

# WINDFIELD PARK

## CITY OF WAUKEE, IOWA

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[ landscape architects ]

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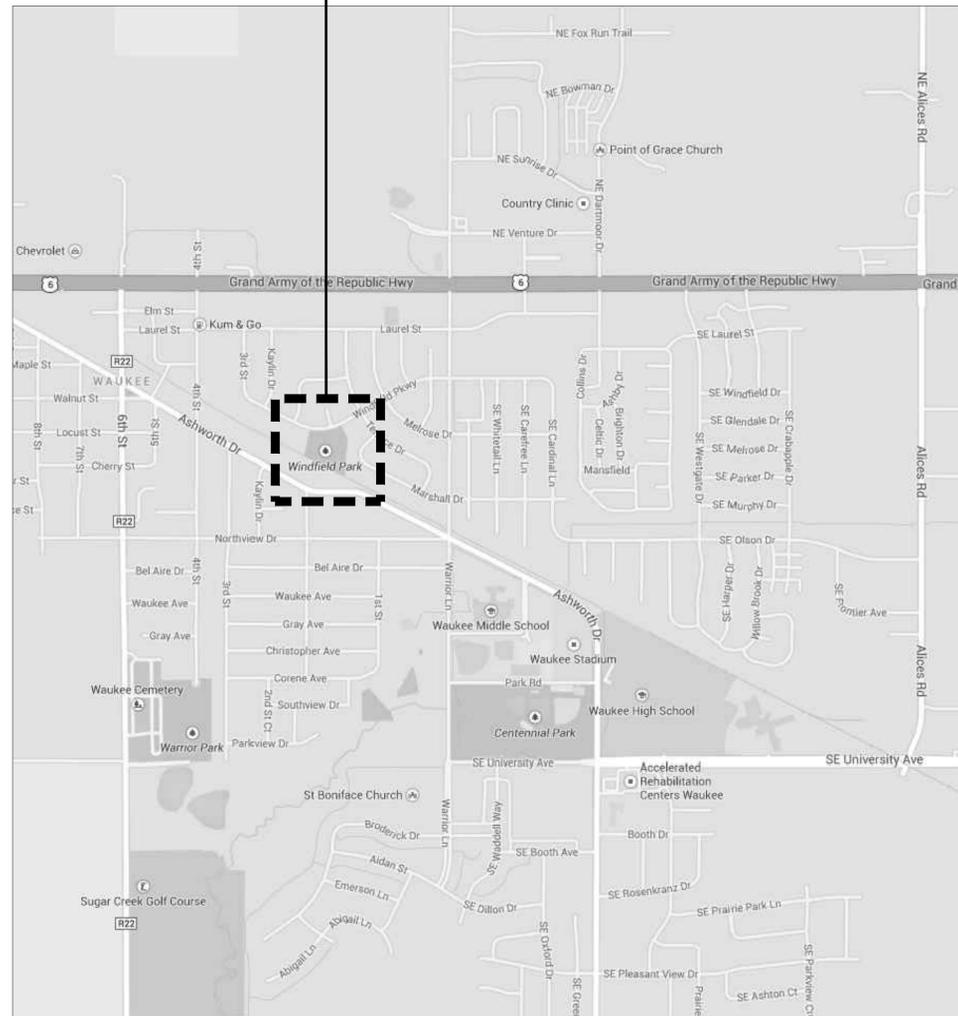
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### GENERAL NOTES

- THE CONTRACTOR SHALL VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF UTILITIES AND PROTECT ALL UTILITIES AND STRUCTURES. THE CONTRACTOR SHALL BEAR THE COST OF ALL PRIVATE LOCATES ON PRIVATE PROPERTY. THE CONTRACTOR SHALL NOTIFY OWNER/CITY OF WAUKEE, LANDSCAPE ARCHITECT, AND "IOWA ONE CALL" ONE (1) WEEK PRIOR TO COMMENCING EXCAVATION, GRADING OR CONSTRUCTION OPERATIONS. THE CONTRACTOR SHALL NOTIFY THE PROPER UTILITY IMMEDIATELY UPON DAMAGE TO ANY UTILITY LINE OR APPURTENANCE OR THE INTERRUPTION OF THEIR SERVICE. DAMAGE TO UTILITIES AND STRUCTURES (CURBS, PAVEMENT, ETC.) SHALL BE REPAIRED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE OWNER.
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH STATE URBAN DESIGN AND SPECIFICATIONS (SUDAS) AND SUPPLEMENTAL SPECIFICATIONS, CURRENT AT THE COMMENCEMENT OF CONSTRUCTION.
- ALL IMPROVEMENTS SHALL BE COMPLIANT WITH THE 2015 CITY OF WAUKEE STANDARD SPECIFICATIONS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF EROSION CONTROL MEASURES PER DRAWINGS AND SPECIFICATIONS. ALL WORK AND MATERIALS SHALL MEET OR EXCEED MINIMUM STANDARDS AS REQUIRED BY NPDES AND AS SHOWN ON SWPPP PLAN (GRADING AND RESTORATION PLANS). MAINTENANCE OF EROSION CONTROL MEASURES SHALL CONTINUE UNTIL ACCEPTANCE AND CLOSURE OF THE NPDES PERMIT.
- CONTRACTOR SHALL PROVIDE COMPETENT MEN AND TOOLS, STAKES AND OTHER MATERIALS AS REQUIRED TO ESTABLISH TEMPORARY OR PERMANENT REFERENCE MARKS IN CONNECTION WITH THE WORK AND CONTRACTOR SHALL PERFORM SUCH DETAILED MEASUREMENTS AND TRANSFER ELEVATIONS AS REQUIRED TO PROPERLY LAY OUT AND CONSTRUCT WORK. ALL STAKING SHALL BE DONE IN COORDINATION WITH THE OWNER AND LANDSCAPE ARCHITECT PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- ALL DEBRIS SPILLED ON THE PUBLIC RIGHTS-OF-WAY OR ADJOINING PROPERTY SHALL BE REMOVED BY CONTRACTOR IN A TIMELY FASHION. NO STORAGE OF MATERIALS SHALL BE ALLOWED IN PUBLIC RIGHT-OF-WAY.
- CONTRACTOR SHALL PROVIDE ACCESS AND PARKING ON-SITE FOR ALL CONSTRUCTION EQUIPMENT AND VEHICLES AS SHOWN ON PLANS.
- NO CONSTRUCTION TRAILERS OR TEMPORARY PROJECT SIGNS SHALL BE ALLOWED WITHOUT PRIOR APPROVAL FROM THE OWNER.
- THE CONTRACTOR IS RESPONSIBLE FOR REMOVAL & DISPOSAL OF ANY DELETERIOUS AND EXCESS MATERIAL FROM THE SITE. ON-SITE DISPOSAL OF TREES, BRUSH OR OTHER DEBRIS SHALL NOT BE ALLOWED.
- ALL WORK SHALL BE DONE IN COMPLIANCE WITH CURRENT OSHA CODES AND STANDARDS. NOTHING INDICATED ON THESE PLANS SHALL RELIEVE THE CONTRACTOR FROM COMPLYING WITH ALL NECESSARY SAFETY REGULATIONS.
- THE MEANS AND METHODS OF THE WORK AND THE SAFETY OF THE CONTRACTOR'S EMPLOYEES ARE SOLELY THE RESPONSIBILITY OF THE CONTRACTOR.
- NO WORK SHALL BE PERFORMED BEYOND THE PROJECT LIMITS WITHOUT PRIOR AUTHORIZATION OF THE OWNER'S REPRESENTATIVE.
- REPLACE ANY PROPERTY MONUMENTS REMOVED OR DESTROYED BY CONSTRUCTION. MONUMENTS SHALL BE SET BY A LAND SURVEYOR REGISTERED TO PRACTICE IN THE STATE OF IOWA.
- MAINTAIN POSITIVE DRAINAGE ON THE SITE THROUGHOUT THE PROJECT DURATION.
- RECONNECT ANY FIELD TILE THAT ARE INTERCEPTED DURING CONSTRUCTION.
- REMOVE SURFACING AS REQUIRED FOR CONSTRUCTION AND REPLACE TO ORIGINAL CONDITION. ALL GRASSED AREAS DISTURBED SHALL BE RE-SEEDDED. ALL PAVEMENT SURFACES DISTURBED SHALL BE RE-PAVED.
- ALL STRUCTURES AND APPURTENANCES SHALL BE ADJUSTED TO GRADE AS NECESSARY. SITE SHALL BE GRADED TO AVOID SITUATION OF THESE APPURTENANCES WITHIN DRAINAGE COURSE OR LOW SPOT.
- ALL UTILITY AND PAVING WORK IN R.O.W. SHALL BE COMPLETED IN ONE 48 HOUR PERIOD.
- SITE CLEAN UP SHALL BE PERFORMED ON A DAILY BASIS. SIDEWALKS, PARKING LOTS, ROADWAYS, ETC. SHALL BE KEPT CLEAN AT ALL TIMES.
- ALL OPEN EXCAVATIONS SHALL BE PROTECTED.
- ANY WORK REQUIRED TO COMPLETE THE SCOPE OF THIS PROJECT BUT NOT SPECIFICALLY CALLED OUT, SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT. NO ADDITIONAL COMPENSATION SHALL BE ALLOWED FOR THE COMPLETION OF THIS WORK.
- WORK WHICH DOES NOT CONFORM TO THE REQUIREMENTS OF THE CONTRACT WILL BE CONSIDERED UNACCEPTABLE. UNACCEPTABLE WORK, WHETHER THE RESULT OF POOR WORKMANSHIP, USE OF DEFECTIVE MATERIALS, DAMAGE THROUGH CARELESSNESS OR ANY OTHER CAUSE, FOUND TO EXIST PRIOR TO THE FINAL ACCEPTANCE OF THE WORK, SHALL BE REMOVED AND REPLACED IN AN ACCEPTABLE MANNER, AS REQUIRED BY GENUS LANDSCAPE ARCHITECTS AT THE CONTRACTORS EXPENSE. WORK DONE CONTRARY TO THE CONTRACT, WORK DONE BEYOND THE LINES SHOWN ON THE PLANS OR ANY EXTRA WORK DONE WITHOUT AUTHORITY WILL NOT BE PAID FOR.
- NO CHANGES SHALL BE AUTHORIZED UNLESS THEY ARE SHOWN ON REVISED PLANS OR IN WRITTEN INSTRUCTIONS OF PROJECT LANDSCAPE ARCHITECT. THE CONTRACTOR WILL NOT BE PAID FOR UNAUTHORIZED CHANGES.
- THE CONTRACTOR SHALL EXERCISE CAUTION AROUND ALL TREES DESIGNATED TO REMAIN, UNDER NO CIRCUMSTANCES, SHALL THE CONTRACTOR PARK OR TRAVEL WITH ANY VEHICLE OR EQUIPMENT UNDER THE DRIP LINE OF ANY TREE TO BE SAVED.
- CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS FOR WORK TO BE PERFORMED FOR THE PROJECT AND IS RESPONSIBLE FOR COMPLYING WITH THE REQUIREMENTS SET FORTH WITHIN THE PERMITS. ALL WORK SHALL COMPLY WITH CURRENT STATE AND LOCAL CODES. INSPECTION SCHEDULING SHALL BE THE CONTRACTOR'S RESPONSIBILITY. THE CONTRACTOR IS RESPONSIBLE FOR APPLYING FOR THE GENERAL PERMIT #2, STORM WATER DISCHARGE ASSOCIATED WITH INDUSTRIAL ACTIVITY FOR CONSTRUCTION ACTIVITIES INCLUDING FEES AND ASSOCIATED PUBLIC NOTICES. CONTRACTOR SHALL BE PROVIDED THE INITIAL STORM WATER POLLUTION PREVENTION PLAN (SWPPP) AND SHALL BE RESPONSIBLE FOR ADMINISTERING THE PERMIT DURING CONSTRUCTION, INSPECTIONS, AND APPLYING FOR THE NOTICE OF DISCONTINUATION ONCE THE SITE HAS BEEN STABILIZED. THE CONTRACTOR WILL ALSO BE RESPONSIBLE FOR APPLYING FOR A BUILDING PERMIT, INCLUDING ANY ASSOCIATED FEES.
- UTILITY WARNING: THE UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND/OR RECORDS OBTAINED. THE SURVEYOR MAKES NO GUARANTEE THAT THE UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEY FURTHER DOES NOT WARRANT THAT THE UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED.
- CONTRACTOR SHALL REVIEW CONTRACT REQUIREMENTS AND PROCEDURES OUTLINED IN THE SPECIFICATIONS. THE WORK OUTLINED IN THE DRAWINGS AND SPECIFICATIONS SHALL BE INCORPORATED INTO THE GENERAL CONTRACT. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MATERIALS, METHODS, AND MEANS REQUIRED TO EXECUTE THE GENERAL CONTRACT AND PROVIDE A FINISHED PRODUCT.
- ALL GENERAL NOTES APPLY TO ALL SHEETS IN THIS SET.
- SURVEY PROVIDED BY BISHOP ENGINEERING, 3501 104TH STREET, URBANDALE, IA 50322, PH: 515-276-0467.

WINDFIELD PARK  
114 Windfield Parkway  
Waukee, IA 50263



**1 LOCATION MAP**  
SCALE: NTS



### SHEET INDEX

CV1.0	COVER SHEET
C1.0	UTILITY PLAN
C1.1	UTILITY DETAILS
L1.0	SWPPP NOTES
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L3.0	GRADING PLAN
L3.1	PLAY AREA PLAN GRADING ENLARGEMENT
L4.0	PLANTING PLAN
L5.0	RESTORATION PLAN
L6.0	SITE DETAILS
L6.1	SITE DETAILS

A001	GENERAL INFORMATION
A101	FLOOR PLAN
A102	ROOF PLAN
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A311	WALL SECTIONS
A501	DETAILS
A700	SPECIFICATIONS
A701	SPECIFICATIONS
A702	SPECIFICATIONS
ME101	MECHANICAL / ELECTRICAL PLAN



I HEREBY CERTIFY THAT THIS DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF IOWA.

BRETT A. DOUGLAS DATE  
LICENSE NO. 00399  
MY LICENSE RENEWAL DATE IS: JUNE 30, 2015.  
CV1.0 THRU L6.1 COVERED BY THIS SEAL



I HEREBY CERTIFY THAT THIS ENGINEERING DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF IOWA.

STEPHEN C. MOSELEY, P.E. IOWA LICENSE NO. 17308 DATE  
MY LICENSE RENEWAL DATE IS: DECEMBER 31, 2015  
PAGES OR SHEETS COVERED BY THIS SEAL:  
C1.0, C1.1, L1.0



I hereby certify that this portion of the technical submission described below was prepared by me or under my direct supervision and responsible charge. I am a duly Registered Architect under the laws of the State of Iowa.

ANDREW P. LORENTZEN 6680  
Printed or Typed Name  
Signature: June 30, 2015 Date: 12/15/2014  
Registration expires Date issued  
Pages or sheets covered by this seal:  
A001 - A702



I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.

DOUGLAS A. CURRIE LIC. NO. 9198 DATE  
My license renewal date is December 31, 2014.  
Pages or sheets covered by this seal: ME101

TITLE & LOGO

WINDFIELD PARK SITE  
IMPROVEMENT PROJECT

KEY MAP

99% COMPLETE  
NOT FOR CONSTRUCTION

NO. DATE REVISION

PRINCIPAL IN CHARGE PROJECT MANAGER

BD AP

PROJECT TEAM MEMBERS

CHECK

SEAL / STAMP

TITLE  
COVER SHEET

PROJECT NO.  
14005

DATE  
12-10-14

PROJECT NETWORK PATH

SHEET NUMBER

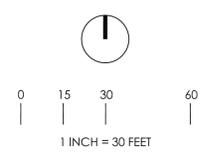
CV1.0

**LEGEND**

- PROPERTY LINE
- LIMIT OF CONSTRUCTION
- ST--- EXISTING STORM SEWER LINE
- SAN--- EXISTING SANITARY SEWER LINE
- W--- EXISTING WATER LINE
- G--- EXISTING GAS LINE
- EXISTING FENCE
- EXISTING DECIDUOUS TREE
- EXISTING EVERGREEN TREE
- SAN--- PROPOSED SANITARY LINE
- W--- PROPOSED WATER LINE

**CONSTRUCTION NOTES**

- ① CONNECT TO EXISTING WATER SERVICE. CONTRACTOR TO VERIFY LOCATION OF EXISTING WATER LINE PRIOR TO CONNECTION.
- ② WATER VALVE.
- ③ 200 LF OF 1" WATER LINE. MINIMUM 5.5' DEPTH.
- ④ CONNECT TO BUILDING WATER LINE. SEE MECHANICAL PLANS FOR CONTINUATION.
- ⑤ CONNECT TO EXISTING SANITARY SEWER LINE WITH SADDLE CONNECTION THAT HAS A WATER TIGHT PLUG INSTALLED DURING CONSTRUCTION. THE SERVICE WILL NEED TO BE CLEANED AND VIDEOED UPON COMPLETION WITH A COPY OF THE VIDEO PROVIDED TO THE WAUKEE ENGINEERING DEPARTMENT. INV=1019.83. SEE DETAIL ON SHEET C1.1.
- ⑥ CONNECT TO BUILDING SANITARY SEWER LINE. SEE MECHANICAL PLANS FOR CONTINUATION.
- ⑦ 106 LF OF 4" SANITARY SEWER LINE. DIRECTIONAL BORE UNDER WINDFIELD PARKWAY AT 7.52% SLOPE.
- ⑧ SANITARY CLEANOUT. INV=1027.80.
- ⑨ ELECTRICAL LINE ROUTING BY OTHERS.
- ⑩ SUBDRAIN. SEE SHEET L3.1 FOR ADDITIONAL INFORMATION.
- ⑪ CORE DRILL EXISTING STRUCTURE FOR SUBDRAIN AND ROOF DRAIN CONNECTION.
- ⑫ ROOF DRAIN. SEE SHEET L3.1 FOR ADDITIONAL INFORMATION.



**IOWA ONE CALL**  
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TITLE & LOGO

WINDFIELD PARK SITE  
IMPROVEMENT PROJECT

KEY MAP

PRELIMINARY  
NOT FOR CONSTRUCTION

NO. DATE REVISION

PRINCIPAL IN CHARGE PROJECT MANAGER  
SCM SCM  
PROJECT TEAM MEMBER(S)  
SCM,SDB  
CHECK

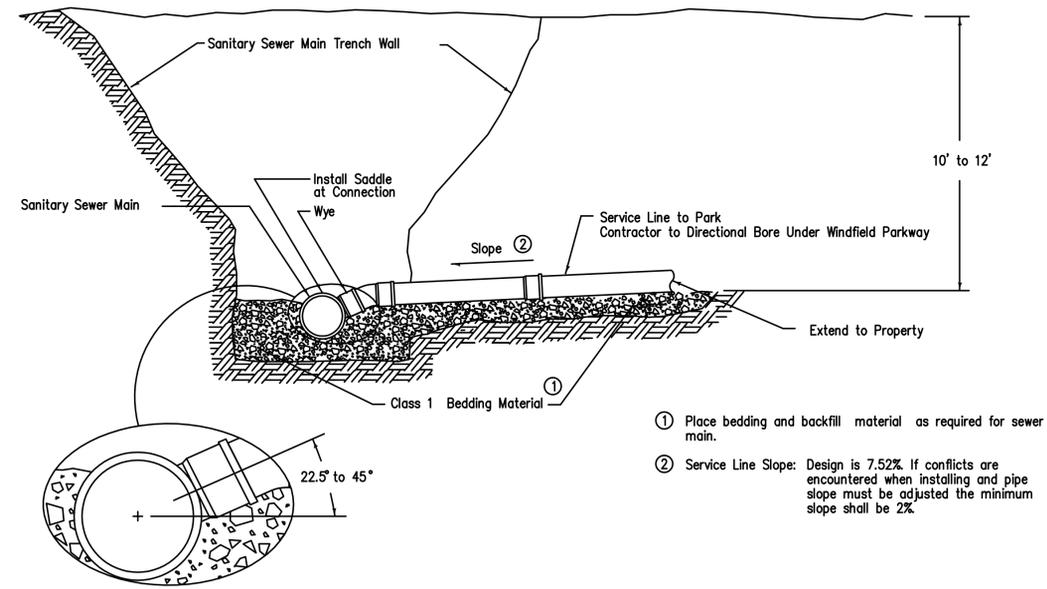
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TITLE  
DETAIL SHEET

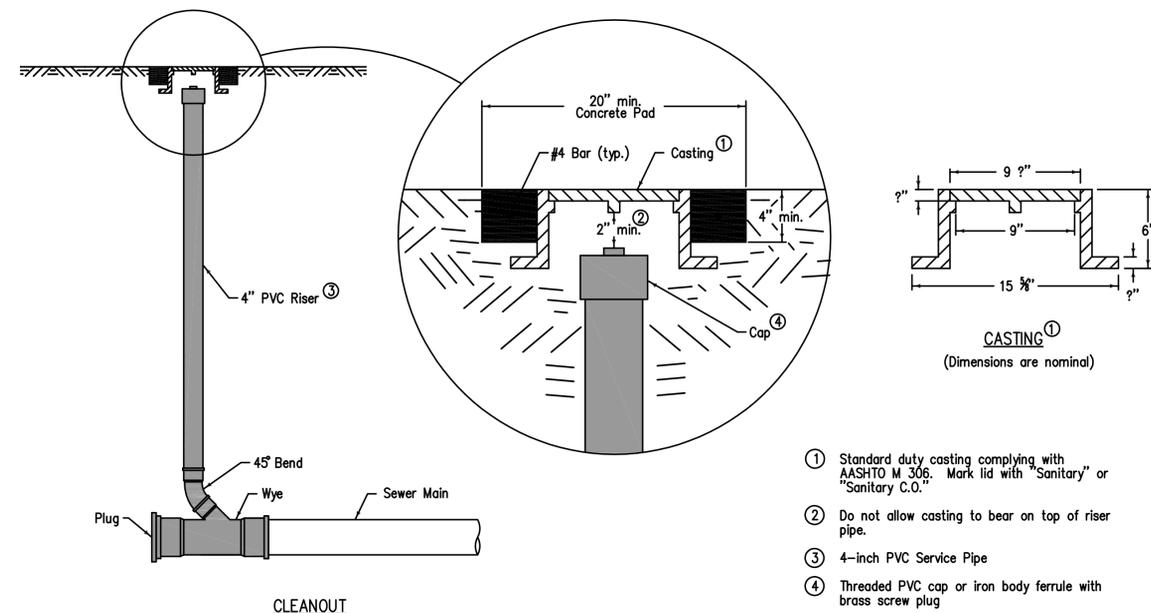
PROJECT NO.  
14005  
DATE  
12-05-14  
PROJECT NETWORK PATH

SHEET NUMBER

C1.1



SW-201  
SANITARY SEWER SERVICE STUB



SW-203  
SANITARY SEWER CLEANOUT

## POLLUTION PREVENTION NOTES

### A. EROSION PROTECTION

1. CODE COMPLIANCE: THE CONTRACTOR IS RESPONSIBLE FOR COMPLIANCE WITH ALL POTENTIAL POLLUTION AND SOIL EROSION CONTROL REQUIREMENTS OF THE IOWA CODE, THE IOWA DEPARTMENT OF NATURAL RESOURCES (IDNR) NPDES PERMIT, THE U.S. CLEAN WATER ACT AND ANY LOCAL ORDINANCES. THE CONTRACTOR SHALL TAKE ALL NECESSARY STEPS TO PROTECT AGAINST EROSION AND POLLUTION FROM THIS PROJECT SITE AND ALL OFF-SITE BORROW OR DEPOSIT AREAS DURING PERFORMANCE OR AS A RESULT OF PERFORMANCE.
2. DAMAGE CLAIMS: THE CONTRACTOR WILL HOLD THE OWNER, ARCHITECT AND ENGINEER HARMLESS FROM ANY AND ALL CLAIMS OF ANY TYPE RESULTING FROM DAMAGES TO ADJOINING PUBLIC OR PRIVATE PROPERTY, INCLUDING REASONABLE ATTORNEY FEES INCURRED TO OWNER. FURTHER, IF THE CONTRACTOR FAILS TO TAKE NECESSARY STEPS TO PROMPTLY REMOVE EARTH SEDIMENTATION OR DEBRIS WHICH COMES ONTO ADJOINING PUBLIC OR PRIVATE PROPERTY, THE OWNER MAY, BUT NEED NOT, REMOVE SUCH ITEMS AND DEDUCT THE COST THEREOF FROM AMOUNTS DUE TO THE CONTRACTOR.

