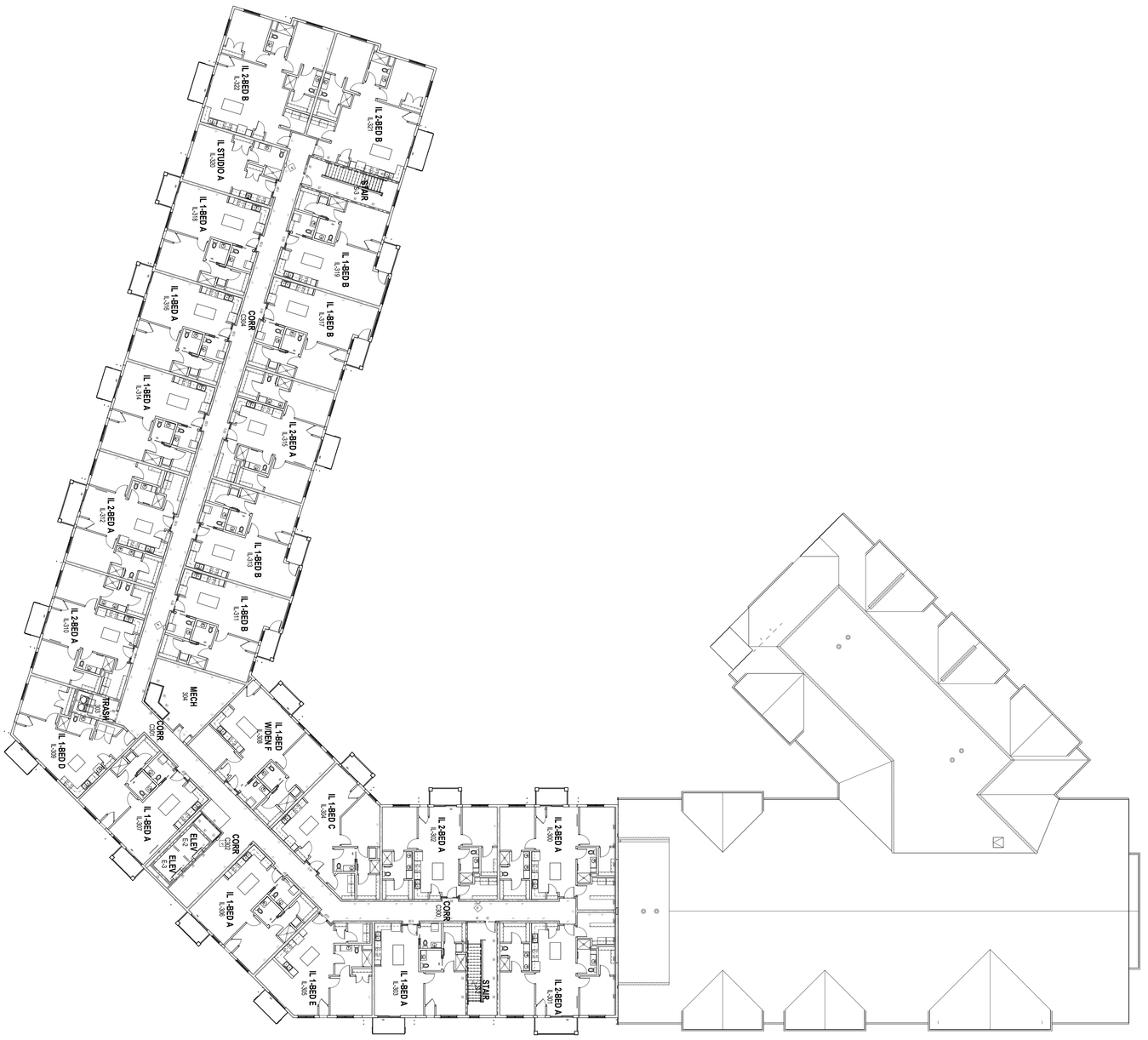
REVISIONS

THREE LEAF PARTNERS
HARTLAND SENIOR

CAMPUS DRIVE, HARTLAND, WISCONSIN

PLUNKETT RAYSICH ARCHITECTS, LLP

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220 industrial boulevard, suite 101, austin, texas 78745 t 512 851 1900
327 E 4th street, suite 204, waterloo, iowa 50703 t 319 233 1163



TRUE NORTH
PLAN NORTH
1/16" = 1'-0"

LIFE SAFETY - OVERALL THIRD FLOOR PLAN

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DATE	04/14/2025
JOB NO.	240053-01
SHEET NO.	A055

LIFE SAFETY OVERALL THIRD FLOOR PLAN

REVISIONS

THREE LEAF PARTNERS
HARTLAND SENIOR

CAMPUS DRIVE, HARTLAND, WISCONSIN

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TRUE NORTH

PLAN NORTH

1/16" = 1'-0"

LIFE SAFETY - OVERALL FOURTH FLOOR PLAN

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LIFE SAFETY OVERALL FOURTH FLOOR PLAN

REVISIONS

THREE LEAF PARTNERS
HARTLAND SENIOR

CAMPUS DRIVE, HARTLAND, WISCONSIN

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B1 NORTHEAST ELEVATION
1/8" = 1'-0"

MASONRY REDUCTION AREA

ELEVATION AS APPROVED
10/21/2024

TOTAL MASONRY VENEER: 32%



B1 NORTHEAST ELEVATION
1/8" = 1'-0"

UPDATED ELEVATION
4/14/2025

TOTAL MASONRY VENEER: 19.5%



B3 **COURTYARD - NORTHWEST ELEVATION**
1/8" = 1'-0"



B1 **SOUTHWEST ELEVATION**
1/8" = 1'-0"

ELEVATIONS AS APPROVED
10/21/2024



B1 **COURTYARD - NORTHWEST ELEVATION**
1/8" = 1'-0"



B4 **SOUTHWEST ELEVATION**
1/8" = 1'-0"

UPDATED ELEVATIONS
4/14/2025

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THREE LEAF PARTNERS
HARTLAND SENIOR

CAMPUS DRIVE, HARTLAND, WISCONSIN

REVISIONS

EXTERIOR ELEVATIONS

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SHEET NO:	A400



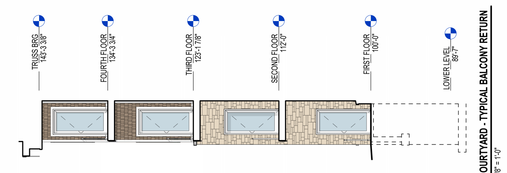
B5 COURTYARD - WEST ELEVATION
1/8" = 1'-0"

EXTERIOR FINISH PATTERNS

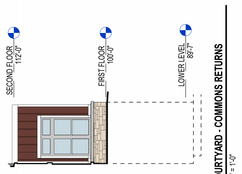




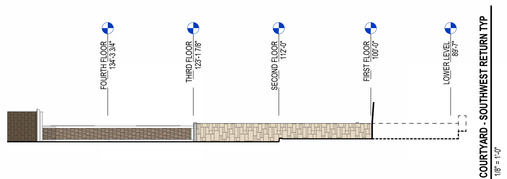
B1 COURTYARD - NORTHWEST ELEVATION
1/8" = 1'-0"



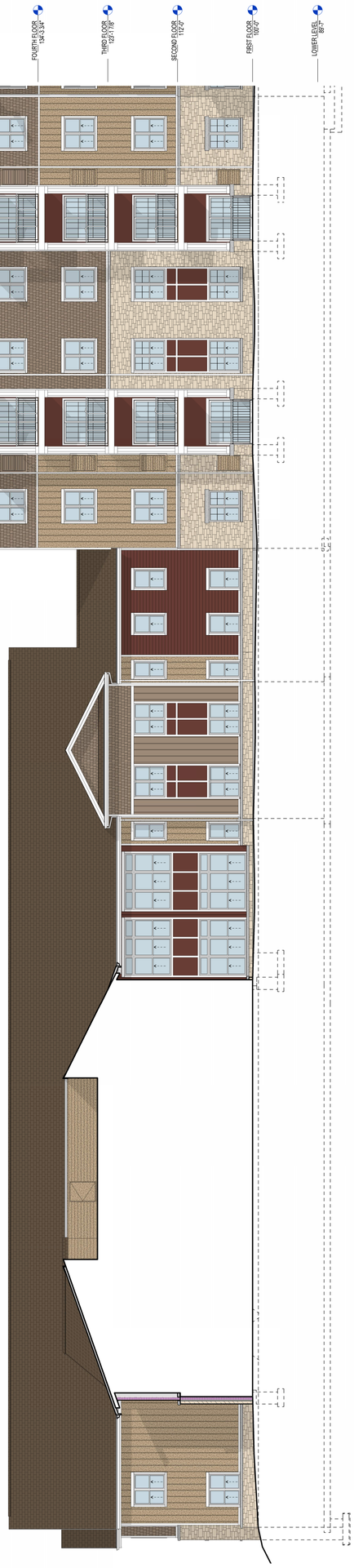
C3 COURTYARD - TYPICAL BALCONY RETURN
1/8" = 1'-0"