### B. STORM WATER DISCHARGE PERMIT

1. THIS PROJECT REQUIRES COVERAGE UNDER THE NPDES GENERAL PERMIT NO. 2 FOR STORM WATER DISCHARGE ASSOCIATED WITH INDUSTRIAL ACTIVITY FOR CONSTRUCTION ACTIVITIES FROM THE IDNR, AS REQUIRED BY THE ENVIRONMENTAL PROTECTION AGENCY (EPA). THE GENERAL CONTRACTOR AND ALL SUBCONTRACTORS ARE RESPONSIBLE FOR COMPLIANCE WITH AND FULFILLMENT OF ALL REQUIREMENTS OF THE NPDES GENERAL PERMIT NO. 2 INCLUDING CREATING OR MAINTAINING THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) AND POSSIBLY OBTAINING THE GENERAL PERMIT COVERAGE FROM THE IDNR.
2. ALL DOCUMENTS RELATED TO THE STORM WATER DISCHARGE PERMIT, INCLUDING, BUT NOT LIMITED TO, THE NOTICE OF INTENT, PR "OOOF OF PUBLICATION, DISCHARGE AUTHORIZATION LETTER, CURRENT SWPPP, SITE INSPECTION DIARY, AND OTHER ITEMS, SHALL BE KEPT ON SITE AT ALL TIMES AND MUST BE PRESENTED TO ANY JURISDICTIONAL AGENCIES UPON REQUEST. FAILURE TO COMPLY WITH THE NPDES PERMIT REQUIREMENTS IS IN VIOLATION OF THE CLEAN WATER ACT AND THE CODE OF IOWA.
3. A "NOTICE OF DISCONTINUATION" MUST BE FILED WITH THE IOWA DNR UPON FINAL STABILIZATION OF THE DISTURBED SITE AND REMOVAL OF TEMPORARY EROSION CONTROL MEASURES. ALL PLANS, INSPECTION REPORTS, AND OTHER DOCUMENTS MUST BE RETAINED FOR A PERIOD OF THREE YEARS AFTER PROJECT COMPLETION. THE CONTRACTOR SHALL RETAIN A RECORD COPY AND PROVIDE THE ORIGINAL DOCUMENTS TO THE OWNER UPON PROJECT ACCEPTANCE AND/OR SUBMITTAL OF THE NOTICE OF DISCONTINUATION.

### C. POLLUTION PREVENTION PLAN:

1. THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) IS A SEPARATE DOCUMENT IN ADDITION TO THE SITE PLAN DRAWINGS. THE CONTRACTOR SHOULD REFER TO THE SWPPP FOR ADDITIONAL CONSTRUCTION REQUIREMENTS AND MODIFICATIONS TO THE POLLUTION PREVENTION PLAN MADE DURING CONSTRUCTION.
2. THE SWPPP ILLUSTRATES GENERAL MEASURES AND BEST MANAGEMENT PRACTICES (BMP) FOR COMPLIANCE WITH THE PROJECT'S NPDES PERMIT COVERAGE. ALL BMP'S AND EROSION CONTROL MEASURES REQUIRED AS A RESULT OF CONSTRUCTION ACTIVITIES ARE THE RESPONSIBILITY OF THE CONTRACTOR TO IDENTIFY, NOTE AND IMPLEMENT. ADDITIONAL BMP'S FROM THOSE SHOWN ON THE PLAN MAY BE REQUIRED.

### D. THE CONTRACTOR IS RESPONSIBLE FOR COMPLIANCE WITH ALL REQUIREMENTS OF THE GENERAL PERMIT AND SWPPP, INCLUDING, BUT NOT LIMITED TO, THE FOLLOWING BMP'S:

- A. INSTALL PERIMETER AND FINAL SEDIMENT CONTROL MEASURES SUCH AS SILT BARRIERS, DITCH CHECKS OR SEDIMENTATION BASINS DOWNSTREAM OF SOIL DISTURBING ACTIVITIES PRIOR TO SITE CLEARING AND GRADING OPERATIONS.
- B. PRESERVE EXISTING VEGETATION IN AREAS NOT NEEDED FOR CONSTRUCTION AND LIMIT TO A MINIMUM THE TOTAL AREA DISTURBED BY CONSTRUCTION OPERATIONS AT ANY TIME.
- C. MAINTAIN ALL TEMPORARY AND PERMANENT EROSION CONTROL MEASURES IN WORKING ORDER, INCLUDING CLEANING, REPAIRING, REPLACEMENT, AND SEDIMENT REMOVAL THROUGHOUT THE PERMIT PERIOD. CLEAN OR REPLACE SILT CONTROL DEVICES WHEN THE MEASURES HAVE LOST 50% OF THEIR ORIGINAL CAPACITY.
- D. INSPECT THE PROJECT AREA AND CONTROL DEVICES (BY QUALIFIED PERSONNEL ASSIGNED BY THE CONTRACTOR) EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS AFTER EACH RAIN EVENT OF 1/2 INCH OR GREATER OR HEAVY SNOW MELT. RECORD THE FINDINGS OF THESE INSPECTIONS AND ANY RESULTING ACTIONS IN THE SWPPP WITH A COPY SUBMITTED WEEKLY TO THE OWNER OR ENGINEER DURING CONSTRUCTION. REVISE THE SWPPP AND IMPLEMENT ANY RECOMMENDED MEASURES WITHIN 7 DAYS.
- E. PREVENT ACCUMULATION OF EARTH AND DEBRIS FROM CONSTRUCTION ACTIVITIES ON ADJOINING PUBLIC OR PRIVATE PROPERTIES, INCLUDING STREETS, DRIVEWAYS, SIDEWALKS, DRAINAGEWAYS, OR UNDERGROUND SEWERS. REMOVE ANY ACCUMULATION OF EARTH OR DEBRIS IMMEDIATELY AND TAKE REMEDIAL ACTIONS FOR FUTURE PREVENTION.
- F. PROVIDE NECESSARY CONTROL MEASURES SUCH AS SILT BARRIERS, EROSION CONTROL MATS, MULCH, DITCH CHECKS OR RIPRAP AS SOON AS AREAS REACH THEIR FINAL GRADES. PROVIDE INLET AND OUTLET CONTROL MEASURES AS SOON AS STORM SEWERS ARE INSTALLED. INSTALL AS NECESSARY AND AS CONSTRUCTION OPERATIONS PROGRESS TO ENSURE CONTINUOUS RUNOFF CONTROL.
- G. SEED AND MULCH UNDEVELOPED, DISTURBED AREAS WITH COMMERCIALY AVAILABLE TEMPORARY SEED MIX OR PERMANENT SEED MIX/SOD AS SOON AS PRACTICAL UPON COMPLETION OR DELAY OF GRADING OPERATIONS. INITIATE STABILIZATION MEASURES NO LATER THAN 14 CALENDAR DAYS AFTER CONSTRUCTION ACTIVITY HAS FINISHED OR IS PLANNED TO BE DELAYED MORE THAN 21 CALENDAR DAYS.
- H. COORDINATE LOCATIONS OF STAGING AREAS WITH THE OWNER AND SWPPP. UNLESS NOTED OTHERWISE IN THE SWPPP, STAGING AREAS SHOULD CONTAIN THE FOLLOWING: JOB TRAILERS, FUELING / VEHICLE MAINTENANCE AREA, TEMPORARY SANITARY FACILITIES, MATERIALS STORAGE, AND CONCRETE WASHOUT FACILITY. CONTROL RUNOFF FROM STAGING AREAS WITH DIVERSION BERMS AND/OR SILT BARRIERS AND DIRECT TO A SEDIMENT BASIN OR OTHER CONTROL DEVICE WHERE POSSIBLE. CONCRETE WASHOUT MUST BE CONTAINED ONSITE.
- I. REMOVE ALL TEMPORARY EROSION CONTROL MEASURES AND SITE WASTE PRIOR TO FILING OF THE "NOTICE OF DISCONTINUATION".

## EROSION AND SEDIMENT CONTROL BMPS

### EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES (BMP'S) SHALL INCLUDE THE FOLLOWING:

- **STABILIZED CONSTRUCTION ENTRANCE**
  - A STABILIZED CONSTRUCTION ENTRANCE SHALL BE USED AT SITE ENTRANCE AND EXIT LOCATIONS TO MINIMIZE SOIL AND SURFACE DEBRIS BEING TRACKED OFF-SITE. OFF-SITE TRACKING OF MATERIAL IS NOT ALLOWED. MATERIAL TRACKED OFF-SITE SHALL BE CLEANED UP BY THE CONTRACTOR ON THE SAME DAY.
- **SILT FENCE**
  - SILT FENCE SHALL BE INSTALLED WHERE NOTED ON PLANS AND AS NECESSARY TO PREVENT SEDIMENT FROM LEAVING THE SITE OR ENTERING STORM DRAINAGE SYSTEMS.
  - AT ALL AREAS WHERE RUNOFF CAN MOVE OFFSITE, SILT FENCE OR APPROVED EQUAL WILL BE INSTALLED ALONG THE PERIMETER OF THE PROJECT DOWNSTREAM OF SOIL DISTURBING ACTIVITIES AND STORM WATER DISCHARGE POINTS PRIOR TO SITE CLEARING AND GRADING OPERATIONS AS REQUIRED AND/OR SHOWN ON THE PLANS.
  - SILT FENCE, SEDIMENT TRAPS OR EQUIVALENT MEASURES FOR ALL SIDE SLOPES AND DOWNSLOPE BOUNDARIES OF THE DISTURBED AREA PROVIDED FOR DISTURBED AREAS OF 10 ACRES OR LESS.
  - SILT BARRIER ENCLOSURES WILL BE INSTALLED AROUND ALL AREA INTAKES AND FLARED END SECTION INLETS TO PROTECT STORM SEWERS FROM SEDIMENT IMMEDIATELY AFTER CONSTRUCTION OF INLET.
  - SILT FENCE, TEMPORARY SILT BASINS, EARTHEN DIKES AND DITCH CHECKS WILL BE INSTALLED ALONG CONCENTRATED DRAINAGEWAYS TO CONTROL FLOW VELOCITY AND ENCOURAGE SEDIMENT DEPOSITION.
- **DUST CONTROL**
  - THE GENERATION OF DUST FROM ON-SITE CONSTRUCTION ACTIVITIES SHALL NOT BE ALLOWED AND SHALL BE MINIMIZED BY THE USE OF DUST CONTROL METHODS.
  - MULCH OR SURFACE WATERING SHALL BE USED TO CONTROL WIND EROSION OF SUSCEPTIBLE SOILS DURING AND/OR IMMEDIATELY AFTER SITE GRADING OPERATIONS.

### OTHER CONTROLS

- STORM WATER DETENTION/RETENTION FACILITIES WILL RETAIN FLOWS AND ACT AS TEMPORARY SEDIMENT BASIN WITH THE INSTALLATION OF A TEMPORARY OUTLET RISER.
- STORM WATER DETENTION/RETENTION FACILITIES SHALL BE INSTALLED PRIOR TO UPSTREAM GRADING OPERATIONS AND STORM SEWER INSTALLATION.
- OTHER EROSION CONTROL MEASURES MAY BE NECESSARY ON EMBANKMENTS, STOCKPILES AND OTHER SITE AREAS TO CONTROL RUNOFF.

### OTHER WASTE MATERIAL CONTROLS

- **SANITARY WASTE**
  - PORTABLE RESTROOM FACILITIES MAY BE LOCATED ONSITE AT THE CONTRACTOR'S DISCRETION. WASTES WILL BE COLLECTED AND DISPOSED OF IN COMPLIANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS. PORTABLE RESTROOM FACILITIES SHALL BE LOCATED IN AREAS WHERE CONTACT WITH THE STORM WATER DISCHARGE IS MINIMAL.
- **HAZARDOUS WASTE**
  - HAZARDOUS WASTE MATERIALS WILL BE DISPOSED OF IN ACCORDANCE WITH APPLICABLE LOCAL, STATE, AND/OR FEDERAL REGULATIONS.
  - EQUIPMENT REFUELING AND MAINTENANCE OPERATIONS WILL BE CARRIED OUT IN SUCH A MANNER SO AS TO PREVENT SPILLS OR CONTAMINATION TO THE SOIL AND GROUNDWATER.
  - CARE WILL BE USED WHEN HANDLING POTENTIALLY HAZARDOUS MATERIALS TO PREVENT SPILLAGE OF ANY VOLUME.
- **WASTE MATERIALS**
  - DISPOSAL OF UNUSED CONSTRUCTION MATERIALS AND CONSTRUCTION MATERIAL WASTES SHALL COMPLY WITH APPLICABLE STATE AND LOCAL WASTE DISPOSAL, SANITARY SEWER, OR SEPTIC SYSTEM REGULATIONS. IN THE EVENT OF A CONFLICT WITH OTHER GOVERNMENTAL LAWS, RULES AND REGULATIONS, THE MORE RESTRICTIVE LAWS, RULES OR REGULATIONS SHALL APPLY.
  - MEASURES FOR CONTROLLING OTHER SOURCES OF POTENTIAL POLLUTION THAT MAY EXIST ON THE CONSTRUCTION SITE. DURING THE COURSE OF CONSTRUCTION, IT IS POSSIBLE THAT SITUATIONS MAY ARISE WHERE UNKNOWN MATERIALS WILL BE ENCOUNTERED. WHEN SUCH SITUATIONS OCCUR, THEY WILL BE HANDLED ACCORDING TO ALL APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS IN EFFECT AT THE TIME.

## MAINTENANCE OF CONTROLS AND WASTE MATERIALS

### MAINTENANCE PROCEDURES:

CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ALL ASPECTS OF THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) BY QUALIFIED PERSONNEL EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS AFTER EACH RAIN EVENT OF 1/2" OR GREATER. THIS INCLUDES HEAVY SNOW MELT. INSPECTION INFORMATION AND ACTIONS TAKEN TO CORRECT DEFICIENCIES SHALL BE RECORDED IN A PROJECT DIARY WITH INFORMATION COPIED TO THE OWNER OR OWNER'S REPRESENTATIVE. THE SWPPP SHALL BE REVISED AS CONSTRUCTION PROGRESSES TO REFLECT CURRENT SITE CONDITIONS AND WITH EVERY CHANGE TO SITE CONTROLS.

### TEMPORARY CONTROLS:

MAINTAIN ALL TEMPORARY AND PERMANENT EROSION AND SEDIMENT CONTROLS IN GOOD WORKING ORDER WITH ADEQUATE CAPACITY BY CLEANING, REPAIRING, REPLACING, OR BY REMOVING SEDIMENT THROUGH PERMIT PERIOD.

- BUILT UP SEDIMENT WILL BE REMOVED FROM SILT BARRIER OR THE SILT BARRIER REPLACED WHEN IT HAS REACHED 1/2 THE HEIGHT OF THE BARRIER.
- BUILT UP SEDIMENT WILL BE REMOVED FROM SEDIMENT BASINS WHEN IT REACHES 25% OF THE DESIGN CAPACITY OR AT THE END OF THE PROJECT.
- ACCUMULATION OF EARTH, SILT OR DEBRIS ON ADJOINING PROPERTIES OR STREETS WILL BE MINIMIZED. REMOVE ANY ACCUMULATION OF EARTH, SILT OR DEBRIS IMMEDIATELY AND TAKE REMEDIAL ACTIONS FOR PREVENTION.

### WASTE MATERIALS:

#### CONCRETE WASTES

- CONCRETE TRUCKS WILL BE ALLOWED TO WASHOUT OR DISCHARGE EXCESS CONCRETE ONLY IN SPECIFICALLY DESIGNATED AREAS WHICH HAVE BEEN PREPARED TO MINIMIZE CONTACT BETWEEN THE CONCRETE AND STORM WATER DISCHARGE FROM THE SITE.
- THE HARDENED PRODUCT FROM THE CONCRETE WASHOUT AREAS WILL BE DISPOSED OF AS OTHER NON-HAZARDOUS WASTE MATERIALS OR MAY BE BROKEN UP AND USED ON THE SITE FOR OTHER APPROPRIATE USES.

#### SOLID AND CONSTRUCTION WASTES

- ALL TRASH AND CONSTRUCTION DEBRIS SHALL BE DEPOSITED INTO A DUMPSTER THAT WILL BE EMPTIED AS NECESSARY. THIS INCLUDES WIND CARRIED DEBRIS. NO CONSTRUCTION WASTE MATERIALS WILL BE BURIED ON SITE. THE DUMPSTERS MUST BE PUT IN A LOCATION WHERE THE CONTACT WITH STORM WATER DISCHARGE IS MINIMIZED.

### FINAL STABILIZATION

- FINAL STABILIZATION SHALL TAKE PLACE IN AREAS WHERE CONSTRUCTION ACTIVITY HAS PERMANENTLY ENDED. THIS SHALL BE DONE WITHIN 14 DAYS OF CEASING CONSTRUCTION ACTIVITIES IN THAT AREA BY AT LEAST ONE OF THE FOLLOWING PERMANENT EROSION CONTROL MEASURES.
- SODDING OR PERMANENT SEEDING WITH MULCH IN ALL UNPAVED AREAS WHERE FINAL GRADING IS COMPLETE.
- PERMANENTLY SEED ANY DRAINAGE SWALES AND INSTALL EROSION CONTROL MATTING WHERE NECESSARY IMMEDIATELY AFTER FINAL GRADING PROCEDURES TO DECREASE EROSION AND FACILITATE SEDIMENT DEPOSITION IN SURFACE RUNOFF.

#### OWNER

City of Waukee, IA  
230 West Hickman Road  
Waukee, IA 50263  
P 515-978-7900 F 515-987-1845

#### ARCHITECT

Walker Coen Lorentzen Architects, Inc.  
3706 Ingersoll Avenue  
Des Moines, IA 50309  
P 515-279-8818

#### CIVIL ENGINEER

Raker Rhodes Engineering  
4717 Grand Avenue  
Des Moines, IA 50312  
P 515-277-0275

TITLE & LOGO

WINDFIELD PARK SITE  
IMPROVEMENT PROJECT

KEY MAP

PRELIMINARY  
NOT FOR CONSTRUCTION

NO. DATE REVISION

PRINCIPAL IN CHARGE PROJECT MANAGER

SCM SCM

PROJECT TEAM MEMBER(S)

SCM,SDB

CHECK

SEAL / STAMP

TITLE

SWPPP NOTES

PROJECT NO.

14005

DATE

12-05-14

PROJECT NETWORK PATH

SHEET NUMBER

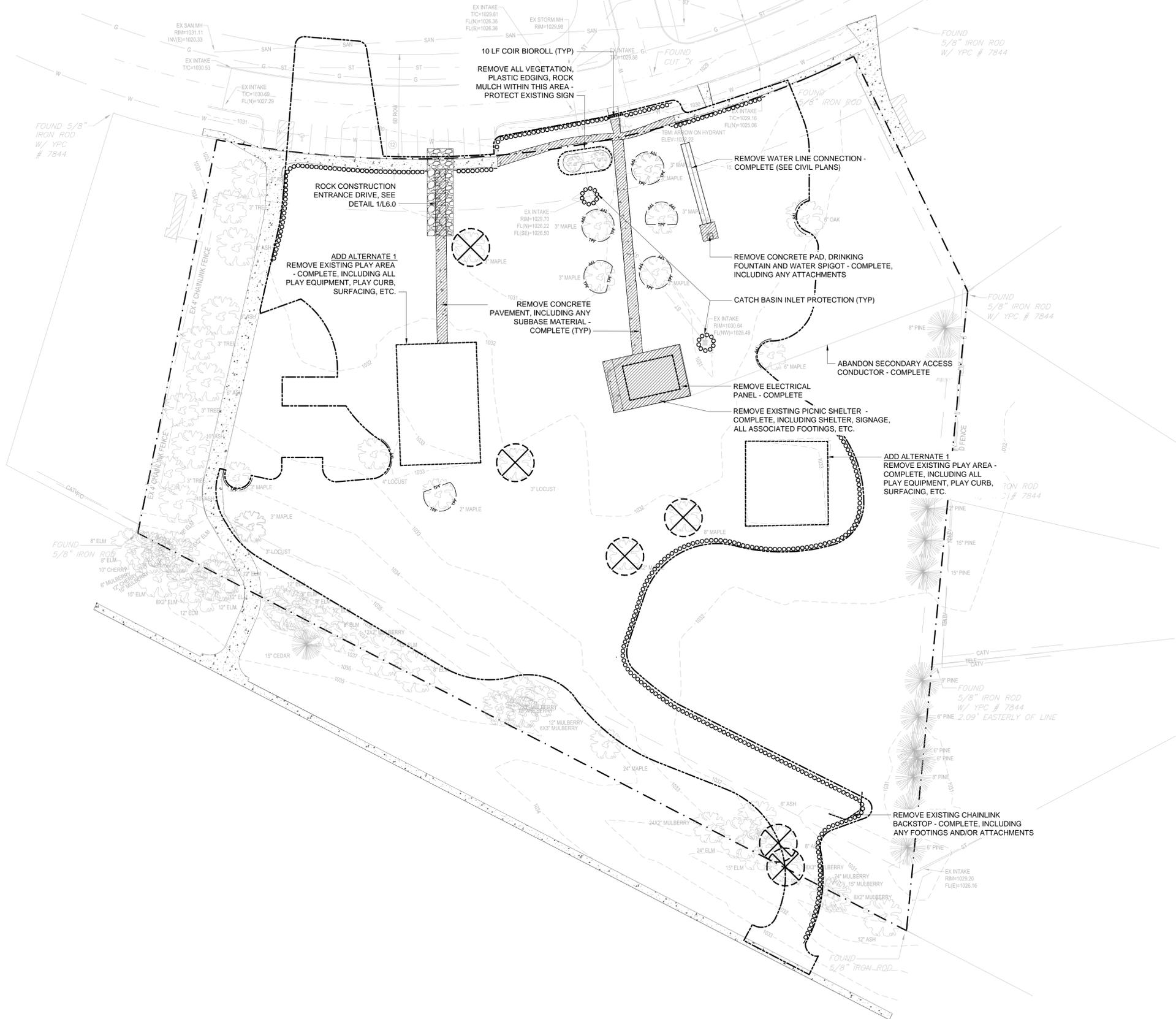
L1.0



1-800-292-8989  
www.iowaonecall.com



TOTAL AREA DISTURBED: 2.16 ACRES



**LEGEND**

- PROPERTY LINE
- LIMIT OF CONSTRUCTION
- ST--- EXISTING STORM SEWER LINE
- SAN--- EXISTING SANITARY SEWER LINE
- W--- EXISTING WATER LINE
- G--- EXISTING GAS LINE
- EXISTING FENCE
- 995 EXISTING CONTOUR
- (Tree Symbol) EXISTING DECIDUOUS TREE
- (Tree Symbol) EXISTING EVERGREEN TREE
- (Fencing Symbol) TREE PROTECTION FENCING
- (Silt Fence Symbol) EROSION CONTROL SILT FENCE
- (Square Symbol) ITEM TO BE REMOVED
- (Hatched Square Symbol) CONCRETE PAVEMENT TO BE REMOVED
- (Circle with X Symbol) TREE TO BE REMOVED

**CONSTRUCTION NOTES**

- 1 SAWCUT PAVEMENT FULL DEPTH. REMOVE AND RECONSTRUCT PAVEMENT. COORDINATE LOCATION WITH LAYOUT PLAN. PROTECT REMAINING CURB LENGTH. LEGALLY DISPOSE OF DEBRIS.
- 2 PROTECT EXISTING TREES PER SPECIFICATIONS AND DETAIL 3/L6.0. NO GRADING, MACHINERY, OR MATERIAL STORAGE TO OCCUR WITHIN DRIPLINE OF TREE.
- 3 EXISTING WALKWAY TO REMAIN ON THE WEST SIDE OF THE PARK MAY NOT BE USED FOR CONSTRUCTION ACCESS AND MUST BE PROTECTED THROUGHOUT CONSTRUCTION. THE CONTRACTOR WILL BE RESPONSIBLE FOR REMOVING AND REPLACING ANY DAMAGED PANELS DUE TO CONSTRUCTION ACTIVITIES AT THE CONTRACTOR'S EXPENSE.
- 4 REMOVE AND GRIND OUT STUMP OF ALL TREES TO BE REMOVED & LEGALLY DISPOSE OF ALL DEBRIS.
- 5 EXISTING INTAKES TO REMAIN. ADD FILTER SOCK FOR INLET PROTECTION.

**DEMOLITION NOTES**

1. PROTECT ALL EXISTING FEATURES NOT DESIGNATED FOR REMOVAL.
2. ALL DEMOLISHED AND/OR REMOVED ITEMS SHALL BE HAULED COMPLETELY AWAY FROM THE SITE BY THE CONTRACTOR.
3. CONTRACTOR SHALL PROTECT EXISTING OVERHEAD AND UNDERGROUND UTILITIES. ANY DAMAGE TO SUCH SHALL BE REPAIRED BY THE CONTRACTOR AT NO EXPENSE TO THE OWNER.
4. THE CONSTRUCTION DOCUMENTS WERE PREPARED USING THE MOST ACCURATE INFORMATION AVAILABLE. IF THE CONTRACTOR DETERMINES THAT FIELD CONDITIONS DIFFER, HE SHALL CEASE CONSTRUCTION ACTIVITIES AND IMMEDIATELY CONTACT THE LANDSCAPE ARCHITECT FOR DECISION.
5. ALL STUMPS OF REMOVED TREES SHALL BE GROUND OFF TO 12 INCHES BENEATH EXISTING/PROPOSED GRADE.
6. ALL VOIDS REMAINING AFTER THE REMOVAL OF STRUCTURES AND TREE STUMPS SHALL BE FILLED AND RECOMPACTED AS PER SPECIFICATIONS.
7. ALL AREAS WHERE NEW PAVEMENT JOINS EXISTING SHALL BE SAW CUT TO PROVIDE A UNIFORM EDGE.
8. CONTRACTOR SHALL BE RESPONSIBLE FOR THE DISCONNECTION OF UTILITIES IN ACCORDANCE WITH CODE REQUIREMENTS PRIOR TO DEMOLITION.
9. TREE PROTECTIVE FENCING SHALL BE REQUIRED AS SHOWN ON THE CONSTRUCTION DOCUMENTS AND AS DIRECTED BY THE LANDSCAPE ARCHITECT. THE CONTRACTOR SHALL LOCATE THE FENCING ALONG THE TREE'S DRIP LINE OR AS SHOWN ON THE DRAWINGS. IN ANY CASE, THE FENCING SHALL BE A MIN. 6' FROM THE TRUNK. FENCING LOCATION SHALL BE APPROVED IN THE FIELD BY LANDSCAPE ARCHITECT. THE CONTRACTOR SHALL AVOID LOCATING POSTS NEAR PROBABLE MAJOR ROOT LOCATIONS, AND RELOCATE ANY POSTS WHEN RESISTANCE (I.E. MAJOR ROOTS) IS ENCOUNTERED DURING POST INSTALLATION. THE PROTECTIVE FENCING SHALL BE INSTALLED PRIOR TO CONSTRUCTION ACTIVITIES AND REMAIN THROUGHOUT CONSTRUCTION. STORAGE OF ANY MATERIALS OR PARKING OF ANY EQUIPMENT WILL NOT BE ALLOWED WITHIN THE FENCING.

325 EAST 5<sup>TH</sup> STREET  
DES MOINES, IA 50309

T 515 284 1010

WWW.GENUS-LA.COM

**OWNER**  
City of Waukee, IA  
230 West Hickman Road  
Waukee, IA 50263  
P 515-978-7900 F 515-987-1845

**ARCHITECT**  
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3706 Ingersoll Avenue  
Des Moines, IA 50309  
P 515-279-8818

**CIVIL & STRUCTURAL ENGINEER**  
Raker Rhodes Engineering  
4717 Grand Avenue  
Des Moines, IA 50312  
P 515-277-0275

TITLE & LOGO

WINDFIELD PARK SITE  
IMPROVEMENT PROJECT

KEY MAP

99% COMPLETE  
NOT FOR CONSTRUCTION

NO. DATE REVISION

PRINCIPAL IN CHARGE PROJECT MANAGER

BD AP

PROJECT TEAM MEMBER(S)

CHECK

SCALE / STAMP

TITLE  
**DEMOLITION PLAN**

PROJECT NO.

14005

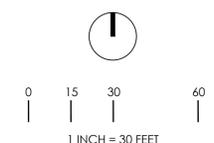
DATE

12-10-14

PROJECT NETWORK PATH

SHEET NUMBER

L1.1



**LEGEND**

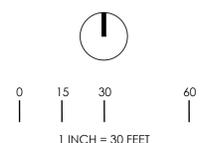
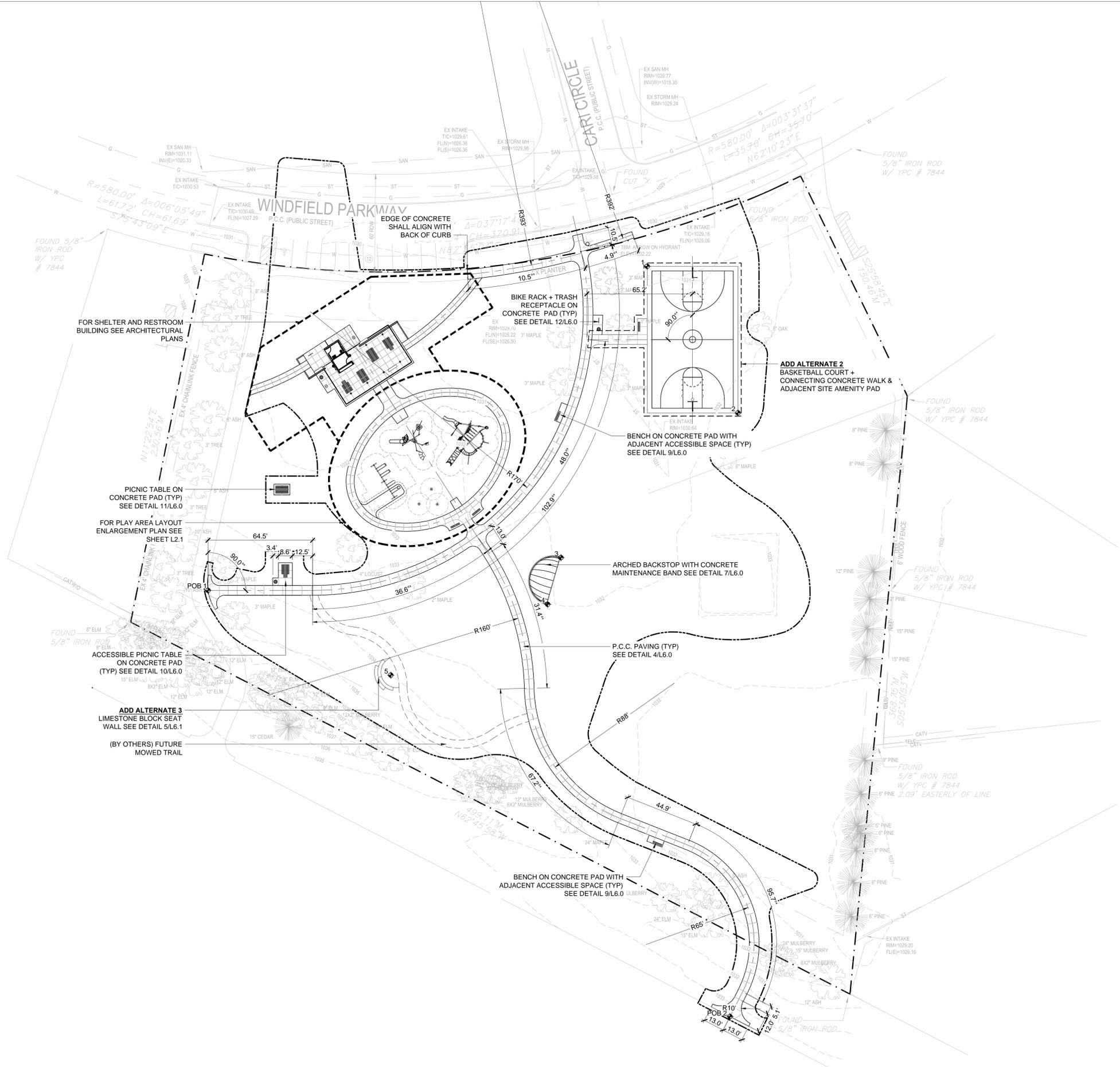
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- EXISTING CONTOUR
- EXISTING DECIDUOUS TREE
- EXISTING EVERGREEN TREE

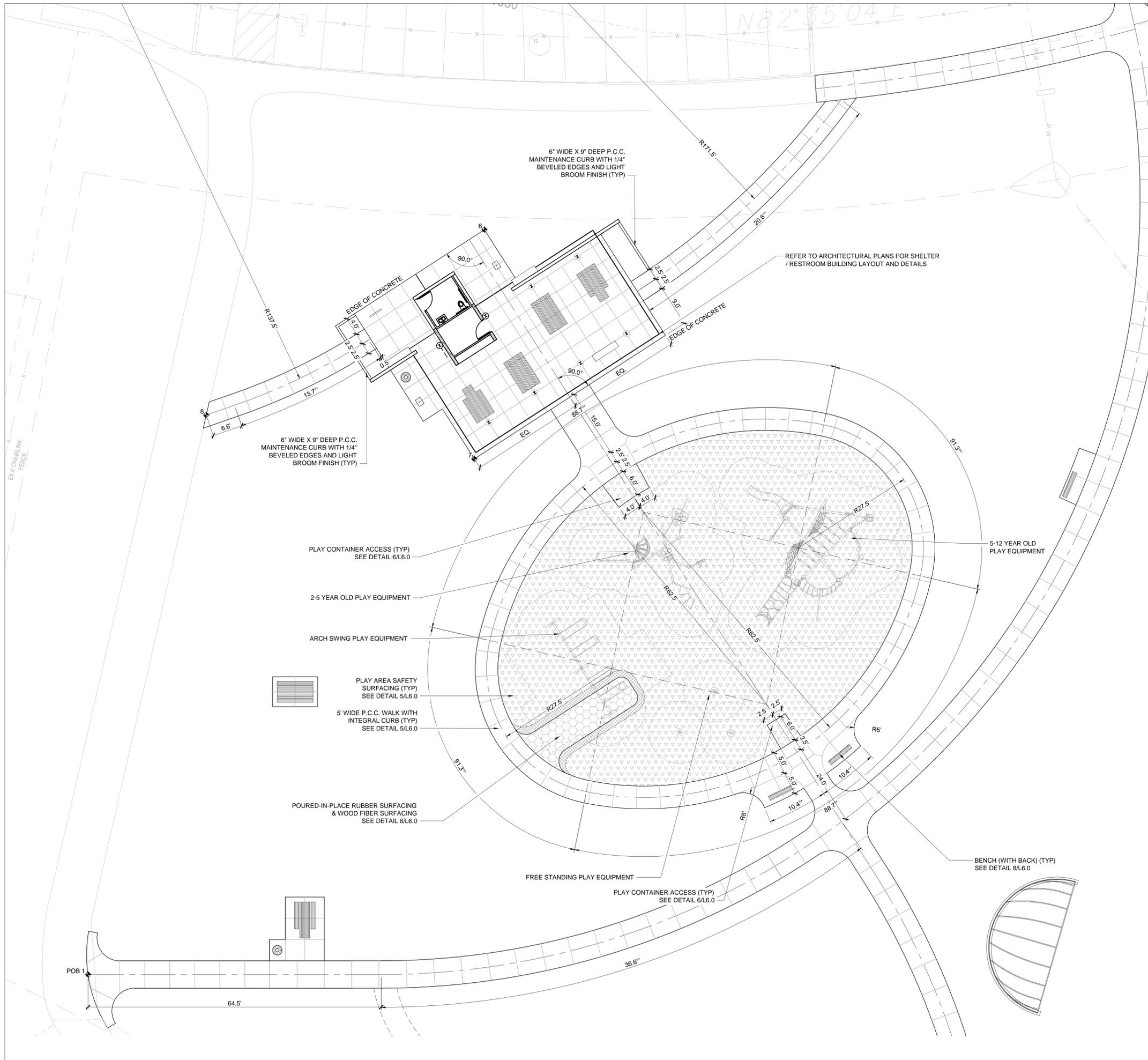
**HORIZONTAL CONTROL**

POB 1	X 1,537,054.96	5	X 1,537,170.56
	Y 586,771.98		Y 586,722.80
POB 2	X 1,537,379.89	6	X 1,537,145.04
	Y 586,513.14		Y 586,937.94
2	X 1,537,328.78	7	X 1,537,142.82
	Y 586,973.86		Y 586,887.77
3	X 1,537,275.61	8	X 1,537,083.81
	Y 586,794.97		Y 586,897.35
4	X 1,537,267.32		
	Y 586,766.32		

**LAYOUT AND MATERIALS NOTES**

- CONTRACTOR SHALL PROVIDE A JOINTING PLAN PER SPECIFICATIONS FOR REVIEW AND APPROVAL BY THE LANDSCAPE ARCHITECT. JOINTS SHOWN ARE FOR REFERENCE ONLY AND MAY BE USED AS A GUIDE TO DEVELOP THE CONTRACTOR'S PLAN.
- JOINTS SHALL BE INSTALLED TO FORM SQUARES DEPENDENT ON WIDTH OF WALK. AS NOTED ON PLAN, SOME JOINTS SHALL BE INSTALLED TO ALIGN WITH ADJACENT JOINTS.
- FORMWORK FOR ALL SITE IMPROVEMENTS SHALL BE INSPECTED AND APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION OF CONCRETE. PROVIDE MINIMUM 24-HOUR NOTICE.
- WHERE ALL PROPOSED WALKS MEET UP WITH EXISTING IT SHALL BE A SMOOTH TRANSITION AND FLUSH.
- ALL INTERSECTIONS OF TRAILS SHALL HAVE 5' RADIUS UNLESS OTHERWISE NOTED.
- CONTRACTOR SHALL PROTECT ALL EXISTING STRUCTURES AND IMPROVEMENTS TO REMAIN.
- USE DIMENSIONAL INFORMATION GIVEN; DO NOT SCALE DRAWINGS. WRITTEN DATA SHALL TAKE PRECEDENCE OVER ANY OTHER DATA.
- ALL DIMENSIONS TO CURBS ARE TO BACK OF CURB, UNLESS OTHERWISE NOTED.
- DIMENSIONS INDICATED WITH A 'A' SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR.
- ALL LINES AND DIMENSIONS ARE PARALLEL OR PERPENDICULAR TO THE LINES FROM WHICH THEY ARE MEASURED UNLESS OTHERWISE NOTED.
- CONTRACTOR SHALL VERIFY ALL SITE CONDITIONS IN THE FIELD AND DIMENSIONS SHOWN ON THE DRAWINGS AND REPORT ANY DISCREPANCIES TO THE LANDSCAPE ARCHITECT PRIOR TO THE START OF CONSTRUCTION.
- CONTRACTOR SHALL REFER ANY QUESTIONS ON SITE MATERIALS, FINISHES, LABOR AND/OR PRODUCTS NOT SPECIFIED HEREIN TO THE LANDSCAPE ARCHITECT PRIOR TO ORDERING MATERIALS OR STARTING WORK.
- ALL CONCRETE SITE AMENITY PAD LOCATIONS SHALL BE FIELD VERIFIED BY LA PRIOR TO POUR.
- THE FOLLOWING SITE FURNISHINGS WILL BE PURCHASED AND INSTALLED BY THE CITY OF WAUKEE: PICNIC TABLES, BIKE RACKS, TRASH RECEPTACLES, AND BENCHES.





**LEGEND**

- PROPERTY LINE
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- EXISTING FENCE
- EXISTING CONTOUR
- EXISTING DECIDUOUS TREE
- EXISTING EVERGREEN TREE
- WOOD FIBER SAFETY SURFACING
- POURED-IN-PLACE SAFETY SURFACING
- POURED-IN-PLACE SAFETY SURFACING (ANGLED SECTION) WITH WOOD FIBER SURFACING ABOVE

**HORIZONTAL CONTROL**

POB 1	X 1,537,054.96	Y 586,771.98	5	X 1,537,170.56	Y 586,722.80
POB 2	X 1,537,379.89	Y 586,513.14	6	X 1,537,145.04	Y 586,937.94
2	X 1,537,328.78	Y 586,973.86	7	X 1,537,142.82	Y 586,887.77
3	X 1,537,275.61	Y 586,794.97	8	X 1,537,083.81	Y 586,897.35
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3. FORMWORK FOR ALL SITE IMPROVEMENTS SHALL BE INSTALLED AND APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION OF CONCRETE. PROVIDE MINIMUM 24-HOUR NOTICE.
4. WHERE ALL PROPOSED WALKS MEET UP WITH EXISTING IT SHALL BE A SMOOTH TRANSITION AND FLUSH.
5. ALL INTERSECTIONS OF TRAILS SHALL HAVE 5' RADIUS UNLESS OTHERWISE NOTED.
6. CONTRACTOR SHALL PROTECT ALL EXISTING STRUCTURES AND IMPROVEMENTS TO REMAIN.
7. USE DIMENSIONAL INFORMATION GIVEN; DO NOT SCALE DRAWINGS. WRITTEN DATA SHALL TAKE PRECEDENCE OVER ANY OTHER DATA.
8. ALL DIMENSIONS TO CURBS ARE TO BACK OF CURB, UNLESS OTHERWISE NOTED.
9. DIMENSIONS INDICATED WITH A 'x' SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR.
10. ALL LINES AND DIMENSIONS ARE PARALLEL OR PERPENDICULAR TO THE LINES FROM WHICH THEY ARE MEASURED UNLESS OTHERWISE NOTED.
11. CONTRACTOR SHALL VERIFY ALL SITE CONDITIONS IN THE FIELD AND DIMENSIONS SHOWN ON THE DRAWINGS AND REPORT ANY DISCREPANCIES TO THE LANDSCAPE ARCHITECT PRIOR TO THE START OF CONSTRUCTION.
12. CONTRACTOR SHALL REFER ANY QUESTIONS ON SITE MATERIALS, FINISHES, LABOR AND/OR PRODUCTS NOT SPECIFIED HEREIN TO THE LANDSCAPE ARCHITECT PRIOR TO ORDERING MATERIALS OR STARTING WORK.
13. ALL CONCRETE SITE AMENITY PAD LOCATIONS SHALL BE FIELD VERIFIED BY LA PRIOR TO POUR.
14. THE FOLLOWING SITE FURNISHINGS WILL BE PURCHASED AND INSTALLED BY THE CITY OF WAUKEE: PICNIC TABLES, BIKE RACKS, TRASH RECEPTACLES, AND BENCHES.

KEY MAP  
**99% COMPLETE  
NOT FOR CONSTRUCTION**

NO.	DATE	REVISION

PRINCIPAL IN CHARGE PROJECT MANAGER  
**BD AP**

PROJECT TEAM MEMBER(S)  
CHECK  
SCALE / STAMP

TITLE  
**PLAY AREA PLAN  
LAYOUT ENLARGEMENT**

PROJECT NO.  
**14005**  
DATE  
**12-10-14**  
PROJECT NETWORK PATH

SHEET NUMBER

**L2.1**

0 5 10 20  
1 INCH = 10 FEET

**IOWA ONE CALL**  
1-800-292-8989  
www.iowaonecall.com

**LEGEND**

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- EXISTING FENCE
- 995 --- EXISTING CONTOUR
- EXISTING DECIDUOUS TREE
- EXISTING EVERGREEN TREE
- 945 --- PROPOSED CONTOUR
- TREE PROTECTION FENCING
- EROSION CONTROL SILT FENCE
- TC --- TOP OF CURB ELEV.
- BC --- BOTTOM OF CURB ELEV.
- BS --- BOTTOM OF PLAY SURFACE
- HP --- HIGH POINT
- LP --- LOW POINT
- INV --- INVERT ELEV.
- FV --- FIELD VERIFY

**CONSTRUCTION NOTES**

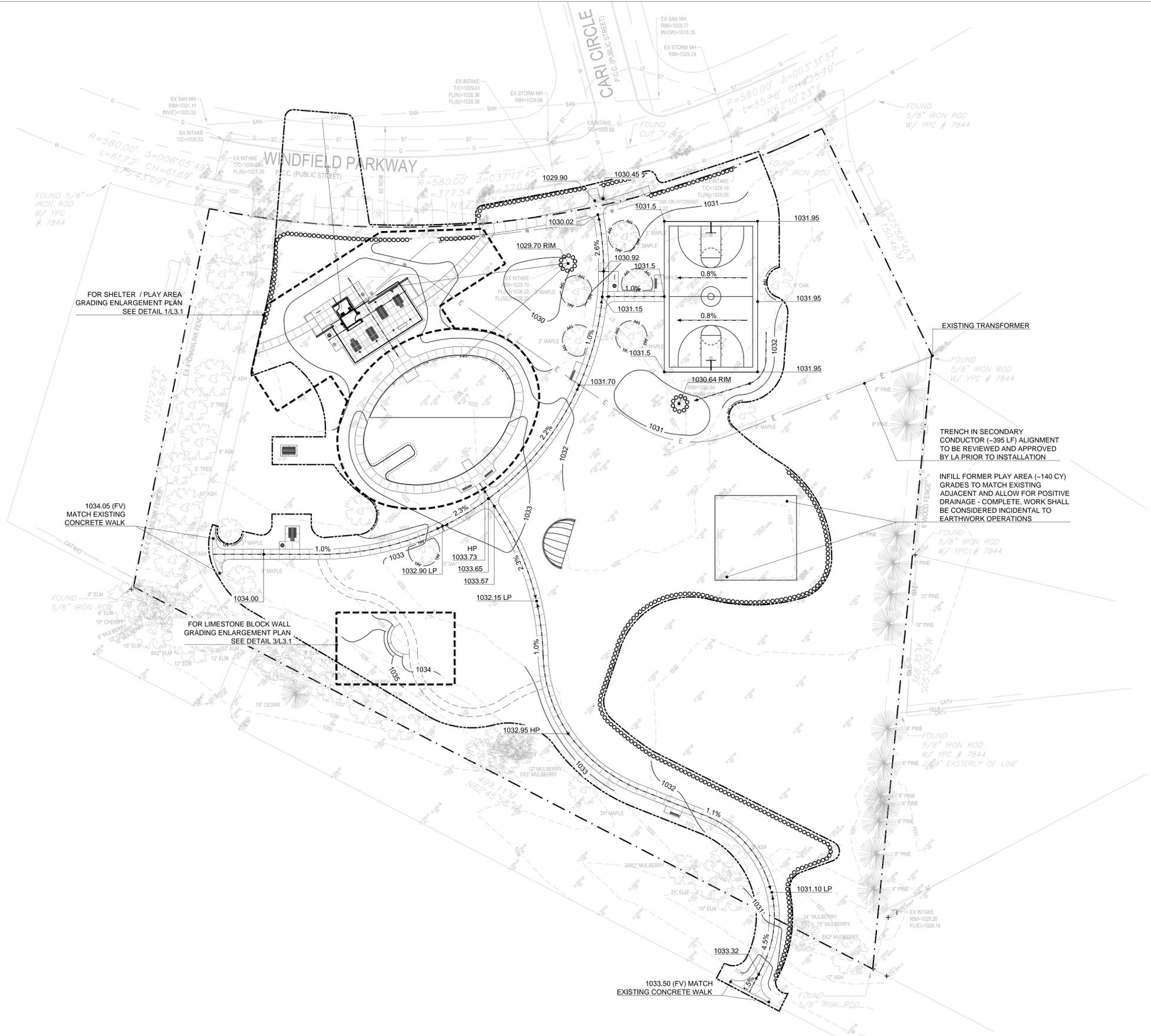
- 1 ALL SPOT ELEVATIONS GIVEN ARE FINISHED GRADE OR TOP OF PAVEMENT.
- 2 ALL GRADING TO BE WITHIN PROPERTY LIMITS UNLESS OTHERWISE NOTED.
- 3 REFER TO CIVIL PLAN C1.0 FOR UTILITY INFORMATION
- 4 REFER TO PLAY AREA PLAN GRADING ENLARGEMENT L3.1 FOR ADDITIONAL GRADING INFORMATION

**GRADING NOTES**

1. TOPOGRAPHIC SURVEY OF EXISTING CONDITIONS SUPPLIED BY BISHOP ENGINEERING. CONTRACTOR SHALL VERIFY EXISTING GRADES AND CONDITIONS PRIOR TO CONSTRUCTION, AND SHALL BE RESPONSIBLE FOR ADJUSTING WORK AS REQUIRED.
2. ALL LAND FORMS SHALL BE GRADED TO BE SMOOTH AND CONTINUOUS SURFACES. CHANGES IN PERCENT OF SLOPE ON SURFACES SHALL BE GRADUAL RATHER THAN ABRUPT. GRADE TRANSITIONAL AREAS TO CREATE VERTICAL CURVES AND ENSURE CONTINUOUS, FLOWING LAND FORM.
3. MINIMUM SLOPE ON LAWN AND PLANTING AREAS SHALL BE 2 PERCENT.
4. PROVIDE FOR SURFACE DRAINAGE DURING THE PERIOD OF CONSTRUCTION IN A MANNER THAT WILL PROTECT NEWLY GRADED AND ADJACENT AREAS.
5. EVERY PRECAUTION AND TEMPORARY MEASURE SHALL BE TAKEN (SUCH AS SILT BARRIERS, TEMPORARY SEEDING, ETC.) TO PREVENT DAMAGE FROM EROSION ON FRESHLY GRADED AREAS. THIS SHALL APPLY TO DAMAGE OF NEWLY GRADED AREAS WITHIN CONSTRUCTION LIMITS AND DAMAGE TO ADJACENT AREA CAUSED BY ERODED MATERIALS. ANY METHODS UTILIZED SHALL MEET AND CONFORM TO ALL LOCAL CODES.
6. REMOVE ANY SHRUBS AND STUMPS IDENTIFIED FOR REMOVAL ON THE PLANS AND PROPERLY DISPOSE OF IN AN OFF-SITE LOCATION.
7. CONTRACTOR IS RESPONSIBLE FOR LOADING, HAULING, STOCKPILING, PLACING, SPREADING, AND FINISHING FILL MATERIAL AS REQUIRED.
8. MAXIMUM SLOPE SHALL BE NO GREATER THAN 4:1.
9. CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE AWAY FROM ALL EXISTING BUILDINGS.
10. ALL NEW CONCRETE WALKS AND ASPHALT PATHS SHALL HAVE A MINIMUM OF 1 PERCENT AND MAXIMUM OF 2 PERCENT CROSS SLOPE AND A MAXIMUM LONGITUDINAL SLOPE OF 5 PERCENT, UNLESS OTHERWISE NOTED.
11. ALL VOIDS REMAINING FROM REMOVED ITEMS SHALL BE FILLED AND COMPACTED AS PER SPECIFICATIONS. GRADE TO PROVIDE CONTINUOUS SURFACES.
12. CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION. ANY DAMAGE TO SUCH SHALL BE SOLELY THE RESPONSIBILITY OF THE CONTRACTOR.
13. CONTRACTOR SHALL PROTECT ALL EXISTING STRUCTURES AND IMPROVEMENTS TO REMAIN.
14. DO NOT DISTURB EXISTING GRADE NEAR EXISTING TREES.
15. ALL SPOT ELEVATIONS ARE TO TOP OF CURB, UNLESS OTHERWISE NOTED.
16. FILL AND REGRADE AS REQUIRED TO PROVIDE A SMOOTH TRANSITION FROM NEW TOP OF CURB TO EXISTING GRADE.
17. ALL NEW CURBS SHALL MATCH ELEVATION OF EXISTING WHEN ABUTTING.



NO.	DATE	REVISION



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**CONSTRUCTION NOTES**

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- 2 ALL GRADING TO BE WITHIN PROPERTY LIMITS UNLESS OTHERWISE NOTED.
- 3 REFER TO CIVIL PLAN C1.0 FOR UTILITY INFORMATION

TITLE & LOGO

**WINDFIELD PARK SITE IMPROVEMENT PROJECT**

KEY MAP

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PRINCIPAL IN CHARGE PROJECT MANAGER

BD AP

PROJECT TEAM MEMBER(S)

CHECK

SEAL / STAMP

TITLE

PLAY AREA PLAN

GRADING ENLARGEMENT

PROJECT NO.