C2 COURTYARD - COMMONS RETURNS
1/8" = 1'-0"



C1 COURTYARD - SOUTHWEST RETURN TYP
1/8" = 1'-0"

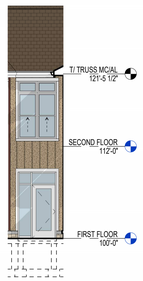


E1 COURTYARD - SOUTHWEST ELEVATION
1/8" = 1'-0"

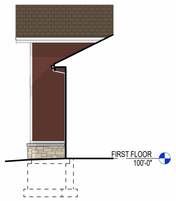
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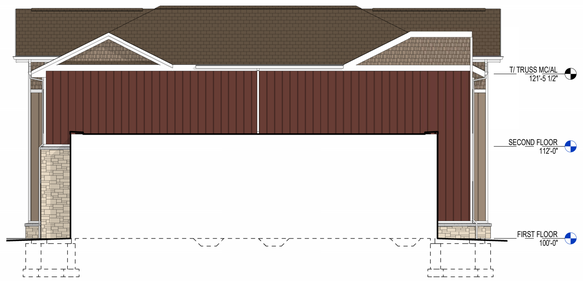
A1 **MEMORY CARE - EAST ELEVATION**
1/8" = 1'-0"



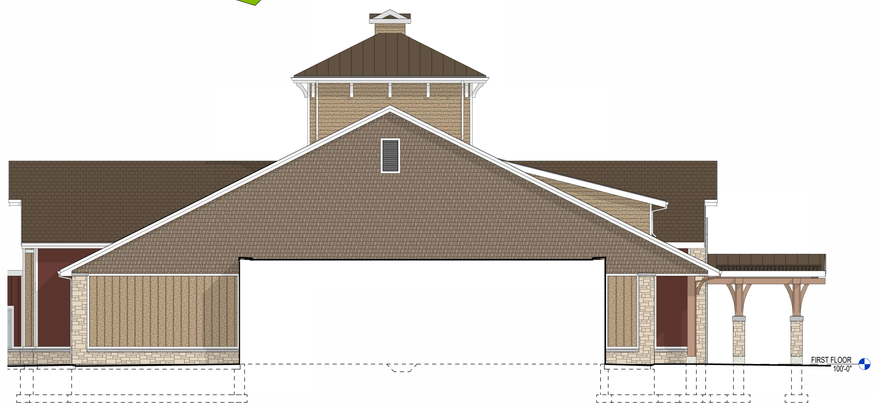
A2 **MEMORY CARE - SOUTHEAST ELEVATION**
1/8" = 1'-0"



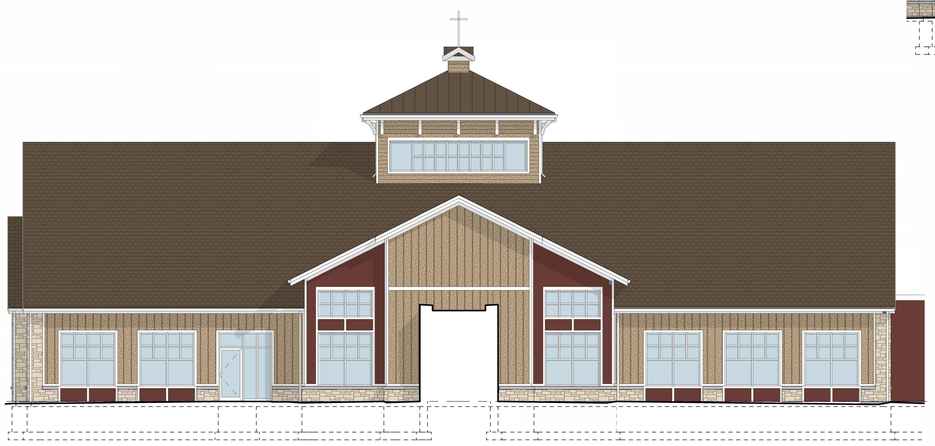
A3 **TOWN SQUARE - EAST ELEVATION RETURN TYP**
1/8" = 1'-0"