14005

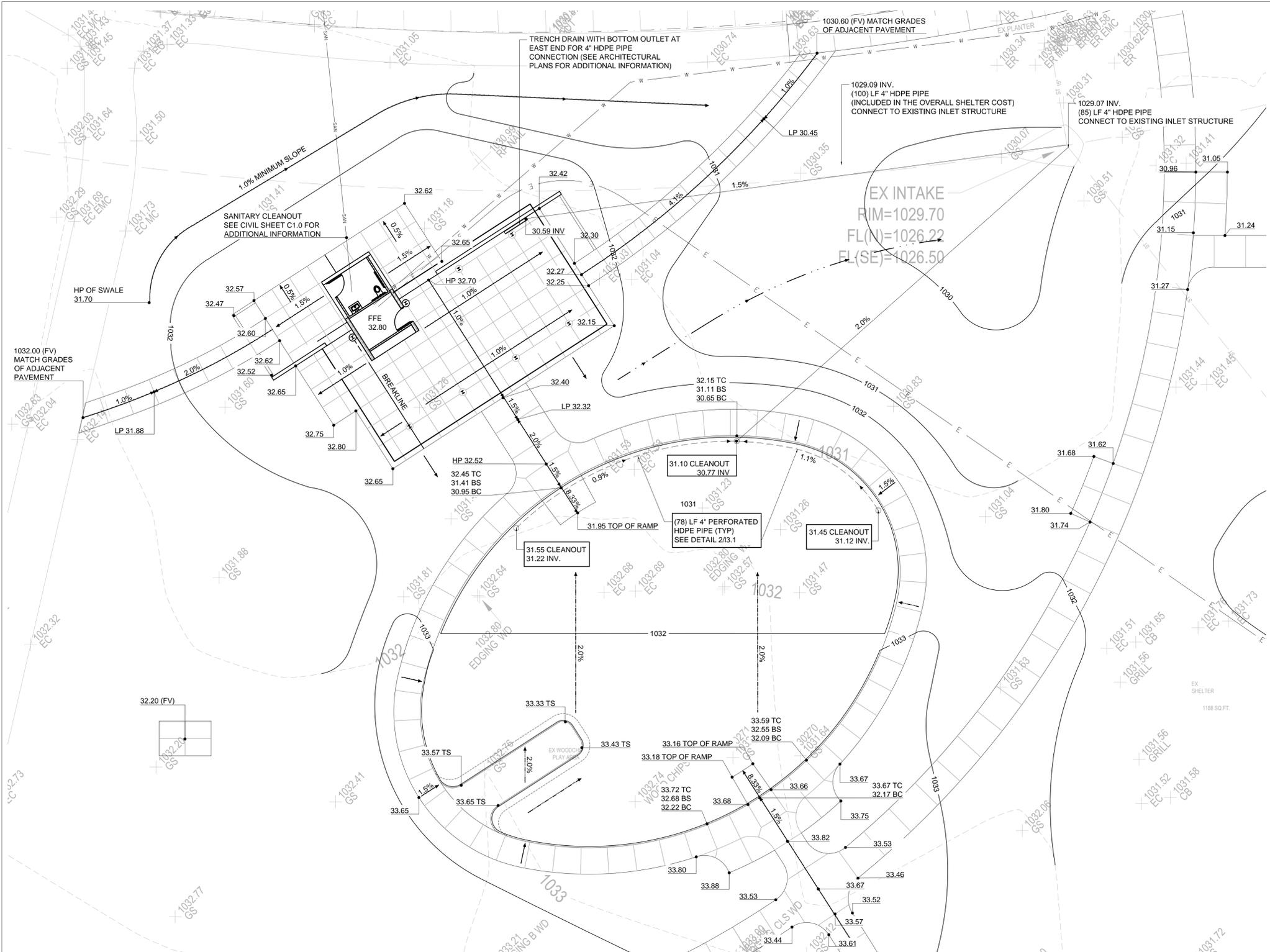
DATE

12-10-14

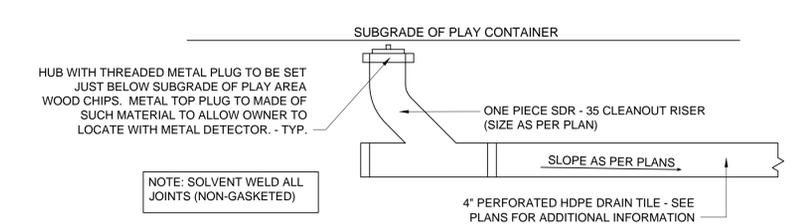
PROJECT NETWORK PATH

SHEET NUMBER

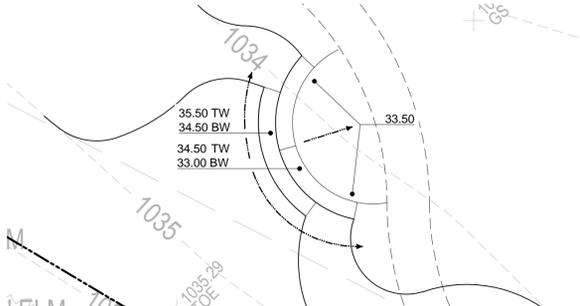
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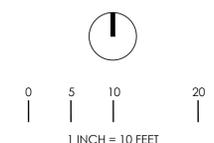
**1 PLAY AREA GRADING ENLARGEMENT PLAN**  
SCALE: 1" = 10'-0"

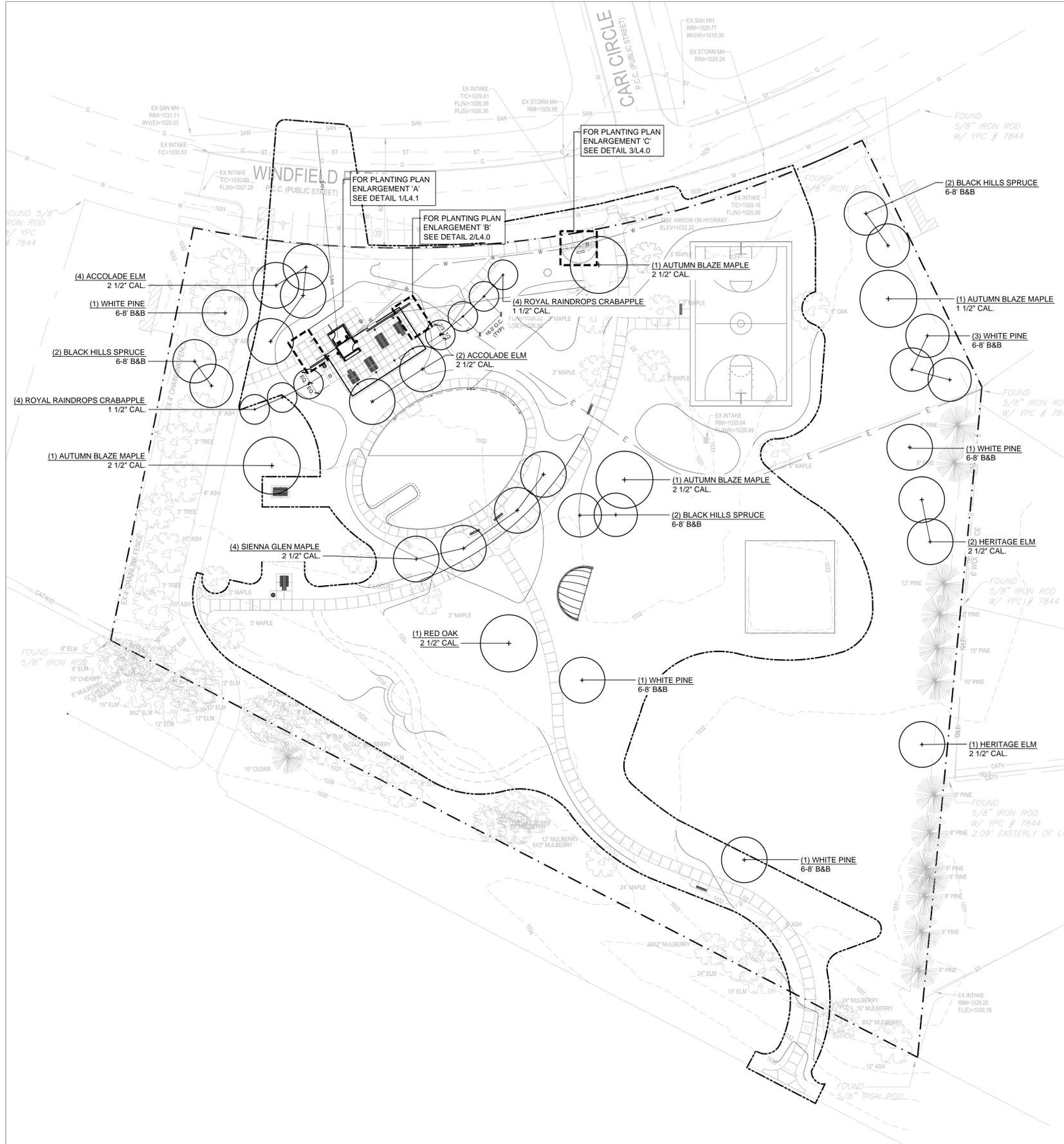


**3 LIMESTONE BLOCK SEAT WALL GRADING PLAN ENLARGEMENT**  
SCALE: NTS



**3 LIMESTONE BLOCK SEAT WALL GRADING ENLARGEMENT PLAN**  
SCALE: 1" = 10'-0"





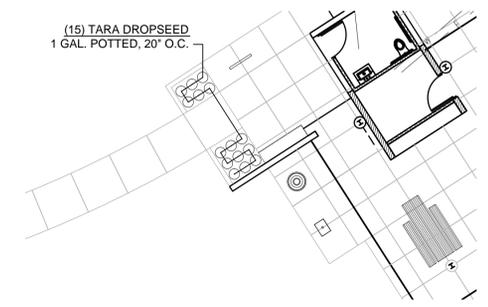
PLANT SCHEDULE			
DECIDUOUS TREES			
QTY	BOTANICAL NAME	COMMON NAME	CONF.
4	<i>Acer x freemanii</i> 'Jeffersred' Autumn Blaze	Autumn Blaze Maple	2-1/2' CAL.
4	<i>Acer x freemanii</i> 'Sienna'	Sienna Glen Maple	2-1/2' CAL.
7	<i>Malus 'JFS-KWS'</i> Royal Raindrops (TM)	Royal Raindrops (TM) Crabapple	1-1/2' CAL.
1	<i>Quercus rubra</i>	Red Oak	2-1/2' CAL.
6	<i>Ulmus americana</i> 'Accolade'	Accolade Elm	2-1/2' CAL.
3	<i>Ulmus americana</i> 'Heritage'	Heritage Elm	2-1/2' CAL.
CONIFEROUS TREES			
QTY	BOTANICAL NAME	COMMON NAME	CONF.
6	<i>Picea glauca</i> var. <i>densata</i>	Black Hills Spruce	6-8' B&B
7	<i>Pinus strobus</i>	Eastern White Pine	6-8' B&B
PERENNIALS			
QTY	BOTANICAL NAME	COMMON NAME	CONF.
73	<i>Rudbeckia fulgida</i> var. <i>sulvianii</i> 'Little Goldstar'	Little Goldstar Black-eyed Susan	1 GAL. POTTED
25	<i>Schizanthus luteus</i> 'The Blues'	The Blues Little Bluestem	1 GAL. POTTED
39	<i>Sporobolus heterolepis</i> 'Tara'	Tara Dwarf Prairie Dropseed	1 GAL. POTTED

SEE SHEET L5.0 FOR SEEDING AND RESTORATION PLAN.

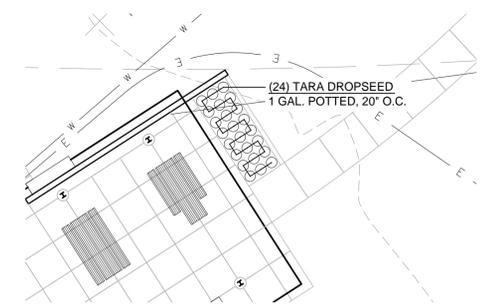
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W	EXISTING WATER LINE
G	EXISTING GAS LINE
---	EXISTING FENCE
995	EXISTING CONTOUR
	EXISTING DECIDUOUS TREE
	EXISTING EVERGREEN TREE

### PLANTING NOTES

- CONTRACTOR SHALL LOCATE AND VERIFY ALL EXISTING UTILITY LINES PRIOR TO PLANTING AND SHALL REPORT ANY CONFLICTS TO THE LANDSCAPE ARCHITECT.
- CONTRACTOR SHALL COORDINATE LOCATION OF ALL UTILITIES (LINES, DUCTS, CONDUITS, SLEEVES, FOOTINGS, ETC.) WITH LOCATIONS OF PROPOSED LANDSCAPE ELEMENTS (FENCE, FOOTINGS, TREE ROOTBALLS, ETC.). CONTRACTOR SHALL REPORT ANY DISCREPANCIES TO LANDSCAPE ARCHITECT PRIOR TO CONTINUING WORK.
- ALL WORK SHALL BE COORDINATED WITH THE WORK OF OTHER TRADES.
- SAVE AND PROTECT ALL EXISTING TREES NOT NOTED TO BE REMOVED.
- IF DISCREPANCIES EXIST BETWEEN THE NUMBER OF PLANTS DRAWN ON THE PLANTING PLAN AND THE NUMBER OF PLANTS IN THE SCHEDULE, THE PLANTING PLAN SHALL GOVERN.
- ALL PLANT MATERIALS MUST CONFORM TO AMERICAN STANDARDS FOR NURSERY STOCK (A.S.N.S.), LATEST EDITION PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, WASHINGTON D.C. LARGER SIZED PLANT MATERIALS OF THE SPECIES LISTED MAY BE USED IF THE STOCK CONFORMS TO THE A.S.N.S.
- ANY PROPOSED SUBSTITUTIONS OF PLANT SPECIES SHALL BE MADE WITH PLANTS OF EQUIVALENT OVERALL FORM, HEIGHT, BRANCHING HABIT, FLOWER, LEAF, COLOR, FRUIT AND CULTURE, AND ONLY AFTER WRITTEN APPROVAL OF THE LANDSCAPE ARCHITECT.
- OWNER RESERVES THE RIGHT TO SUBSTITUTE PLANT MATERIAL TYPE, SIZE, AND/OR QUANTITY.
- STAKE LOCATION OF ALL PROPOSED PLANTING FOR APPROVAL BY LANDSCAPE ARCHITECT PRIOR TO THE COMMENCEMENT OF PLANTING. DO NOT PLANT TREES OR SHRUBS IN SWALE AREAS.
- CONTRACTOR IS RESPONSIBLE FOR ALL DAMAGE DUE TO OPERATIONS INSIDE AND OUTSIDE OF THE CONTRACT LIMIT LINE. ANY AREAS OUTSIDE THE LIMIT OF WORK THAT ARE DISTURBED SHALL BE RESTORED TO ITS ORIGINAL CONDITION AT NO ADDITIONAL COST TO THE OWNER.
- THE LANDSCAPE CONTRACTOR SHALL REMOVE ALL CONSTRUCTION DEBRIS AND MATERIALS INJURIOUS TO PLANT GROWTH FROM PLANTING PITS AND BEDS PRIOR TO BACKFILLING WITH PLANTING MIX.
- ALL LAWN AREAS SHALL RECEIVE A MINIMUM 4-INCH DEPTH OF TOPSOIL COMPACTED TO 85% MAXIMUM DENSITY AT OPTIMUM MOISTURE CONTENT.
- PROVIDE SHREDDED HARDWOOD MULCH, NATURAL COLOR, IN ALL PLANTING BEDS AND 3' DIA. AROUND ALL TREES TO A 3-INCH DEPTH. APPLY PRE-EMERGENT TO ALL PLANTING BEDS PRIOR TO ALL PLANTING BEDS SHALL HAVE SPADE EDGES.
- ANY DAMAGE TO EXISTING TREE CROWNS OR ROOTS SHALL BE IMMEDIATELY REPAIRED BY A TRAINED AND APPROVED ARBORIST AT THE CONTRACTOR'S EXPENSE. VEGETATION TRIMMING REQUIRED TO FACILITATE CONSTRUCTION OPERATIONS SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT AND THEN PERFORMED BY TRAINED TREE MAINTENANCE PERSONNEL. NO VEGETATION SHALL BE REMOVED OR ALTERED WITHOUT APPROVAL OF THE LANDSCAPE ARCHITECT.
- ALL PLANT MATERIAL SHALL BE GUARANTEED TO BE IN A LIVE AND HEALTHY GROWING CONDITION FOR ONE FULL GROWING SEASON (ONE YEAR) AFTER FINAL PROJECT ACCEPTANCE OR SHALL BE REPLACED FREE OF CHARGE WITH THE SAME GRADE AND SPECIES.



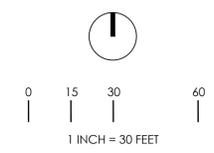
**1 AREA 'A' PLANTING ENLARGEMENT PLAN**  
SCALE: 1" = 10'-0"

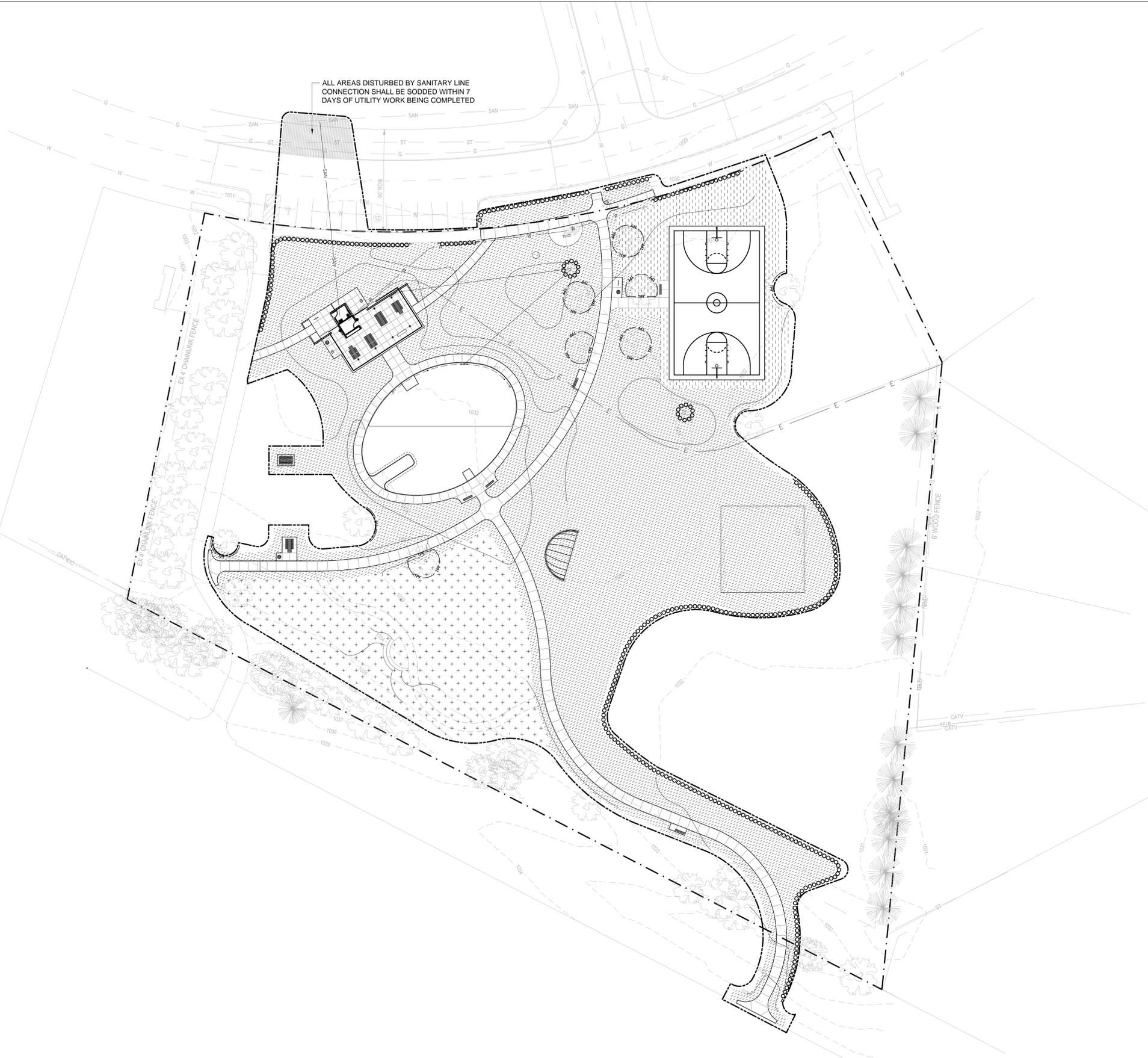


**2 AREA 'B' PLANTING ENLARGEMENT PLAN**  
SCALE: 1" = 10'-0"



**3 AREA 'C' PLANTING ENLARGEMENT PLAN**  
SCALE: 1" = 10'-0"





**LEGEND**

- PROPERTY LINE
- LIMIT OF CONSTRUCTION
- ST --- EXISTING STORM SEWER LINE
- SAN --- EXISTING SANITARY SEWER LINE
- W --- EXISTING WATER LINE
- G --- EXISTING GAS LINE
- EXISTING FENCE
- 995 --- EXISTING CONTOUR
- (Tree Symbol) --- EXISTING DECIDUOUS TREE
- (Tree Symbol) --- EXISTING EVERGREEN TREE
- (Tree Symbol) --- TREE PROTECTION FENCING
- (Circle Symbol) --- EROSION CONTROL SILT FENCE
- (Hatched Box) --- TURF SEED MIX
- (Hatched Box) --- TURF SEED MIX (ALTERNATE BID ITEM)
- (Hatched Box) --- NATIVE SEED MIX (ALTERNATE BID ITEM)

**RESTORATION NOTES**

- 1 APPROXIMATE LIMITS OF SEEDING. CONTRACTOR TO SEED ALL DISTURBED AREAS.
- 2 REFER TO SPECIFICATIONS FOR SEED COVER MATERIAL.
- 3 ALL AREAS OF THE SITE INDICATED TO BE DISTURBED SHALL BE PREPARED IN THE FOLLOWING MANNER:
  1. PREPARE SUBGRADE ACCORDING TO PLAN AND SPECIFICATIONS.
  2. SCARIFY / TILL SUBGRADE TO A 6 INCH MINIMUM DEPTH PRIOR TO PLACEMENT OF TOPSOIL.
  3. PLACE TOPSOIL TO A 6 INCH DEPTH IN ALL AREAS SCHEDULED TO RECEIVE TOPSOIL ACCORDING TO SPECIFICATIONS.
  4. APPLY HERBICIDE TO ANY UNWANTED VEGETATION / WEEDS THAT MAY HAVE EMERGED.
  5. INSTALL TURF AND PLANT MATERIALS NO LESS THAN 14 DAYS AFTER HERBICIDE APPLICATION.

NO.	DATE	REVISION

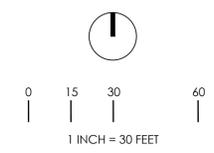
  

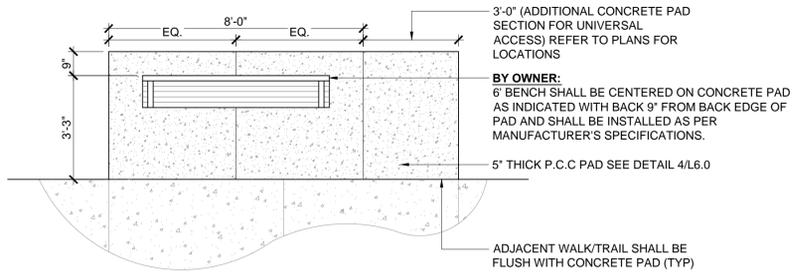
PRINCIPAL IN CHARGE	PROJECT MANAGER
BD	AP

PROJECT TEAM MEMBER(S)

CHECK

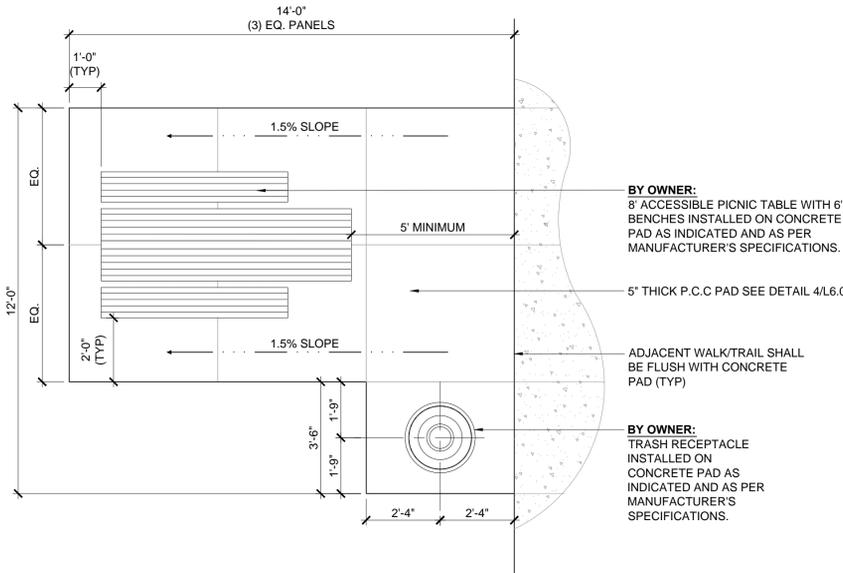
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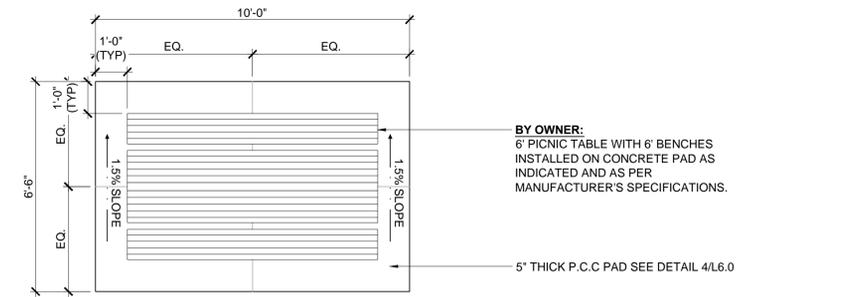
**9 BENCH ON CONCRETE PAD DETAIL**

SCALE: 3/8" = 1'-0"



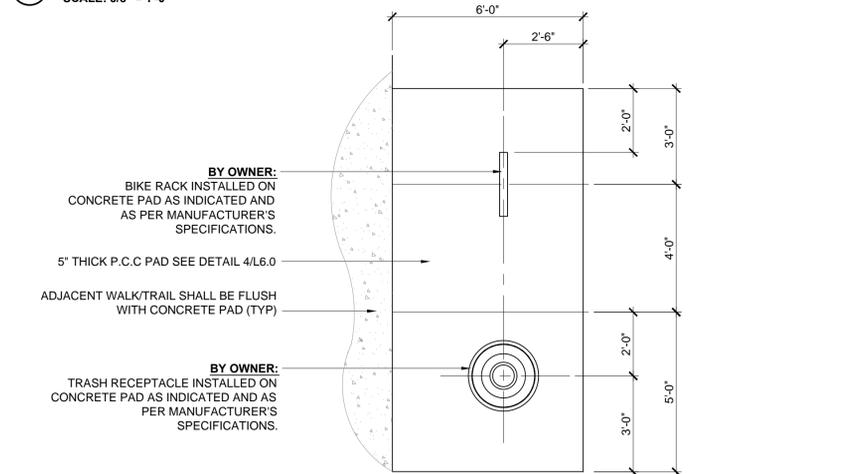
**10 ACCESSIBLE PICNIC TABLE ON CONCRETE PAD DETAIL**

SCALE: 3/8" = 1'-0"



**11 PICNIC TABLE ON CONCRETE PAD DETAIL**

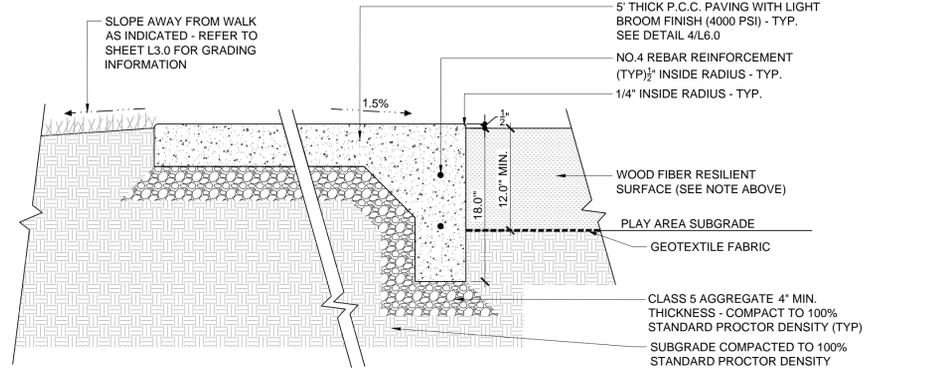
SCALE: 3/8" = 1'-0"



**12 BIKE RACK + TRASH RECEPTACLE ON CONCRETE PAD DETAIL**

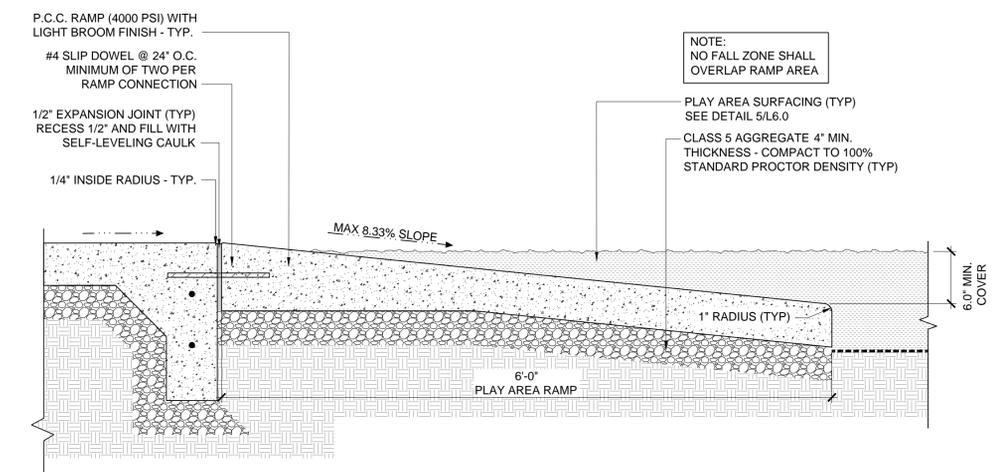
SCALE: 3/8" = 1'-0"

**WOOD FIBER SURFACING SYSTEM:**  
WOOD FIBER RESILIENT SURFACING SYSTEM TO BE FURNISHED AND PLACED TO A MIN. 12 INCH COMPACTED DEPTH - COMPLETE, INCLUDING WOOD FIBER AND GEOTEXTILE FABRIC (FINAL SURFACING DEPTH SHALL BE BASED ON THE MANUF. RECOMMENDATIONS TO MEET THE FALL HEIGHTS OF PLAY EQUIPMENT AS PER ASTM AND CPSC REQUIREMENTS)



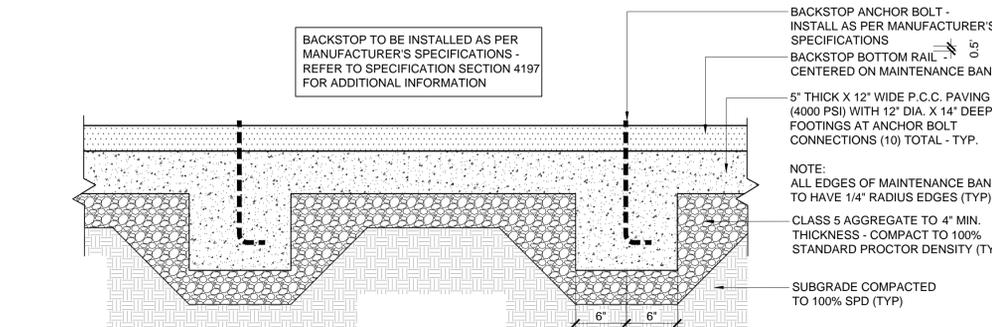
**5 5' WIDE P.C.C. WALK WITH INTEGRAL DROP CURB + PLAY AREA SURFACING DETAIL**

SCALE: NTS



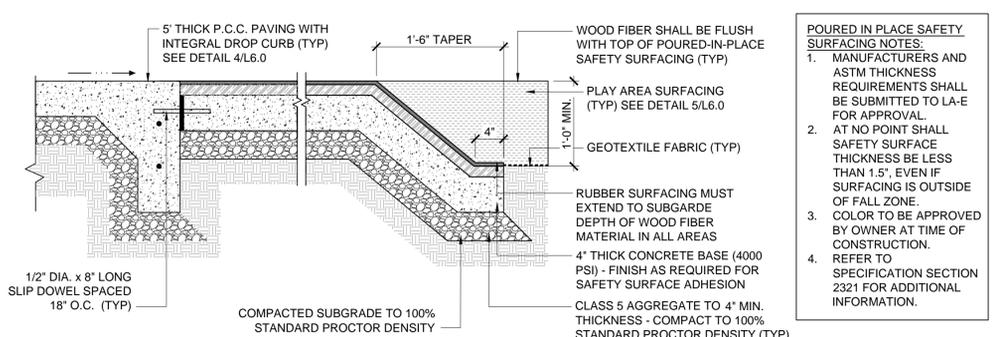
**6 PLAY CONTAINER ACCESS DETAIL**

SCALE: NTS



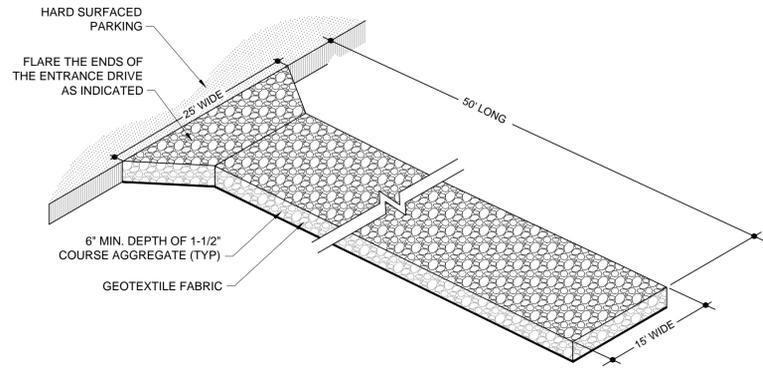
**7 ARCHED BACKSTOP WITH CONCRETE MAINTENANCE BAND DETAIL**

SCALE: NTS



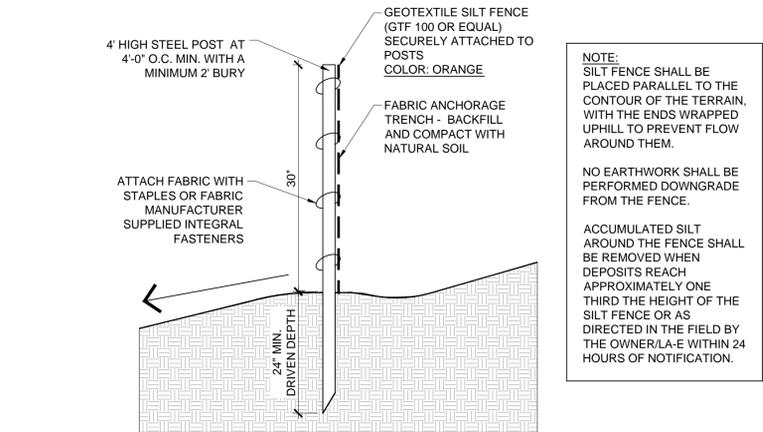
**8 POURED-IN-PLACE RUBBER SURFACING & WOOD FIBER SURFACING DETAIL**

SCALE: 1" = 1'-0"



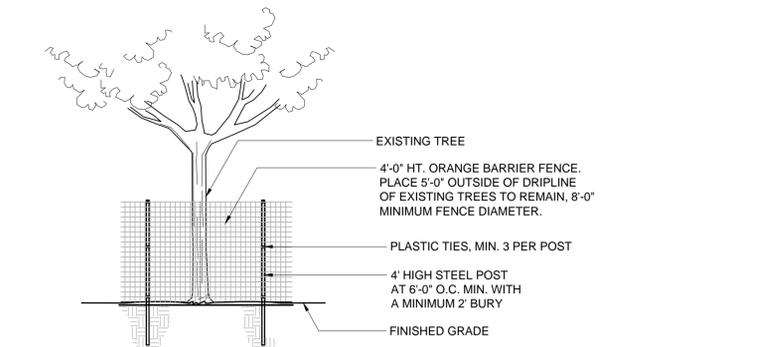
**1 ROCK CONSTRUCTION ENTRANCE DRIVE**

SCALE: NTS



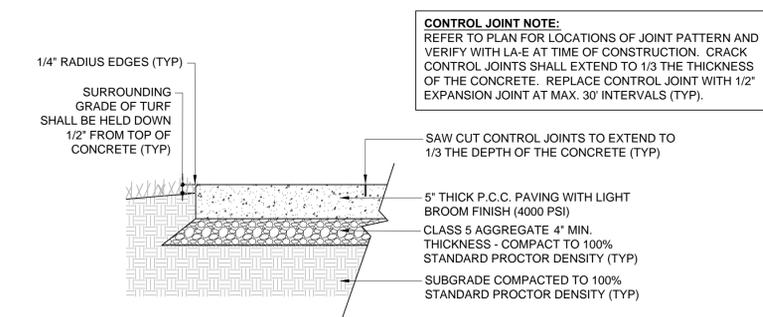
**2 EROSION CONTROL SILT FENCE DETAIL**

SCALE: NTS



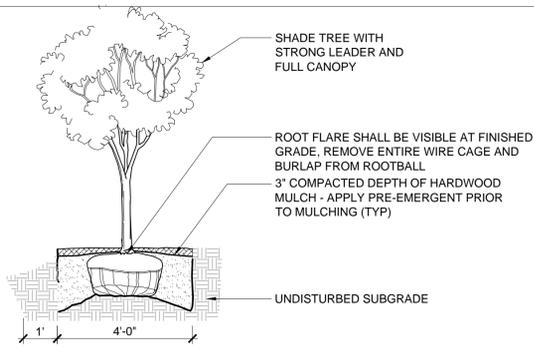
**3 TREE PROTECTION FENCING**

SCALE: NTS

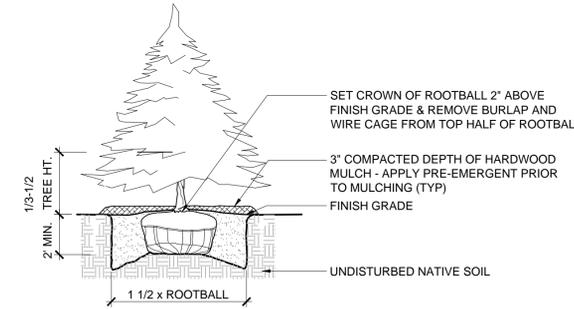


**4 P.C.C. PAVING DETAIL**

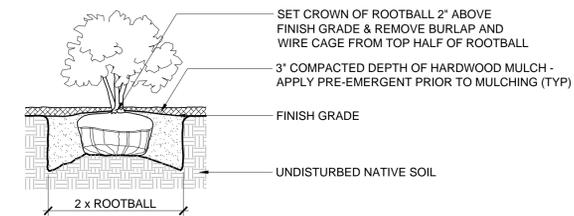
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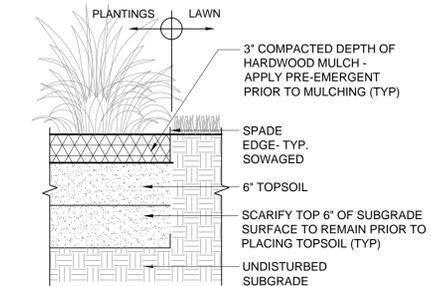
**7 DECIDUOUS TREE PLANTING**  
SCALE: NTS



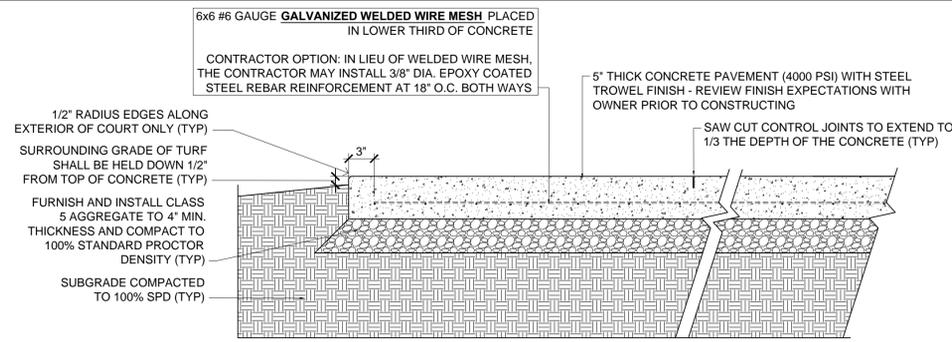
**8 CONIFEROUS TREE PLANTING**  
SCALE: NTS



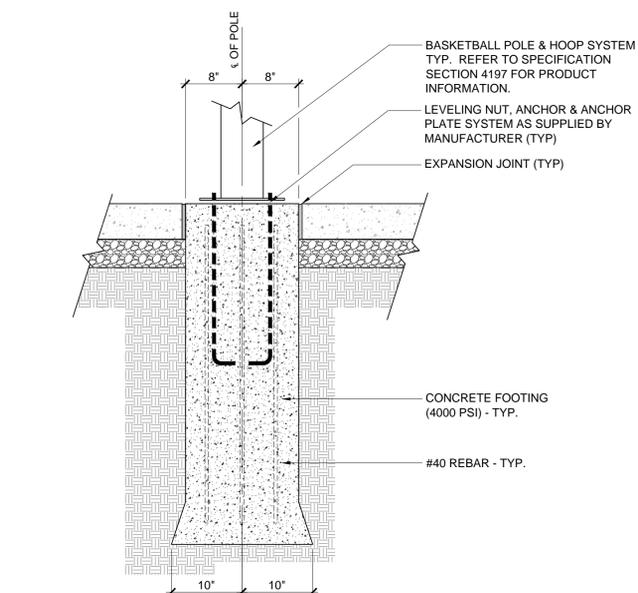
**9 CONTAINER / B&B SHRUB PLANTING**  
SCALE: NTS



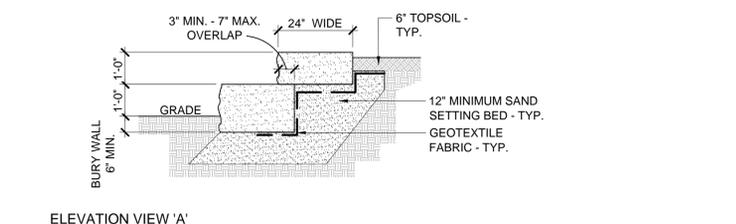
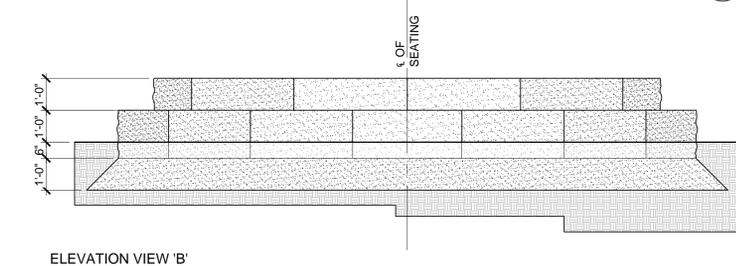
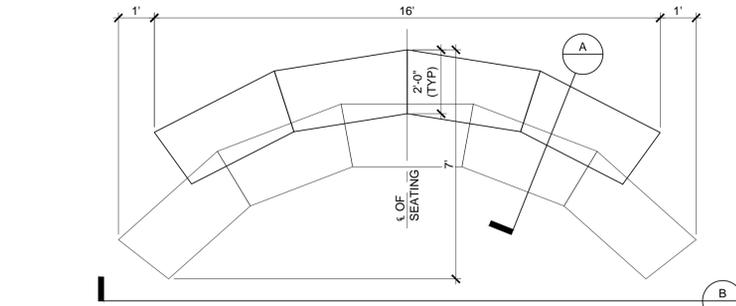
**10 PLANTING SOIL**  
SCALE: NTS



**3 P.C.C. COURT PAVING DETAIL**  
SCALE: NTS



**4 BASKETBALL GOAL FOOTING DETAIL**  
SCALE: NTS



**5 LIMESTONE BLOCK SEAT WALL DETAILS**  
SCALE: 3/8" = 1'-0"

**STONE SELECTION AND INSTALLATION NOTES:**

STONE TYPE: ANAMOSA LIMESTONE, NATURAL BED FINISH, SMOOTH FINISH FACE UP

STONE SIZE: APPROXIMATELY 24" WIDE x 4" LONG x 18" - 12" HIGH

STONE SETTING: STONES SHALL BE SET WITH A MINIMUM 12" LAYER OF SAND

FILTER FABRIC: A NON-WOXEN GEOTEXTILE FABRIC.

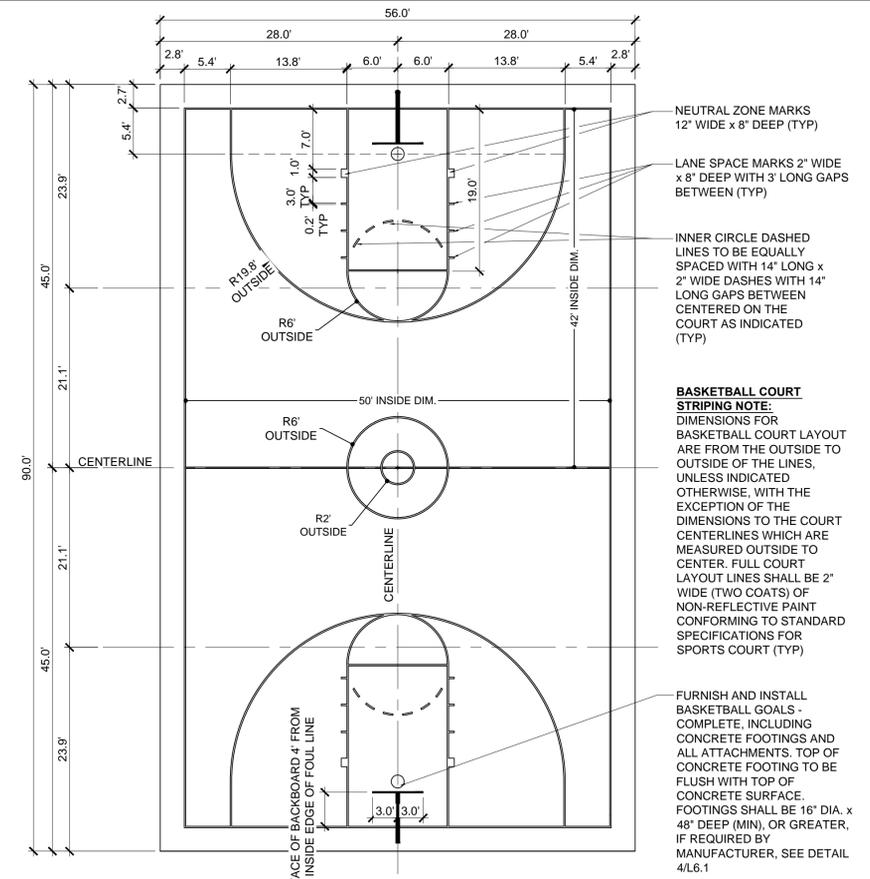
STONE INSTALLATION: ALL STONE SHALL BE HAND SET. THE SETBACK OF SUCCEEDING LAYERS SHALL BE NO MORE THAN 6" AND NO LESS THAN 4"

FILTER FABRIC, SETTING BED, AND BACKING INSTALLATION: FILTER FABRIC SHALL BE ANCHORED BETWEEN THE FIRST STONE LAYER AND THE SAND BEDDING. FILTER FABRIC AND SAND BACKING SHALL BE INSTALLED PROGRESSIVELY AS THE WALL IS CONSTRUCTED. FABRIC JOINTS SHALL BE OVERLAPPED A MINIMUM OF 2 FEET. SAND BACKING SHALL EXTEND TO WITHIN 6" OF FINISHED GRADE BEHIND THE WALL. FABRIC AT THE TOP OF THE WALL SHALL EXTEND HORIZONTALLY 12" AWAY FROM THE BACK OF THE WALL AND SHALL BE ANCHORED BENEATH THE TOPSOIL. SIMILARLY, THE FILTER FABRIC SHALL EXTEND 12" BEYOND THE ENDS OF THE WALLS AND SHALL BE BURIED SECURELY IN THE SUBSOIL. NO FILTER FABRIC SHALL BE EXPOSED TO VIEW UPON COMPLETION OF THE WALL CONSTRUCTION.

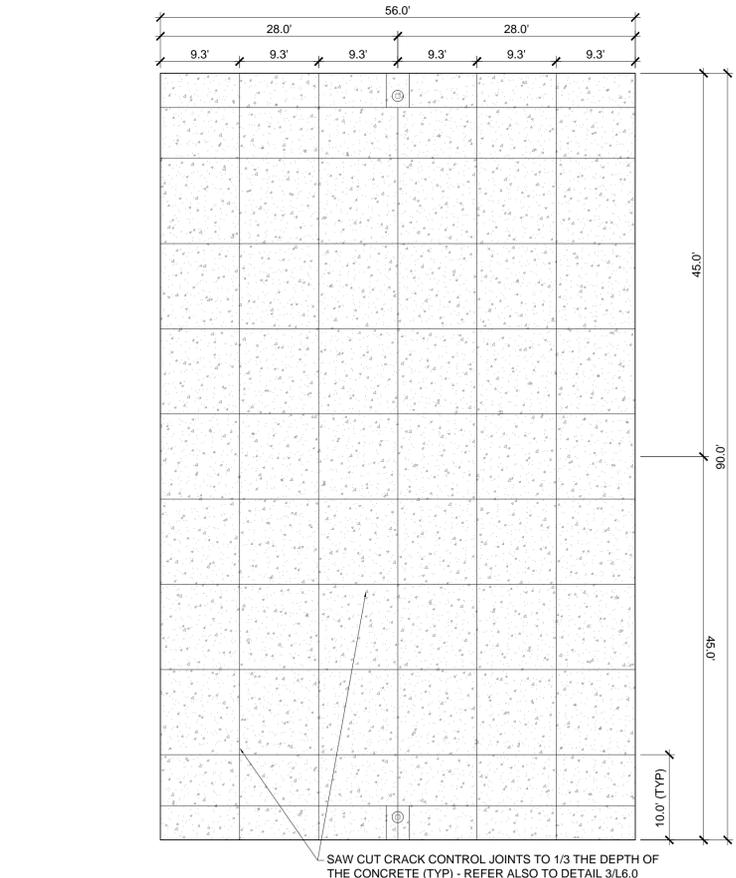
STONE VOIDS: VOIDS BETWEEN STONES SHALL BE MINIMIZED. VOIDS GREATER THAN 1-1/2" IN SIZE SHALL BE ACCEPTABLE.