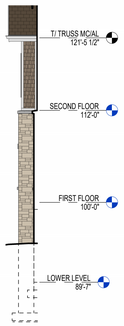
A4 **MEMORY CARE - SOUTH ELEVATION**
1/8" = 1'-0"



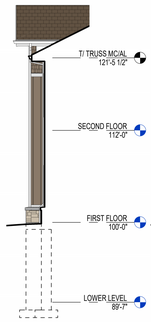
B1 **TOWN SQUARE - NORTH ELEVATION**
1/8" = 1'-0"



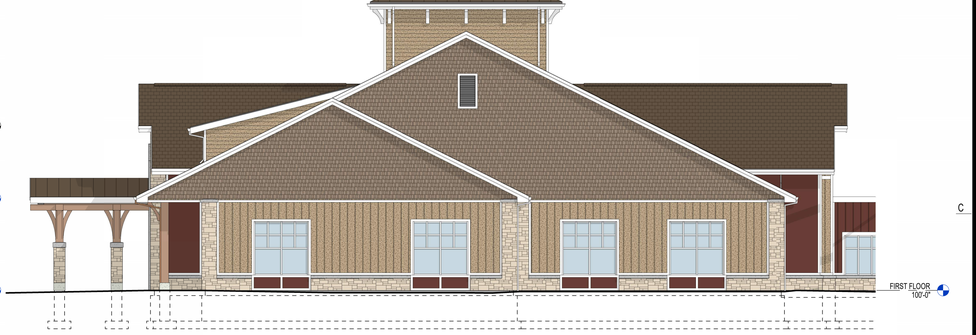
C1 **TOWN SQUARE - EAST ELEVATION**
1/8" = 1'-0"



C3 **MEMORY CARE - SOUTHWEST RETURN TYP**
1/8" = 1'-0"



C4 **MEMORY CARE - TYPICAL RETURN**
1/8" = 1'-0"



C5 **TOWN SQUARE - SOUTH ELEVATION**
1/8" = 1'-0"



E1 **MEMORY CARE - WEST ELEVATION**
1/8" = 1'-0"

EXTERIOR FINISH PATTERNS

- SHINGLES
- STONE
- SIDING (COUNTRYLANE RED)
- SIDING (MANSION TAN)
- SHAKE (KHAKI BROWN)
- STANDING SEAM METAL ROOF
- BOARD AND BATTEN (COUNTRYLANE RED)
- BOARD AND BATTEN (MANSION TAN)
- BOARD AND BATTERN (KHAKI BROWN)
- FLAT PANEL (COUNTRYLANE RED)

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THREE LEAF PARTNERS
HARTLAND SENIOR
CAMPUS DRIVE, HARTLAND, WISCONSIN

REVISIONS:

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JOB NO: 240063-01
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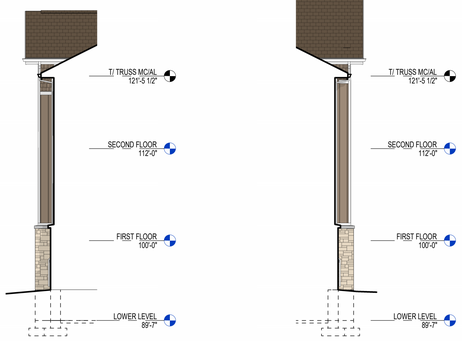
EXTERIOR ELEVATIONS

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B1 **NORTHEAST ELEVATION**
1/8" = 1'-0"



C4 **MEMORY CARE - NORTHEAST ELEVATION RETURN TYP**
1/8" = 1'-0"