INSTALLATION INSPECTION: CONTRACTOR SHALL PROVIDE THE LANDSCAPE ARCHITECT WITH A NOTICE OF A MINIMUM OF 10 DAYS PRIOR TO BEGINNING STONE INSTALLATION. THE LANDSCAPE ARCHITECT SHALL BE ON SITE DURING THE STONE INSTALLATION TO PROVIDE THE CONTRACTOR WITH ADDITIONAL AESTHETIC GUIDANCE IN PLACEMENT OF THE STONES.

STONE SELECTION INSPECTION: CONTRACTOR SHALL PROVIDE THE LANDSCAPE ARCHITECT WITH A NOTICE OF A MINIMUM OF 10 DAYS PRIOR TO SELECTING STONE FOR THE PROJECT. THE LANDSCAPE ARCHITECT SHALL INSPECT AND APPROVE THE GENERAL CHARACTERISTICS OF THE STONE PROPOSED FOR USE IN THE PROJECT.

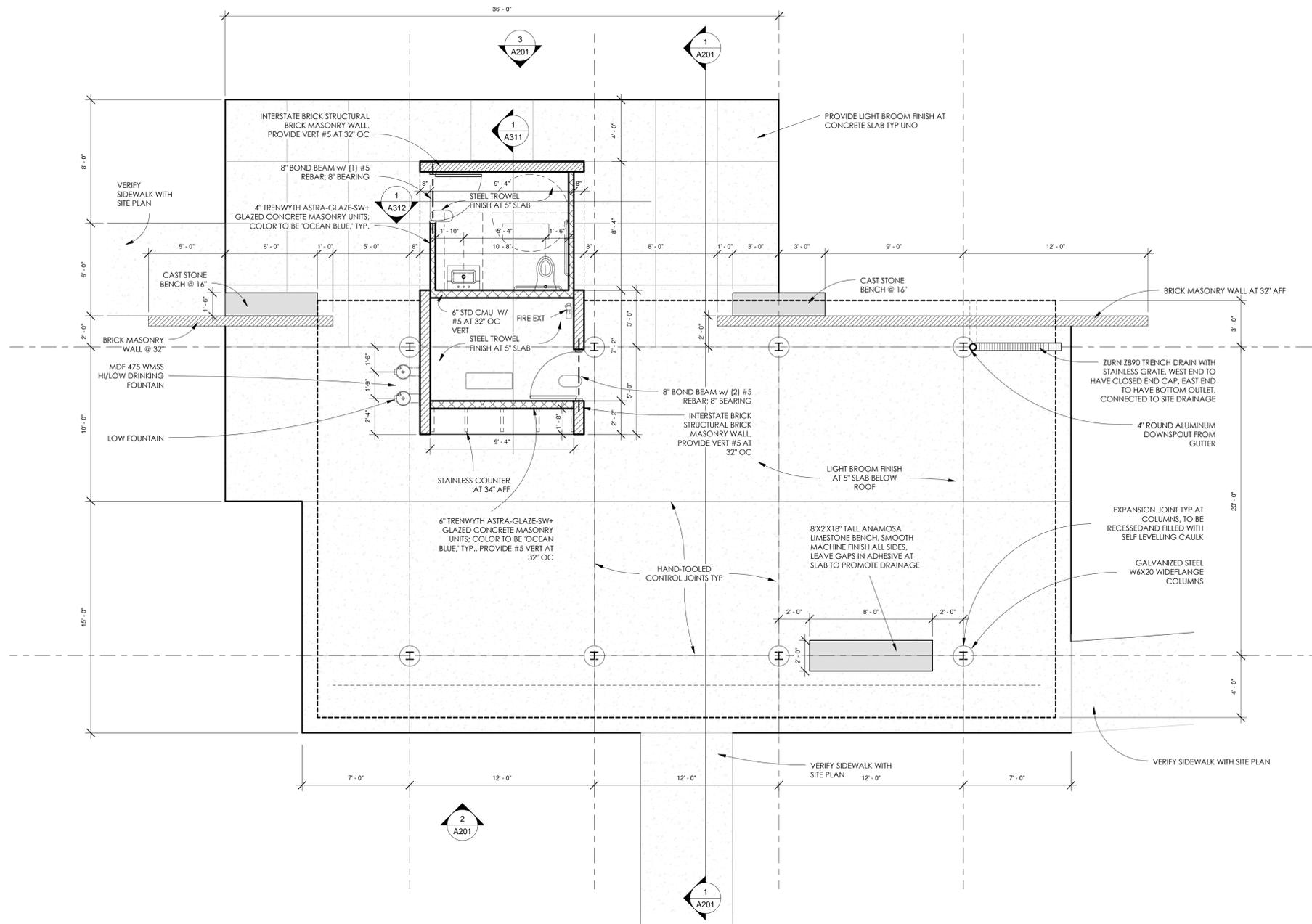


**1 FULL BASKETBALL COURT STRIPING DETAIL**  
SCALE: 1" = 10'-0"



**2 FULL BASKETBALL COURT JOINT DETAIL**  
SCALE: 1" = 10'-0"





1 SHELTER PLAN  
1/4" = 1'-0"

## DOOR SCHEDULE

DOOR	ROOM	DOOR MATERIAL	DOOR SIZE	DOOR THICKNESS	DOOR FINISH	BASIS OF DESIGN	FRAME MATERIAL	HEAD HEIGHT	PROFILE	FRAME FINISH	WALL MAT'L	BASIS OF DESIGN	FIRE RATING	CLOSER	LOCKSET	SILL
101A	RESTROOM	18 GA STEEL	3'-0" X 7'-0"	1 3/8"	FACTORY PRIME, PAINT TO MATCH GLAZED CMU	CURRIES 607	18 GA. HOLLOW METAL	4"	G	MATCH DOOR	4" CMU	CURRIES MASONRY, WELDED AND GROUND SMOOTH	NO	PULL SIDE SLIDE TRACK	YALE 4700 SERIES PRIVACY FUNCTION; SATIN CHROME	PEMKO ALUMINUM ADA
102A	SERVICE	18 GA STEEL	3'-0" X 7'-0"	1 3/8"	FACTORY PRIME, PAINT TO MATCH GLAZED CMU	CURRIES 607	18 GA. HOLLOW METAL	4"	G	MATCH DOOR	4" CMU	CURRIES MASONRY, WELDED AND GROUND SMOOTH	NO	NO	YALE 4700 SERIES STOREROOM FUNCTION; SATIN CHROME	PEMKO ALUMINUM ADA

TITLE & ISSUE

WINDFIELD PARK SITE  
IMPROVEMENT PROJECT

REVISED

NO. DATE REVISION

PRINCIPAL IN CHARGE PROJECT MANAGER

BD AP

PROJECT TEAM MEMBERS

CHECK

SEAL / STAMP

TITLE

PROJECT NO.

14005

DATE

11 - 5 - 2014

PROJECT NETWORK PATH

SHEET NUMBER

A101  
FLOOR  
PLAN

1. ALL DIMENSIONS UNLESS OTHERWISE NOTED.  
 2. VERIFY SIDEWALK WITH SITE PLAN.  
 3. INTERSTATE BRICK STRUCTURAL BRICK MASONRY WALL, PROVIDE VERT #5 AT 32" OC.  
 4. 8" BOND BEAM W/ (1) #5 REBAR; 8" BEARING.  
 5. 4" TRENWYTH ASTRA-GLAZE-SW+ GLAZED CONCRETE MASONRY UNITS; COLOR TO BE OCEAN BLUE, TYP.  
 6. 6" STD CMU W/ #5 AT 32" OC VERT. STEEL TROWEL FINISH AT 5' SLAB.  
 7. 8" BOND BEAM W/ (2) #5 REBAR; 8" BEARING.  
 8. INTERSTATE BRICK STRUCTURAL BRICK MASONRY WALL, PROVIDE VERT #5 AT 32" OC.  
 9. 6" TRENWYTH ASTRA-GLAZE-SW+ GLAZED CONCRETE MASONRY UNITS; COLOR TO BE OCEAN BLUE, TYP., PROVIDE #5 VERT AT 32" OC.  
 10. 8"X21"8" TALL ANAMOSA LIMESTONE BENCH, SMOOTH MACHINE FINISH ALL SIDES. LEAVE GAPS IN ADHESIVE AT SLAB TO PROMOTE DRAINAGE.  
 11. GALVANIZED STEEL W6X20 WIDENFLANGE COLUMNS.  
 12. EXPANSION JOINT TYP AT COLUMNS, TO BE RECESSED AND FILLED WITH SELF LEVELLING CAULK.  
 13. 4" ROUND ALUMINUM DOWNSPOUT FROM GUTTER.  
 14. ZURN Z890 TRENCH DRAIN WITH STAINLESS GRATE, WEST END TO HAVE CLOSED END CAP, EAST END TO HAVE BOTTOM OUTLET, CONNECTED TO SITE DRAINAGE.  
 15. LIGHT BROOM FINISH AT 5' SLAB BELOW ROOF.  
 16. HAND-TOOLED CONTROL JOINTS TYP.  
 17. STAINLESS COUNTER AT 34" AFF.  
 18. MDF 475 WMSS HI/LOW DRINKING FOUNTAIN.  
 19. LOW FOUNTAIN.  
 20. CAST STONE BENCH @ 16".  
 21. BRICK MASONRY WALL @ 32".  
 22. VERIFY SIDEWALK WITH SITE PLAN.  
 23. BRICK MASONRY WALL AT 32" AFF.  
 24. PROVIDE LIGHT BROOM FINISH AT CONCRETE SLAB TYP UNO.  
 25. 8" BOND BEAM W/ (1) #5 REBAR; 8" BEARING.  
 26. 4" TRENWYTH ASTRA-GLAZE-SW+ GLAZED CONCRETE MASONRY UNITS; COLOR TO BE OCEAN BLUE, TYP.  
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 34. EXPANSION JOINT TYP AT COLUMNS, TO BE RECESSED AND FILLED WITH SELF LEVELLING CAULK.  
 35. 4" ROUND ALUMINUM DOWNSPOUT FROM GUTTER.  
 36. ZURN Z890 TRENCH DRAIN WITH STAINLESS GRATE, WEST END TO HAVE CLOSED END CAP, EAST END TO HAVE BOTTOM OUTLET, CONNECTED TO SITE DRAINAGE.  
 37. LIGHT BROOM FINISH AT 5' SLAB BELOW ROOF.  
 38. HAND-TOOLED CONTROL JOINTS TYP.  
 39. STAINLESS COUNTER AT 34" AFF.  
 40. MDF 475 WMSS HI/LOW DRINKING FOUNTAIN.  
 41. LOW FOUNTAIN.  
 42. CAST STONE BENCH @ 16".  
 43. BRICK MASONRY WALL @ 32".  
 44. VERIFY SIDEWALK WITH SITE PLAN.  
 45. BRICK MASONRY WALL AT 32" AFF.  
 46. PROVIDE LIGHT BROOM FINISH AT CONCRETE SLAB TYP UNO.  
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 48. 4" TRENWYTH ASTRA-GLAZE-SW+ GLAZED CONCRETE MASONRY UNITS; COLOR TO BE OCEAN BLUE, TYP.  
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 51. 8" BOND BEAM W/ (2) #5 REBAR; 8" BEARING.  
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 57. 4" ROUND ALUMINUM DOWNSPOUT FROM GUTTER.  
 58. ZURN Z890 TRENCH DRAIN WITH STAINLESS GRATE, WEST END TO HAVE CLOSED END CAP, EAST END TO HAVE BOTTOM OUTLET, CONNECTED TO SITE DRAINAGE.  
 59. LIGHT BROOM FINISH AT 5' SLAB BELOW ROOF.  
 60. HAND-TOOLED CONTROL JOINTS TYP.  
 61. STAINLESS COUNTER AT 34" AFF.  
 62. MDF 475 WMSS HI/LOW DRINKING FOUNTAIN.  
 63. LOW FOUNTAIN.  
 64. CAST STONE BENCH @ 16".  
 65. BRICK MASONRY WALL @ 32".  
 66. VERIFY SIDEWALK WITH SITE PLAN.  
 67. BRICK MASONRY WALL AT 32" AFF.  
 68. PROVIDE LIGHT BROOM FINISH AT CONCRETE SLAB TYP UNO.  
 69. 8" BOND BEAM W/ (1) #5 REBAR; 8" BEARING.  
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 89. BRICK MASONRY WALL AT 32" AFF.  
 90. PROVIDE LIGHT BROOM FINISH AT CONCRETE SLAB TYP UNO.  
 91. 8" BOND BEAM W/ (1) #5 REBAR; 8" BEARING.  
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 100. EXPANSION JOINT TYP AT COLUMNS, TO BE RECESSED AND FILLED WITH SELF LEVELLING CAULK.  
 101. 4" ROUND ALUMINUM DOWNSPOUT FROM GUTTER.  
 102. ZURN Z890 TRENCH DRAIN WITH STAINLESS GRATE, WEST END TO HAVE CLOSED END CAP, EAST END TO HAVE BOTTOM OUTLET, CONNECTED TO SITE DRAINAGE.  
 103. LIGHT BROOM FINISH AT 5' SLAB BELOW ROOF.  
 104. HAND-TOOLED CONTROL JOINTS TYP.  
 105. STAINLESS COUNTER AT 34" AFF.  
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 107. LOW FOUNTAIN.  
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Iowa -- Des Moines

Rainfall Intensity (10yr) = 7.3 in./hr.  
Rainfall Intensity (100yr) = 10.3 in./hr.  
Drainable Area (10yr) = 160 sq. ft.  
Drainable Area (100yr) = 120 sq. ft.  
Year Setting = 10 yr.  
Plan Area = 1296 sq. ft.  
Gutter Length = 48 ft.  
Max Gutter Served by Each DS = 48 ft.

Design Area = 1296 sq. ft.  
Minimum Number of DS = 1  
Max Roof Area Served by Each DS = 1296 sq. ft.

Min. Gutter Width = 6 in.  
Min. Gutter Depth = 6 in.

Recommended Product: *NorthClad® Gs 700 Series*

Min. Ds Size = 4 in. dia.

Recommended Product: *NorthClad® Gs 44 Square DS*

Select the State/City nearest you:

Iowa -- Des Moines

Roof Plan width: 48 ft.

Roof Plan length: 27.6 ft.

Roof Slope: 3 in./ft.

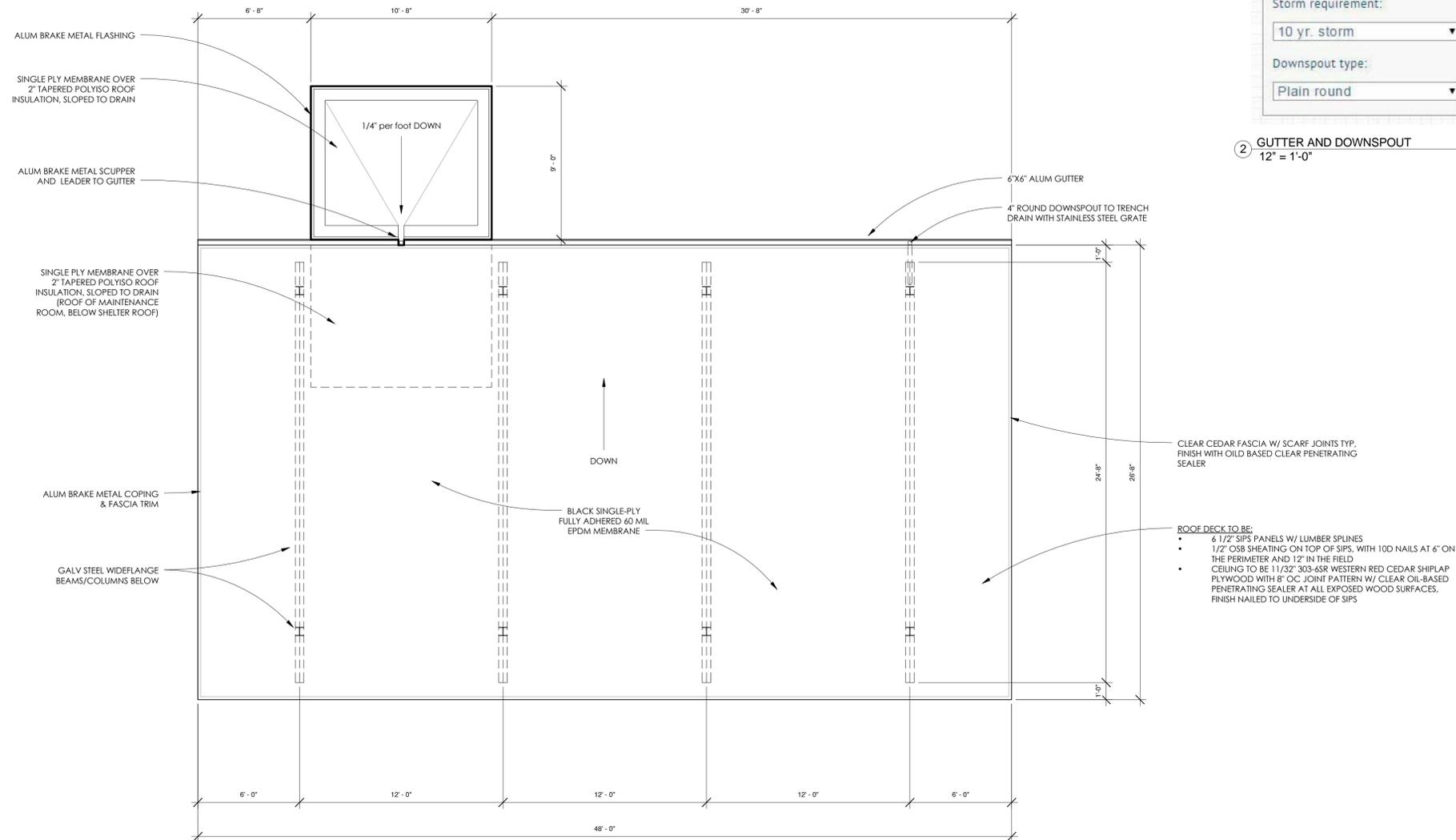
Total Gutter Length (All Sides): 48 ft.

Gutter Length Per Downspout: 48 ft.

Storm requirement: 10 yr. storm

Downspout type: Plain round

2 GUTTER AND DOWNSPOUT  
12" = 1'-0"



1 ROOF PLAN  
1/4" = 1'-0"

TITLE & LOGO

WINDFIELD PARK SITE  
IMPROVEMENT PROJECT

REV. SHEET

NO. DATE REVISION

PRINCIPAL IN CHARGE PROJECT MANAGER

BD AP

PROJECT TEAM MEMBERS

CHECK

SEAL / STAMP

TITLE

PROJECT NO.

14005

DATE

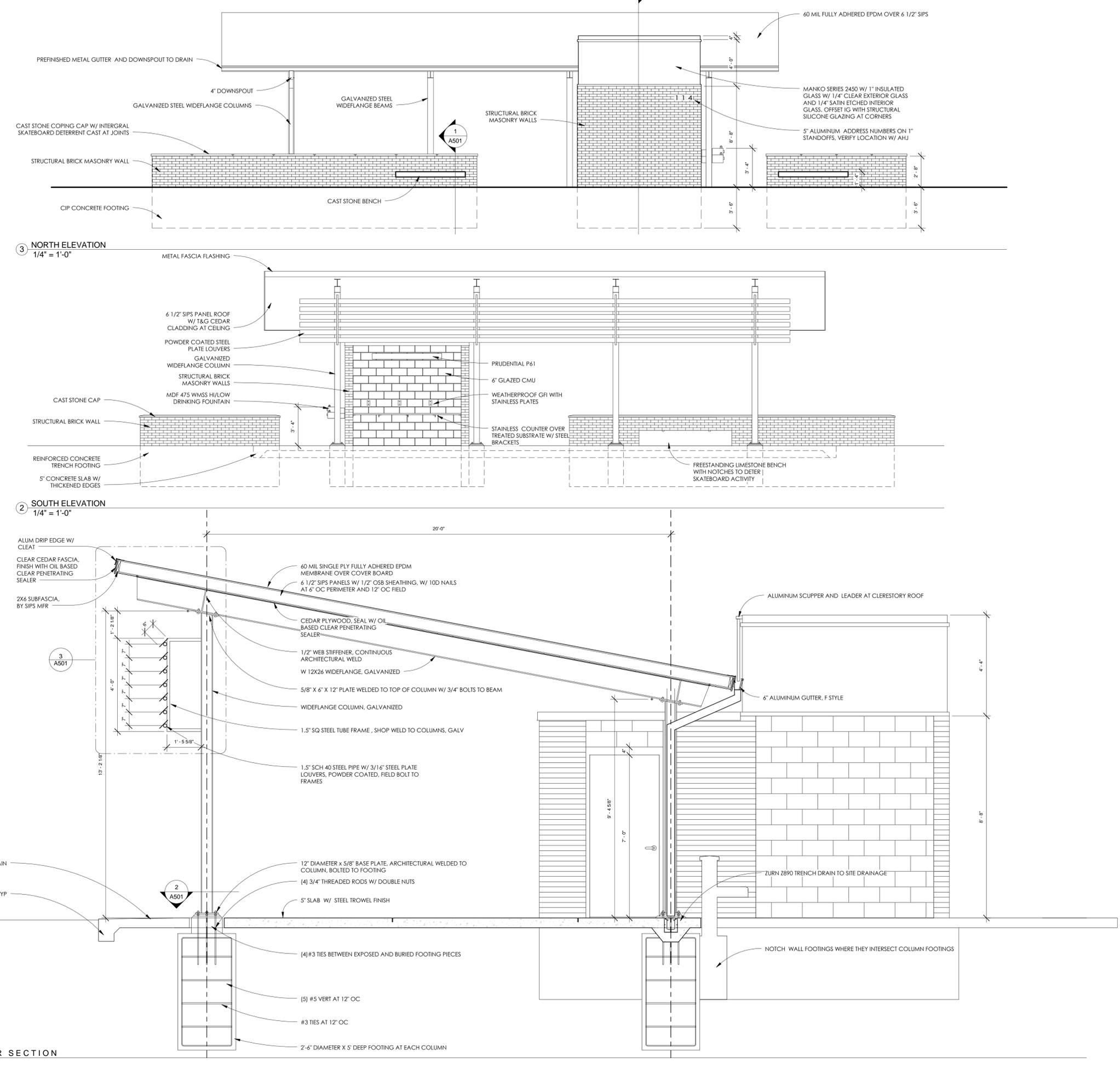
11 - 5 - 2014

PROJECT NETWORK PATH

SHEET NUMBER

A102  
ROOF  
PLAN

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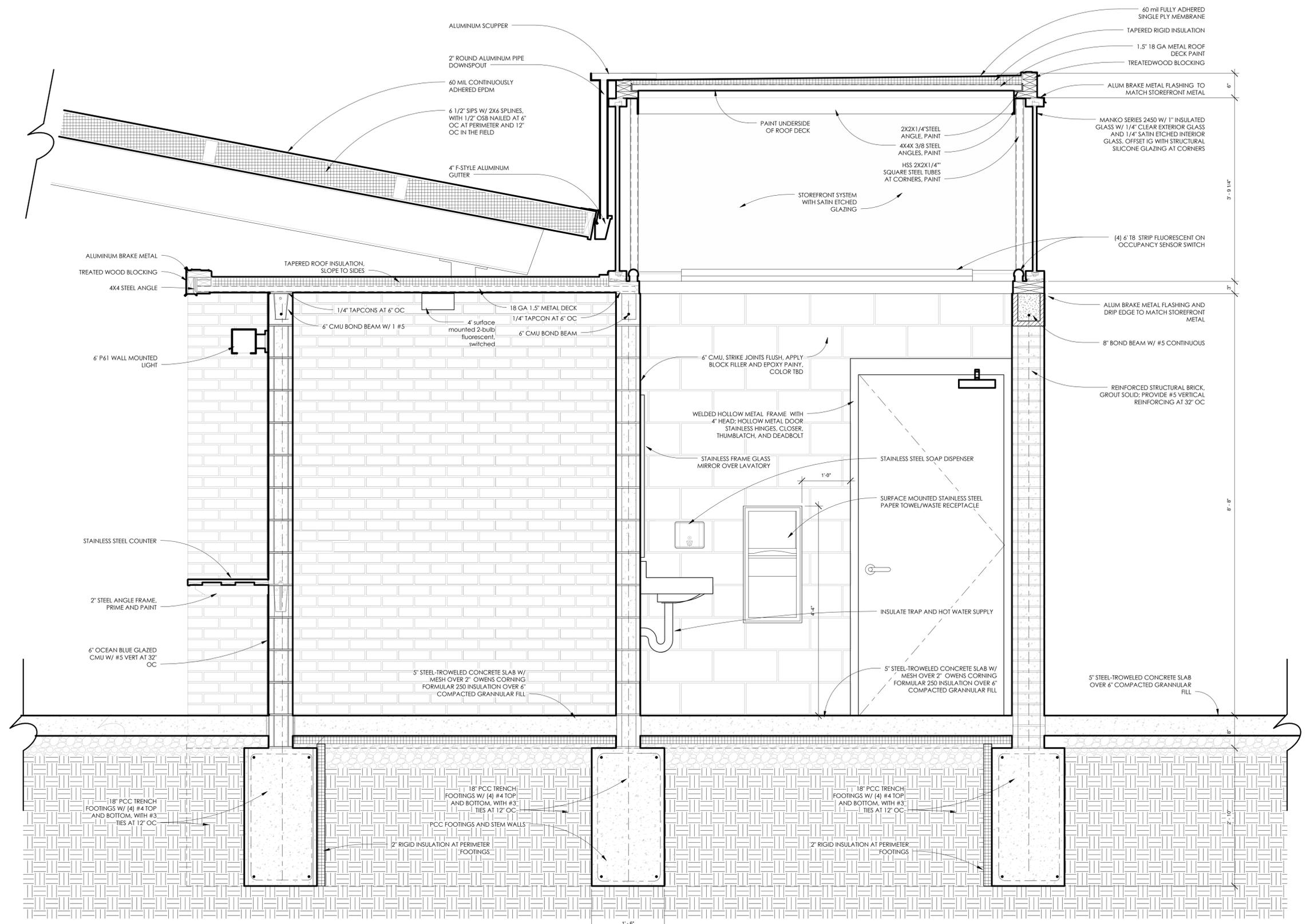


③ NORTH ELEVATION  
1/4" = 1'-0"

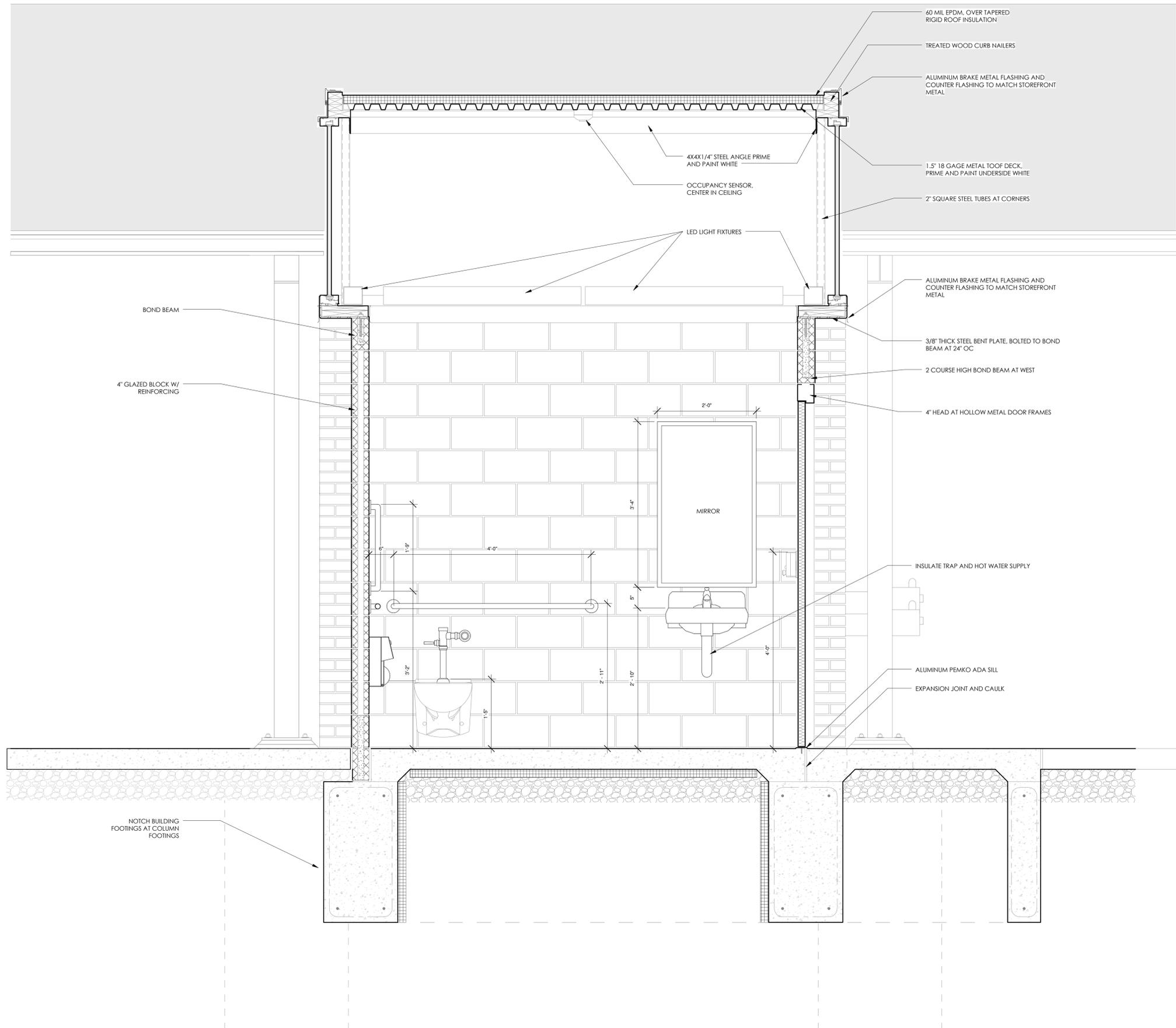
② SOUTH ELEVATION  
1/4" = 1'-0"

① SHELTER SECTION  
1/2" = 1'-0"

1. All dimensions are in feet and inches. 2. All materials are to be specified by name and manufacturer. 3. All materials are to be specified by name and manufacturer. 4. All materials are to be specified by name and manufacturer. 5. All materials are to be specified by name and manufacturer. 6. All materials are to be specified by name and manufacturer. 7. All materials are to be specified by name and manufacturer. 8. All materials are to be specified by name and manufacturer. 9. All materials are to be specified by name and manufacturer. 10. All materials are to be specified by name and manufacturer. 11. All materials are to be specified by name and manufacturer. 12. All materials are to be specified by name and manufacturer. 13. All materials are to be specified by name and manufacturer. 14. All materials are to be specified by name and manufacturer. 15. All materials are to be specified by name and manufacturer. 16. All materials are to be specified by name and manufacturer. 17. All materials are to be specified by name and manufacturer. 18. All materials are to be specified by name and manufacturer. 19. All materials are to be specified by name and manufacturer. 20. All materials are to be specified by name and manufacturer.



1 BUILDING SECTION  
1" = 1'-0"



1 RESTROOM CROSS SECTION  
1" = 1'-0"

Small vertical text on the left margin containing project details and disclaimers.



**OWNER**

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P 515-279-8818

**CIVIL ENGINEER**

Raker Rhodes Engineering  
4717 Grand Avenue  
Des Moines, IA 50312  
P 515-279-0275

**TITLE & LOGO**

**WINDFIELD PARK SITE  
IMPROVEMENT PROJECT**

**KEY MAP**

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BD AP

**PROJECT TEAM MEMBER(S)**

**CHECK**

**SEAL / STAMP**

**TITLE**

**PROJECT NO.**

14005

**DATE**

9-29-14

**PROJECT NETWORK PATH**

**SHEET NUMBER**

A700

SPEC.

**OUTLINE SPECIFICATIONS**

SECTION 03350 CONCRETE AND REINFORCING  
ALL CONCRETE WORK SHALL CONFORM TO THE LATEST EDITION OF THE AMERICAN CONCRETE INSTITUTE PUBLICATIONS: ACI 301, ACI 304, ACI 311, ACI 315, ACI 318, AND ACI 347 UNLESS OTHERWISE NOTED.  
CONCRETE MATERIALS:  
ASTM C150 TYPE 1 PORTLAND CEMENT  
ASTM C33 - NORMAL WEIGHT AGGREGATES  
PORTABLE WATER  
STRENGTH: FOOTINGS 3000 PSI  
INTERIOR SLAB 4000 PSI  
EXTERIOR SLABS 4000 PSI

LIMIT CHLORIDES CONTENT BY ACI REQUIREMENTS FOR EXPOSURE TYPE. PROVIDE HARDENER AND SEALER AT INTERIOR SLABS.

REINFORCING: MATERIAL: HIGH STRENGTH NEW BILLET STEEL CONFORMING TO THE FOLLOWING;

BARs: ASTM A615 GRADE 60

WELDED WIRE FABRIC: ASTM A185 6 X 6 X W2.1 X W2.1 WWR

PRINCIPAL REINFORCING PROTECTION:

CAST AGAINST EXPOSED EARTH: 3"

FORMED SURFACES: SLABS 2"

SLABS ON GRADE: 2"

UNLESS NOTED OTHERWISE, PLACED 1" FROM TOP OF SLAB. LAP WWR MINIMUM 2 PANELS AT EDGES AND ENDS AND PROVIDE ADDITIONAL REINFORCING WHERE SHOWN ON THE DRAWINGS.

TESTING: 2 CYLINDERS AND 1 SLUMP TEST FOR EVERY 50 CUBIC YARDS OF CONCRETE PLACED. MINIMUM 1 SET PER CONDITION. FURNISH RESULTS TO OWNER AND ARCHITECT/ENGINEER. SUBMIT TESTING RESULTS AND SAMPLES TO ARCHITECT.

**042100 CLAY UNIT MASONRY  
PART I QUALITY ASSURANCE**

BRICK TESTS

ALL TESTS SHALL BE PERFORMED BY AN INDEPENDENT CERTIFIED TESTING LABORATORY.

ALL TESTS SHALL BE IN ACCORDANCE WITH ASTM C-67.

SUBMITTALS:

SUBMIT TEST REPORT AND CERTIFICATE OF CONFORMANCE DOCUMENT FOR TYPE AND COLOR OF BRICK SPEC'D

TEST REPORTS SHALL INCLUDE:

COMPRESSIVE STRENGTH, 24 HOUR COLD WATER ABSORPTION, 5 HOUR BOIL ABSORPTION (IF REQUIRED), SATURATION COEFFICIENT (IF REQUIRED), INITIAL RATE OF ABSORPTION (I.R.A.), EFFLORESCENCE, WEATHER CLASSIFICATION

CERTIFICATE OF CONFORMANCE SHALL STATE THAT BRICK MEETS OR EXCEEDS APP. ASTM SPECIFICATIONS.

SAMPLE PANELS: SAMPLE PANEL SIZE SHALL BE 4'X4' SHOWING THE PROPOSED COLOR RANGE, TEXTURE, BOND, MORTAR, WORKMANSHIP, CLEANING, AND WATER REPELLENTS WHERE APPLICABLE.

FINAL BRICK SELECTION SHALL BE MADE ONLY FOLLOWING ARCHITECT'S REVIEW AND APPROVAL OF SAMPLE PANEL.

BRICK FROM MANUFACTURED MATERIAL FOR PROJECT SHALL BE SHIPPED TO SITE AND SAMPLE PANEL ERECTED.

NO BRICK SHALL BE SHIPPED FROM MANUFACTURER TO SITE UNTIL ARCHITECT'S ACCEPTANCE OF JOB PANEL CONSTRUCTED FROM ACTUAL MATERIAL FOR PROJECT. THIS PANEL SHALL REPLACE ALL OTHER SAMPLE PANELS AND SHALL REMAIN ON SITE THROUGHOUT CONSTRUCTION, AND BECOME THE PROJECT STANDARD FOR BOND, MORTAR, WORKMANSHIP, AND APPEARANCE.

**PART II PRODUCTS**

HOLLOW BRICK

MANUFACTURER: INTERSTATE BRICK COMPANY OR H.C. MUDDOX

ASTM C-652, GRADE SW, TYPE HBX OR BETTER.

COLOR AND TEXTURE - DESERT SAND, MATTE TEXTURE, WITH 2 SLOTS ON ONE FACE. 1 ON THE OTHER.

DIMENSIONS 7-5/8" WIDE X 2-1/4" TALL X 15-5/8" LENGTH.

MINIMUM COMPRESSIVE STRENGTH 9,000 PSI.

MAXIMUM SATURATION COEFFICIENT 0.78 (IF REQUIRED).

MINIMUM IRA 6 G/ MIN/30 IN2.

**PART III EXECUTION**

\* BOND SHALL BE RUNNING BOND UNLESS OTHERWISE SHOWN ON CONTRACT DOCUMENTS.

\* MORTAR JOINTS SHALL BE CONCAVE UNLESS OTHERWISE SHOWN ON CONTRACT DOCUMENTS.

\* ALL CONSTRUCTION STRICTLY ADHERES TO INTERNATIONAL BUILDING CODE (IBC) OR TMS 402/ACI308/ASCES.

\* CLEANING SHALL CONFORM TO INTERSTATE BRICK TECHNICAL BULLETIN 4 BRICK CLEANING RECOMMENDATIONS, SECTION 040120 AND BIA TECHNICAL NOTE #20 CLEANING BRICKWORK. DO NOT USE MURIATIC ACID OR SAND BLASTING; CONTACT MANUFACTURER FOR RECOMMENDATIONS.

\* WATER REPELLENT & COATINGS

\* WHERE WATER REPELLENTS ARE REQUIRED, CONSULT INTERSTATE BRICK TECHNICAL BULLETIN 1 WATER REPELLENT COATINGS AND SECTION 071900.

**ASTRA-GLAZE-SW+ SPECIFICATION**

**PART 1 - GENERAL**

SUBMITTAL:

SELECTION FOR SAMPLES FOR SELECTION FROM MANUFACTURER'S SERIES. SUBMIT PRODUCT LITERATURE, CERTIFICATIONS, TEST REPORTS, FULL SIZE SAMPLE(S) OF EACH COLOR SPECIFIED OR SELECTED. CUSTOM COLORS ARE AVAILABLE. CONTACT NORTHFIELD 847 816 9000 FOR DETAILS.

QUALITY ASSURANCE:

ALL GLAZED MASONRY UNITS SHALL BE ASTRA-GLAZE-SW+ UNITS MANUFACTURED BY TRENWYTH MANUFACTURING FACILITIES. GLAZED CONCRETE BLOCKS MANUFACTURED IN PENNSYLVANIA SHALL BE LIGHTWEIGHT UNITS CONFORMING TO ASTM C90. GLAZED CONCRETE BLOCKS MANUFACTURED IN ARIZONA SHALL BE MEDIUM WEIGHT UNITS CONFORMING TO ASTM C90. THE GLAZED SURFACE SHALL HAVE A SMOOTH SATIN-GLOSS FINISH, EXTERNALLY HEAT-POLYMERIZED CAST-ON FACING CONFORMING TO ASTM C744-08 AND ALL APPLICABLE FEDERAL SPECIFICATIONS. ALL ASTRA-GLAZE-SW+ UNITS ARE MANUFACTURED WITH AN APPROVED INTEGRAL WATER REPELLENT CMU ADMIXTURE.

ALL ASTRA-GLAZE-SW+ ARE MANUFACTURED WITH PRE-CONSUMER RECYCLED MATERIAL.

FIRE RESISTANCE: FIRE RATED FOR UP TO 4 HOURS. DEFINE HOURLY RATINGS REQUIRED BY NCMA TEK NOTES.

FIELD CONSTRUCTED MOCK-UPS: CONSTRUCT A SAMPLE PANEL, NO LESS THAN 4' X 4', OF UNITS OF EACH COLOR AND SIZE TO BE USED IN THE PROJECT.

A FULL SIZE UNIT IS REQUIRED TO ILLUSTRATE COLOR AND TEXTURE FOR APPROVAL. MANUFACTURER REQUIRES THAT A SAMPLE PANEL BE INSTALLED AT THE JOBSITE PRIOR TO INSTALLATION OF ANY TRENWYTH PRODUCT. THIS PANEL WILL REPRESENT BOTH THE QUALITY OF THE PRODUCT AND THE WORKMANSHIP TO BE EXPECTED FOR THE PROJECT. THE PANEL MUST BE APPROVED BY EITHER THE OWNER OR ARCHITECT FOR THE PROJECT.

MANUFACTURER WILL PROVIDE 47 UNITS FOR A 4' BY 4' SAMPLE PANEL AT NO COST FOR THE MATERIAL (EXCLUDING FREIGHT TO SITE).

DELIVERY, STORAGE AND HANDLING:

GLAZED MASONRY UNITS SHALL BE DELIVERED TO THE JOBSITE ON BANDED PALLETS WITH INDIVIDUAL PROTECTIVE COVERS ON EACH GLAZED BLOCK FACE. KEEP PROTECTIVE BLOCK COVERS ON THE BLOCKS UNTIL INSTALLATION. STORE PALLETS IN SINGLE STACKS ON LEVEL GROUND AND COVER WITH WATERPROOF COVERING (E.G., TARP AULINS) TO PROTECT THE BLOCKS FROM INCREMENT WEATHER. HANDLE BLOCKS CAREFULLY TO AVOID BREAKAGE AND DAMAGE TO THE FINISHED SURFACE.

PROJECT SITE CONDITIONS:

PROTECTION OF WORK: COVER WALLS EACH DAY AFTER INSTALLATION TO KEEP OPEN WALLS PROTECTED AND DRY. AFTER UNITS ARE INSTALLED THEY SHOULD BE PROTECTED FROM DAMAGE BY OTHER TRADES PERFORMING OPERATIONS THAT CAN STAIN OR OTHERWISE DAMAGE THE FINISHED SURFACES BY COVERING WALLS WITH PLASTIC. CORNERS SHOULD BE PROTECTED FROM DAMAGE AFTER INSTALLATION BY COVERING THEM WITH PLYWOOD.

PART 2- PRODUCTS

PRODUCT NAME: OCEAN BLUE ASTRA-GLAZE-SW+@ GLAZED CONCRETE MASONRY UNITS.

DISTRIBUTED BY: GLEN-GERY BRICK (515) 205-8729, 101 ASHWORTH ROAD, WEST DES MOINES, IA 50265

RELATED MATERIALS:

COLOR MATCHING OR CONTRASTING MORTAR IS AVAILABLE FROM MANUFACTURER. CONSULT NCMA TEK NOTES. FOR MORTAR TYPE AND SPECIFICATIONS, USE MANUFACTURER-APPROVED MATCHING WATER-REPELLENT MORTAR ADDITIVE. FOLLOWING MANUFACTURER'S INSTRUCTIONS, FOR ALL EXTERIOR MORTAR. CONSULT MANUFACTURER FOR RECOMMENDATIONS.

IN AREAS THAT ARE EXPOSED TO EXCESSIVE MOISTURE, WE RECOMMEND JOINTS TO BE RAKED AND FILLED WITH BONSAI B-7000 EPOXY. SEE MORTAR BEDDING AND JOINTING FOR DETAILS.

SIZES AND SHAPES:

ACTUAL FACING DIMENSIONS SHALL BE 7-3/4" X 15-3/4" FORMING A 1/16" LIP AROUND THE EDGES OF A MODULAR 7-5/8" X 15-5/8" BLOCK. NOMINAL 6" STANDARD BLOCK THICKNESS SHALL BE USED AS REQUIRED, AS WELL AS STANDARD AND SPECIAL BLOCK SHAPES. BASIC UNITS MAY INCLUDE STRETCHERS, JAMBS, CAPS AND COVE BASES. SEMI-SOLID AND SOLID UNITS SHALL BE USED WHERE SPECIFIED AND/OR SHOWN ON THE DRAWINGS. PROVIDE SIZES AS SHOWN ON DRAWINGS.

WORKMANSHIP CLEARANCE:

CAREFULLY FOLLOWING THE MANUFACTURER'S INSTRUCTIONS, WE RECOMMEND THE USE OF CUSTOM BURNISHED MASONRY CLEANER BY PROSOCO (DILUTE 1 PART TO 3 PARTS CLEAN WATER). AVAILABLE FROM MANUFACTURER.

DO NOT POWERWASH.

CAUTION: THE FOLLOWING SOLVENTS MUST NEVER BE USED AS THEY MAY DAMAGE ASTRA-GLAZE-SW+ BLOCK FINISHES: PAINT REMOVER, LACQUER THINNER, EPOXY THINNER, METHYLENE CHLORIDE, ACETONE, MURIATIC ACID. CONTACT YOUR NORTHFIELD REPRESENTATIVE FOR RECOMMENDATIONS FOR HARD TO CLEAN AREAS.

PART 3 - EXECUTION

LAYING MASONRY WALLS

DRAW BLOCKS FROM MORE THAN ONE PALLET AT A TIME DURING INSTALLATION. ALL EXTERIOR MORTAR SHALL INCLUDE MANUFACTURER-APPROVED WATER-REPELLENT ADDITIVE ADDED TO EACH BATCH IN THE APPROPRIATE DOSAGE RATES FOR MORTAR TYPE (M, S OR N) PER MANUFACTURER'S INSTRUCTIONS. REFER TO NCMA TEK NOTES, FOR HOT AND COLD WEATHER CONSTRUCTION PRACTICES.

LAY ASTRA-GLAZE-SW+ BLOCKS WITH THE FACES LEVEL, PLUMB AND TRUE TO A LINE STRUNG HORIZONTALLY AT THE GLAZED FACE. INSTALL ONLY QUALITY UNITS; REJECT ALL DEFECTIVE UNITS, AS DEFINED IN ASTM C744.

UNITS SHALL HAVE UNIFORM FACE JOINT DIMENSIONS OF 1/4" BOTH HORIZONTALLY AND VERTICALLY. TOOL JOINTS NEATLY AFTER THEY ARE FINGER-HARD TO MAKE THEM STRAIGHT AND UNIFORM. SIZE AND PLACE CUT PIECES APPROPRIATELY TO MAINTAIN CONSISTENCY AND BOND. COMPLETE MASONRY CONSTRUCTION USING PROCEDURES AND WORKMANSHIP CONSISTENT WITH THE BEST MASONRY PRACTICES.

INSTALLATION:

LIGHTING: PROVIDE ADEQUATE LIGHTING FOR MASONRY WORK BY PLACING ALL LIGHTING AT A REASONABLE DISTANCE FROM THE WALL FOR EVEN ILLUMINATION. DO NOT USE TROUGH LIGHTING.

BASE COURSE: ALIGN BASE COURSE PROPERLY ON THE FLOOR SLAB. COVE BASE: KEEP THE COVE BASE TIGHT TO THE SLAB IF VINYL FLOOR TILE IS TO BE INSTALLED. FOR THICKER FLOORING, RAISE COVE BASE UNITS TO THE DESIRED HEIGHT.

CUTTING: MAKE ALL UNIT CUTS, INCLUDING THOSE FOR BONDING, HOLES, BOXES, ETC., WITH MOTOR DRIVEN MASONRY SAWS, USING EITHER AN ABRASIVE OR DIAMOND BLADE. CUT NEATLY AND LOCATE FOR BEST APPEARANCE.

MORTAR BEDDING AND JOINTING:

1. LAY UNITS WITH FULL MORTAR COVERAGE ON HEAD AND BED JOINTS TAKING CARE NOT TO BLOCK CORES TO BE GROUTED OR FILLED WITH MASONRY INSULATION.

2. TOOL ALL MORTAR JOINTS WHEN THUMBPRINT HARD INTO A CONCAVE CONFIGURATION.

3. CARE SHOULD BE TAKEN TO REMOVE MORTAR FROM THE FACE OF MASONRY UNITS BEFORE IT SETS.

**4. TUCKPOINT THE JOINTS OF SCORED UNITS FOR PROPER APPEARANCE.**

ALL EXTERIOR SCORED UNITS MUST BE TUCKPOINTED TO PREVENT WATER PENETRATION. RAKE BACK THE JOINT WHEN EPOXY (BONSALATICRETE) IS USED ON SELECT JOBS THAT REQUIRE BETTER MOISTURE PREVENTION.

VARIOUS MASONRY MORTARS MAY BE USED WITH ASTRA-GLAZE-SW+ CONCRETE MASONRY UNITS DEPENDING ON SPECIFIC STRUCTURAL REQUIREMENTS FOR THE FINISHED WALLS. WE RECOMMEND A MATCHING WATER-REPELLENT MORTAR ADDITIVE (AVAILABLE FOR PURCHASE FROM MANUFACTURER). FOLLOW MANUFACTURER'S INSTRUCTIONS IN ALL MORTAR APPLICATIONS.

EPOXY FINISHED JOINTS:

IN AREAS EXPOSED TO EXCESSIVE MOISTURE, MAKE SURE TO TOOL MORTAR JOINTS WITH A MINIMUM OF 1/4" AND TUCKPOINT WITH AN APPROVED WATER-RESISTANT GROUT. A TYPICAL TUCKPOINTING GROUT IS BONSAI® POLYMER MODIFIED SANDED TIE GROUT MIXED WITH THE BONSAI B-7000 EPOXY. DO NOT ADD WATER OR ANYTHING ELSE IN ADDITION TO THE B-7000, WHICH WILL MAKE IT A 100% SOLID ENBLING IT TO BE ACID AND STAIN RESISTANT.

RECOMMENDATION FOR USING BONSAI® - DO NOT FLOAT GROUT ACROSS GLAZED SURFACE. THE PROPER TECHNIQUE IS TO POINT OR USE A MORTAR GUN!

FLASHING OF MASONRY WORK:

INSTALL FLASHING AT LOCATIONS SHOWN IN THE PLANS AND IN STRICT ACCORDANCE WITH THE DETAILS AND THE BEST MASONRY FLASHING PRACTICES.