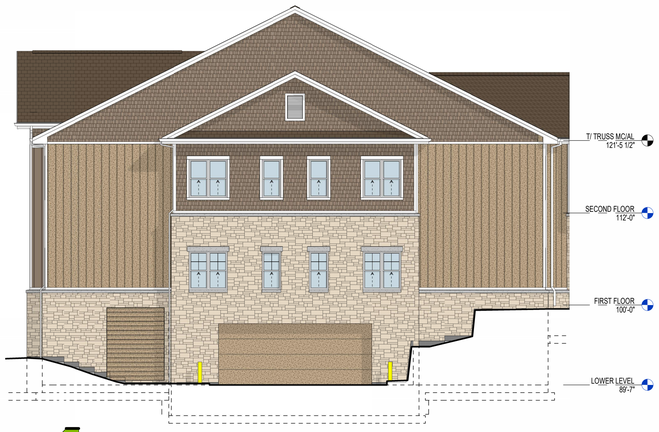
C5 **MEMORY CARE - SUNROOM RETURN TYP**
1/8" = 1'-0"

EXTERIOR FINISH PATTERNS

- SHINGLES
- STONE
- SIDING (COUNTRYLANE RED)
- SIDING (MANSION TAN)
- SHAKE (KHAKI BROWN)
- STANDING SEAM METAL ROOF
- BOARD AND BATTEN (COUNTRYLANE RED)
- BOARD AND BATTEN (MANSION TAN)
- BOARD AND BATTERN (KHAKI BROWN)
- FLAT PANEL (COUNTRYLANE RED)



E1 **EAST ELEVATION**
1/8" = 1'-0"



E4 **MEMORY CARE - NORTHWEST ELEVATION**
1/8" = 1'-0"

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220 industrial boulevard, suite 101, austin, texas 78745 t 512.851.1900
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THREE LEAF PARTNERS
HARTLAND SENIOR

CAMPUS DRIVE, HARTLAND, WISCONSIN

REVISIONS:

EXTERIOR ELEVATIONS

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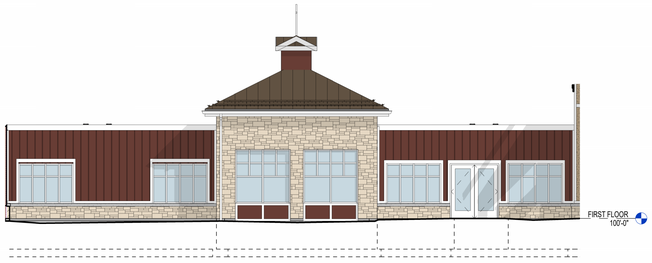
DATE: 04/14/2025

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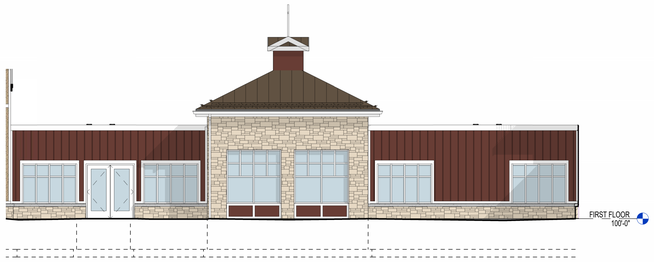
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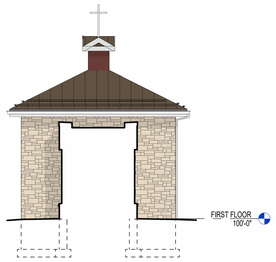
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A1 **COURTYARD - NORTH CONNECTOR ELEVATION**
1/8" = 1'-0"



B1 **COURTYARD - SOUTH CONNECTOR ELEVATION**
1/8" = 1'-0"



B2 **COURTYARD - CONNECTOR RETURN TYP.**
1/8" = 1'-0"



B4 **SOUTHWEST ELEVATION**
1/8" = 1'-0"

EXTERIOR FINISH PATTERNS

- SHINGLES
- STONE
- SIDING (COUNTRYLANE RED)
- SIDING (MANSION TAN)
- SHAKE (KHAKI BROWN)
- STANDING SEAM METAL ROOF
- BOARD AND BATTEN (COUNTRYLANE RED)
- BOARD AND BATTEN (MANSION TAN)
- BOARD AND BATTERN (KHAKI BROWN)
- FLAT PANEL (COUNTRYLANE RED)



E1 **SOUTHEAST ELEVATION**
1/8" = 1'-0"

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THREE LEAF PARTNERS
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CAMPUS DRIVE, HARTLAND, WISCONSIN

REVISIONS:

EXTERIOR ELEVATIONS

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VIEW FROM CAMPUS DRIVE

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