WEEP HOLES AND VENTS:

INSTALL WEEP HOLES AND VENTS AT PROPER INTERVALS AT COURSES ABOVE GRADE AND AT ANY WATER STOPS OVER WINDOWS, DOORS AND BEAMS. CONSULT NCMA TEK NOTES, AVAILABLE AT WWW.TRENWYTH.COM, FOR ADDITIONAL INFORMATION ON FLASHING.

INSPECTION:

THE GLAZED FACING SHALL CONFORM TO THE REQUIREMENTS OF ASTM C744 WHEN VIEWED FROM A DISTANCE OF FIVE (5) FEET AT RIGHT ANGLES TO THE WALL WITH NORMAL LIGHTING. THE CONCRETE MASONRY UNITS ON WHICH THE GLAZE IS MOLDED SHALL CONFORM TO THE REQUIREMENTS OF ASTM C90.

CLEANING:

KEEP WALLS CLEAN DAILY DURING INSTALLATION USING BRUSHES OR RAGS AND A CLEAN DAMP CLOTH. HARSH CLEANING METHODS AFTER WALLS HAVE BEEN ERECTED MAY MAR THE SURFACE OF THE BLOCKS. DO NOT ALLOW EXCESS MORTAR LUMPS OR SMEARS TO HARDEN ON THE GLAZED SURFACES. REMOVE GREEN MORTAR WITH A DRY CLOTH. DO NOT USE STEEL WOOL, SANDPAPER OR OTHER ABRASIVES.

FINAL CLEANDOWN:

CLEAN THE COMPLETED WALLS WITH BURNISHED CUSTOM MASONRY CLEANER BY PROSOCO 3:1 SOLUTION, CAREFULLY FOLLOWING MANUFACTURER'S WASH/DOWN INSTRUCTIONS. INCLUDING THOROUGH RINSING. DO NOT USE ACID OR ABRASIVES ON THE GLAZED SURFACES.

MAINTENANCE:

ASTRA-GLAZE-SW+ UNITS, PROPERLY INSTALLED AND CLEANED, NEED VIRTUALLY NO MAINTENANCE OTHER THAN ROUTINE CLEANING WITH TYPICAL NON-ABRASIVE HOUSEHOLD CLEANER. GRAFFITI, PAINT OR DYE MAY NEED SPECIAL CLEANING METHODS AND PRODUCTS SUCH AS GRAFFITI WIZARD® ENVIRONMENTALLY FRIENDLY CLEANER. CONTACT MANUFACTURER FOR SPECIFIC CLEANING RECOMMENDATIONS. DO NOT POWERWASH.

INSTALLATION RECOMMENDATIONS:

\* FOR WALLS WITH A GLAZED FINISH ON BOTH SIDES, USE TWO SINGLE-FACED UNITS. BECAUSE MASONRY UNITS ARE TYPICALLY INSTALLED ALIGNING ONE SIDE, THE SECOND SIDE OF DOUBLE FACED UNITS IS ALMOST INvariably MISALIGNED. DOUBLE-FACED UNITS ARE NOT RECOMMENDED.

\* MANUFACTURER ACCEPTS NO RESPONSIBILITY FOR FACE ALIGNMENT.

\* CAVITY WALL CONSTRUCTION IS RECOMMENDED FOR EXTERIOR WALLS, WITH PROPER FLASHING, VENTING AND WEEP HOLES.

\* FOR BEST APPEARANCE, USE STACK BOND CONSTRUCTION WHEN STACK BOND APPEARANCE IS DESIRED (AS OPPOSED TO SCORED UNITS IN RUNNING BOND).

\* ALL EXTERIOR MORTAR JOINTS MUST CONTAIN A MANUFACTURER-APPROVED WATER REPELLENT ADDITIVE.

\* FOR BEST APPEARANCE AND WATER RESISTANCE, TUCKPOINT SCORED JOINTS ON INTERIOR AND EXTERIOR APPLICATIONS.

\* COLORED MATCHING OR CONTRASTING MORTAR / EPOXY IS AVAILABLE WHEN USING COLORFUL ASTRA-GLAZE-SW+ UNITS. CONTACT YOUR NORTHFIELD REPRESENTATIVE FOR INFORMATION.

**SECTION 04900 - MASONRY RESTORATION AND CLEANING**

APPLICATION: WATER WASHING AND CLEANING EXPOSED MASONRY SURFACES.

MATERIALS: WIRE BRUSH AND MEDIUM PRESSURE WATER.

**SECTION 05120 - STRUCTURAL STEEL**

SHOP DRAWINGS: SUBMIT SHOP DRAWINGS INDICATING MATERIAL CHARACTERISTICS, DETAILS OF CONSTRUCTION, CONNECTIONS, AND RELATIONSHIP WITH ADJACENT CONSTRUCTION.

STANDARDS: AISC, CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES, AND APPLICABLE REGULATIONS.

ARCHITECTURALLY EXPOSED STRUCTURAL STEEL: COMPLY WITH FABRICATION REQUIREMENTS, INCLUDING TOLERANCE LIMITS, AND INSTALLATION TOLERANCES OF AISC'S "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES" FOR STRUCTURAL STEEL IDENTIFIED AS ARCHITECTURALLY EXPOSED STRUCTURAL STEEL.

TESTING: INDEPENDENT TESTING LABORATORY - SUBMIT FOR APPROVAL TEST REPORTS.

ERECTION TOLERANCES: AISC STANDARDS.

STRUCTURAL STEEL:

APPLICATION: BUILDING STRUCTURE.

APPLICATION: ARCHITECTURALLY EXPOSED STRUCTURAL STEEL.

W- SHAPES: ASTM A992

STRUCTURAL STEEL SHAPES (OTHER THAN W), PLATES, AND BARS: ASTM A 36.

STRUCTURAL STEEL TUBING: ASTM A 500, GRADE B.

STEEL PIPE: ASTM A 53, TYPE E OR S, GRADE B

HEADED STUD-TYPE SHEAR CONNECTORS: ASTM A 108, GRADE 1015 OR 1020.

ANCHOR BOLTS: ASTM A 307, NONLEADED TYPE.

UNFINISHED THREADED FASTENERS: ASTM A 307, GRADE A.

HIGH-STRENGTH THREADED FASTENERS: ASTM A 325 OR ASTM A 490, AS APPLICABLE.

AUXILIARY MATERIALS:

-DIRECT TENSION INDICATORS: ASTM A 959.

-ELECTRODES FOR WELDING: AWS CODE.

-STRUCTURAL STEEL PRIMER PAINT: SSPC - PAINT 13, COMPATIBLE WITH TOPCOATS.

-NONMETALLIC SHRINKAGE-RESISTANT GROUT: PREMIXED NONMETALLIC GROUTING COMPOUND, ASTM C 1107.

COMPLY WITH AISC CODES AND SPECIFICATIONS, AND WITH AWS "STRUCTURAL WELDING CODE".

**ARCHITECTURALLY EXPOSED STEEL: FABRICATE WITH SPECIAL CARE USING MATERIALS CAREFULLY SELECTED FOR BEST APPEARANCE. STORE MATERIALS OFF GROUND AND KEEP CLEAN. CUT, FIT AND ASSEMBLE WORK WITH SURFACES SMOOTH, SQUARE AND WITH COMPLETE CONTACT AT JOINTS. SET ALL CAMBERS UP. WELD ALL WORK CONTINUOUSLY; GRIND SMOOTH AND FLUSH TO MAKE SEAMS NOT VISIBLE AFTER PRIMING. PREPARE SURFACES TO COMPLY WITH SSPC-SP6; APPLY PRIME COAT WITHIN 24 HOURS AFTER CLEANING. TOUCH-UP FIELD WELDS AND ABRADED AREAS WITH SHOP PRIMER.**

**SECTION 05500 - METAL FABRICATIONS**

SHOP DRAWINGS: SUBMIT SHOP DRAWINGS INDICATING MATERIAL CHARACTERISTICS, DETAILS OF CONSTRUCTION, CONNECTIONS, AND RELATIONSHIP WITH ADJACENT CONSTRUCTION.

SHOP DRAWINGS SHALL BE PREPARED AND STAMPED BY A QUALIFIED ENGINEER LICENSED IN THE JURISDICTION OF THE PROJECT.

COMPLY WITH GOVERNING CODES AND REGULATIONS. PROVIDE PRODUCTS OF ACCEPTABLE MANUFACTURERS, WHICH HAVE BEEN IN SATISFACTORY USE IN SIMILAR SERVICE FOR THREE YEARS. USE EXPERIENCED INSTALLERS. DELIVER, HANDLE, AND STORE MATERIALS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

METAL FABRICATION APPLICATIONS:

APPLICATION: SEE DRAWINGS

FERROUS MATERIALS:

STEEL SHAPE: SEE STRUCTURAL STEEL SECTION

WELDING RODS AND BARE ELECTRODES: AWS SPECIFICATIONS.

ALUMINUM MATERIALS:

EXTRUDED BARS AND SHAPES: ASTM B 221 ALUMINUM ALLOY.

ROLLED TREAD PLATE: ASTM B 632 ALUMINUM ALLOY.

FASTENERS: ASTM A 153.

FINISH: CLEAR ANODIZED.

FASTENERS:

BOLTS AND NUTS: HEXAGON HEAD TYPE, ASTM A 307, GRADE A.

LAG BOLTS: SQUARE HEAD, FS FF-B-561.

MACHINE SCREWS: CADMIUM PLATED STEEL, FS FF-S-92.

WOOD SCREWS: FLAT HEAD CARBON STEEL, FS FS-111.

PLAIN WASHERS: ROUND CARBON STEEL, FS FF-W-92.

DRILLED-IN EXPANSION ANCHORS: FS FF-S-325.

TOGGLE BOLTS: TUMBLE-WING TYPE, FS FF-B-588.

LOCK WASHERS: SPRING TYPE CARBON STEEL, FS FF-W-84.</

**OWNER**

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**ARCHITECT**

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**CIVIL ENGINEER**

Raker Rhodes Engineering  
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WINDFIELD PARK SITE  
IMPROVEMENT PROJECT

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14005

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A701

SPEC.

**SECTION 061200**

**STRUCTURAL INSULATED PANELS**

**PART 1 GENERAL**

**1.01 SUMMARY**

SECTION INCLUDES: STRUCTURAL INSULATED PANELS (SIPS).

RELATED SECTIONS: SECTION(S) RELATED TO THIS SECTION INCLUDE:

**1.02 SYSTEM DESCRIPTION**

STRUCTURAL INSULATED PANELS (SIPS) CONSIST OF ORIENTED STRAND BOARD (OSB) LAMINATED WITH STRUCTURAL ADHESIVES TO AN INSECT RESISTANT EPS INSULATION CORE, AND SIP MANUFACTURER SUPPLIED CONNECTING SPLINES, SEALANTS, AND SIP SCREWS.

**1.03 REFERENCES**

ACSE 7 - MINIMUM LOADS FOR BUILDINGS AND OTHER STRUCTURES.  
ASTM C578 - STANDARD SPECIFICATION FOR RIGID, CELLULAR POLYSTYRENE THERMAL INSULATION.

ASTM E1803 - STANDARD TEST METHOD FOR DETERMINING STRUCTURAL CAPACITIES OF INSULATED PANELS.

DOC P52 - PERFORMANCE STANDARD FOR WOOD-BASED STRUCTURAL-USE PANELS.

ICC ES AC04 - ACCEPTANCE CRITERIA FOR SANDWICH PANELS.

ICC ES AC05 - ACCEPTANCE CRITERIA FOR SANDWICH PANEL ADHESIVES.

ICC ES AC12 - ACCEPTANCE CRITERIA FOR FOAM PLASTIC INSULATION.

ASTM D3273 - STANDARD TEST METHOD FOR RESISTANCE TO GROWTH OF MOLD ON THE SURFACE OF INTERIOR COATINGS IN AN ENVIRONMENTAL CHAMBER.

ASTM E1333- STANDARD TEST METHOD FOR DETERMINING FORMALDEHYDE CONCENTRATIONS IN AIR AND EMISSION RATES FROM WOOD PRODUCTS USING A LARGE CHAMBER.

EPA - REGISTERED PRODUCTS LISTING.

**1.04 SUBMITTALS**

**PRODUCT DATA:**

SIP CODE COMPLIANCE: SUBMIT A CODE REPORT / MATERIAL LISTING REPORT FOR SIPS SHOWING EVIDENCE OF COMPLIANCE WITH CODE REQUIREMENTS AS AN ALTERNATE METHOD OF CONSTRUCTION. SUBMIT CURRENT COMPLIANCE REPORT FROM AN INTERNATIONAL ACCREDITATION SERVICE (IAS) ACCREDITED PRODUCT CERTIFICATION AGENCY THAT HAS DEMONSTRATED COMPLIANCE WITH ISO GUIDE 65, GENERAL REQUIREMENTS FOR BODIES OPERATING PRODUCT CERTIFICATION SYSTEMS, SHOWING CONFORMANCE TO THE INTERNATIONAL BUILDING CODE (IBC) AND INTERNATIONAL RESIDENTIAL CODE (IRC).

SHEAR WALL USE: THE SUBMITTED CODE REPORT / MATERIAL LISTING REPORT SHALL INCLUDE ALL LOAD CASES FOR TRANSVERSE, AXIAL AND RACKING SHEAR LOADING FOR THE SIPS. THE REPORT MUST DEMONSTRATE THAT THE SIPS MAY BE USED AS SHEAR WALLS IN ALL SEISMIC DESIGN CATEGORIES A, B, C, D, E AND F.

EPS CODE COMPLIANCE: SUBMIT ICC ES CODE REPORT FOR EPS FOAM WITH EVIDENCE OF COMPLIANCE WITH CODE. SUBMIT CURRENT COMPLIANCE REPORT NUMBERS FROM ICC ES WITH CONFORMANCE TO THE INTERNATIONAL BUILDING CODE (IBC) AND INTERNATIONAL RESIDENTIAL CODE (IRC). CODE REPORT SHALL INCLUDE COMPLIANCE WITH ICC ES AC12. MANUFACTURER'S INSTRUCTIONS: SUBMIT SIP MANUFACTURER'S CONSTRUCTION DETAIL BOOK AND LOAD DESIGN CHARTS.

CALCULATIONS: SUBMIT STRUCTURAL CALCULATIONS BY A DESIGN PROFESSIONAL REGISTERED IN THE STATE THE PROJECT IS BEING CONSTRUCTED IN AND QUALIFIED TO PERFORM THE DESIGN WORK. CALCULATIONS SHALL BE BASED ON PREMIER'S DESIGN VALUES AS SHOWN IN THE CURRENT NTA CODE REPORT.

SHOP DRAWINGS: SUBMIT SHOP DRAWINGS FOR SIPS SHOWING LAYOUT, ELEVATIONS, PRODUCT COMPONENTS AND ACCESSORIES.

QUALITY ASSURANCE SUBMITTALS - SUBMIT THE FOLLOWING:

SIPS: SUBMIT SIP PRODUCT CERTIFICATE SHOWING COMPLIANCE TO THIRD PARTY QUALITY CONTROL PROGRAM OF UNDERWRITERS LABORATORIES, INC.

EPS CORE: SUBMIT EPS INSULATION MANUFACTURER'S CERTIFICATE SHOWING COMPLIANCE TO THIRD PARTY QUALITY CONTROL PROGRAM OF UNDERWRITERS LABORATORIES, INC.

LABELS: SUBMIT A COPY OF THE LABEL APPROVED BY THE INSPECTION AGENCY CERTIFYING THAT MANUFACTURE OF PANELS COMPLIES WITH SPECIFIED PERFORMANCE CHARACTERISTICS AND PHYSICAL PROPERTIES.

SIPA MANUFACTURER MEMBER IN GOOD STANDING: SUBMIT SIPA CERTIFICATE AS EVIDENCE SHOWING SIP MANUFACTURER IS A SIPA MANUFACTURING MEMBER IN GOOD STANDING.

FORMALDEHYDE EMISSION RATES: SUBMIT EVIDENCE THAT THE SIP MANUFACTURER HAS TESTED THE PANELS IN ACCORDANCE WITH ASTM E1333 BY AND IAS ACCREDITED TESTING LABORATORY AND THE RESULT OF THE TESTING SHOWS FORMALDEHYDE LEVELS BELOW .03 PPM.

FIRE RESISTANT ASSEMBLIES - SUBMIT THE FOLLOWING:  
SUBMIT UL CONSTRUCTION NUMBER OR A CODE REPORT / MATERIAL LISTING REPORT DESCRIBING EACH FIRE-RATED ASSEMBLY.

SUBMIT UL CERTIFICATE SHOWING FLAME SPREAD AND SMOKE DEVELOPED INFORMATION.

WARRANTY: SUBMIT SIP MANUFACTURER'S STANDARD WARRANTY DOCUMENT.

**1.05 QUALITY ASSURANCE**

INSTALLER QUALIFICATIONS: INSTALLER SHALL BE EXPERIENCED IN PERFORMING WORK OF THIS SECTION AND SHOULD HAVE SPECIALIZED IN INSTALLATION OF WORK SIMILAR TO THAT REQUIRED FOR THIS PROJECT.

SOURCE LIMITATIONS: OBTAIN ALL SIPS THROUGH ONE MANUFACTURER. ALL ACCESSORIES TO BE FURNISHED OR RECOMMENDED BY THE SIP MANUFACTURER.

SIP MANUFACTURER SHALL BE A MANUFACTURING MEMBER, IN GOOD STANDING, OF THE STRUCTURAL INSULATED PANEL ASSOCIATION (SIPA).

**1.06 REGULATORY REQUIREMENTS**

SIPS SHALL BE RECOGNIZED FOR COMPLIANCE IN A CURRENT IAS ACCREDITED EVALUATION REPORT OR MATERIAL LISTING REPORT COMPLIANT WITH THE 2009 IBC AND 2009 IRC.

PRE-INSTALLATION MEETING: CONDUCT PRE-INSTALLATION MEETING TO VERIFY PROJECT REQUIREMENTS, FOUNDATION/STRUCTURAL SYSTEMS/SUBSTRATE CONDITIONS, SIP MANUFACTURER'S INSTALLATION INSTRUCTIONS AND SIP MANUFACTURER'S WARRANTY REQUIREMENTS.

COMPLY WITH DIVISION 1 PROJECT MANAGEMENT AND COORDINATION (PROJECT MEETINGS) SECTION.

**1.07 DELIVERY, STORAGE & HANDLING**

ORDERING: COMPLY WITH SIP MANUFACTURER'S ORDERING INSTRUCTIONS AND LEAD TIME REQUIREMENTS TO AVOID CONSTRUCTION DELAYS.

DELIVERY: DELIVER MATERIALS FROM SIP MANUFACTURER WITH IDENTIFICATION LABELS OR MARKINGS INTACT.

OFF-LOAD SIPS FROM TRUCK AND HANDLE USING FORK LIFT OR OTHER MEANS TO PREVENT DAMAGE TO SIPS.

SIPS SHALL BE FULLY SUPPORTED IN STORAGE AND PREVENTED FROM CONTACT WITH THE GROUND. STACK SIPS ON PALLETS OR ON SUPPORTS AT A MAXIMUM OF FOUR FEET ON CENTER.

SIPS SHALL BE FULLY PROTECTED FROM WEATHER. PROTECT AGAINST EXPOSURE TO RAIN, WATER, DIRT, MUD, AND OTHER RESIDUE THAT MAY AFFECT SIP PERFORMANCE. COVER STORED SIPS WITH BREATHABLE PROTECTIVE WRAPS. SIPS SHALL BE STORED IN A PROTECTED AREA.

**1.08 WARRANTY**

PROJECT WARRANTY: REFER TO CONDITIONS OF THE CONTRACT FOR PROJECT WARRANTY PROVISIONS.

MANUFACTURER'S WARRANTY: SIP MANUFACTURER'S WARRANTY IS IN ADDITION TO, AND NOT A LIMITATION OF, OTHER RIGHTS OWNER MAY HAVE UNDER CONTRACT DOCUMENTS.

WARRANTY PERIOD: TWENTY (20) YEARS FROM THE DATE OF ISSUE OF THE WARRANTY.

**PART 2 PRODUCTS**

2.01 MANUFACTURES / SUPPLIERS  
PREMIER SIPS, 19757 57TH AVENUE EAST, PUYALLUP, WA 98375 PHONE 800-272-0986

PREMIER SIPS, 1155 BUSINESS PARK DRIVE-BLDG "A", DIXON, CA 95620-4303. PHONE 707-678-6900

SELECT SIPS EAST, INC., 6906 OLD OAK LANE, MINT HILL, NC 28227 PHONE 980-229-2310

**2.02 MATERIALS**

SIPS CONSISTING OF THE FOLLOWING:

5-1/2" EPS CORE UL CERTIFIED FOR FIRE AND PHYSICAL PROPERTIES OF ASTM C578 TYPE I EPS WITH BORATE INSECT RESISTANT TREATMENT.

INSULATION MANUFACTURER SHALL PROVIDE THIRD PARTY UL CERTIFICATE. 7/16" OSB IDENTIFIED WITH APA OR PFS PERFORMANCE MARK WITH EXPOSURE I DURABILITY RATING AND PERFORMANCE IN ACCORDANCE WITH DOC P5-2 SPAN RATING 24/16 OR GREATER.

LAMINATING ADHESIVES SHALL BE IN CONFORMANCE WITH ICC ES AC05 - ACCEPTANCE CRITERIA FOR SANDWICH PANEL ADHESIVES

**2.03 ACCESSORIES**

SPLINES: OSB, PREMIER SIP SPLINE, OR I-BEAM FOR USE IN JOINING SIPS SHALL BE SUPPLIED BY SIPS MANUFACTURER. DIMENSIONS LUMBER FOR JOINING THE PANELS SHALL BE SUPPLIED BY THE BUILDER.

FASTENERS: CORROSION RESISTANT SIP SCREWS COMPATIBLE WITH SIP SYSTEM SHALL BE PROVIDED BY THE SIPS MANUFACTURER.

WOOD SCREWS FOR ATTACHMENT TO WOOD MEMBERS  
HEAVY DUTY METAL SCREWS FOR ATTACHMENT TO METAL MEMBERS (16 GAUGE TO 1/4")

LIGHT DUTY METAL SCREWS FOR ATTACHMENT TO METAL DECKS (18 GAUGE OR THINNER)

SIP MASTIC: SHALL BE SPECIFICALLY DESIGNED FOR USE WITH SIPS. MASTIC MUST BE COMPATIBLE WITH ALL COMPONENTS OF THE SIP. MASTIC SHALL BE PROVIDED BY THE SIP MANUFACTURER.

DIMENSIONAL LUMBER: SPF, #2 OR BETTER, OR ENGINEERED EQUIVALENT UNLESS OTHERWISE REQUIRED BY STRUCTURAL DRAWINGS.

**2.04 FABRICATION**

SIZES: SIPS SHALL BE FABRICATED IN ACCORDANCE WITH APPROVED SHOP DRAWINGS

THERMAL RESISTANCE, R-VALUE  
\*\*\*NOTE TO SPECIFIER\*\*\* SELECT THE R-VALUE AS REQUIRED FOR EACH AREA OF CONSTRUCTION; TYPICALLY, 4" & 6" PANELS ARE USED FOR WALLS, 6", 10" & 12" PANELS ARE USED FOR FLOORS AND ROOFS.

2.05 6 1/2" (165 MM) THICK SIP WITH R-VALUE OF 22.7 AT 750F AND AN R-VALUE OF 24.5 AT 400F

2.06 PRODUCT SUBSTITUTIONS  
SUBSTITUTIONS: NO SUBSTITUTIONS PERMITTED.

**2.07 RELATED MATERIALS**

RELATED MATERIALS: REFER TO OTHER SECTIONS FOR RELATED MATERIALS AS FOLLOWS:

DIMENSIONAL LUMBER: SPF #2 OR BETTER OR PRE-ENGINEERED EQUIVALENT: REFER TO DIVISION 6 CARPENTRY SECTIONS.

**2.08 SOURCE QUALITY**

SOURCE QUALITY ASSURANCE: EACH SIP COMPONENT REQUIRED SHALL BE SUPPLIED BY SIP MANUFACTURER AND SHALL BE OBTAINED FROM SELECTED MANUFACTURER OR ITS APPROVED SUPPLIER.

EACH SIP SHALL BE LABELED INDICATING UL OR OTHER ISO GUIDE 65 APPROVED THIRD PARTY CERTIFICATION.

PROVIDE EVIDENCE OF UL THIRD PARTY INSPECTION AND LABELING OF ALL INSULATION USED IN MANUFACTURE OF SIPS.

SIP MANUFACTURER SHALL PROVIDE LAMINATION/R-VALUE WARRANTY DOCUMENTS FOR BUILDING OWNER ACCEPTANCE AND EXECUTION.

MANUFACTURER'S STANDARD FORMS WILL BE SUBMITTED.

PROVIDE SIPS WITH EPS TREATED FOR INSECT RESISTANCE. TREATMENT SHALL BE EPA REGISTERED.

DIMENSIONAL TOLERANCE - SHALL COMPLY WITH VALUES LISTED IN THE MANUFACTURER'S QUALITY CONTROL MANUAL.

SOURCE QUALITY: OBTAIN SIPS FROM A SINGLE MANUFACTURER.

**PART 3 EXECUTION**

3.01 MANUFACTURER'S INSTRUCTIONS  
COMPLIANCE: COMPLY WITH MANUFACTURER'S ICC-ES OR MATERIAL LISTING REPORT, LOAD DESIGN CHARTS, DETAIL BOOK, SHOP DRAWINGS, AND PRODUCT DATA, INCLUDING PRODUCT TECHNICAL BULLETINS, FOR INSTALLATION.

3.02 FIELD SMOOTHING  
SITE VERIFICATION OF CONDITIONS: VERIFY SUBSTRATE CONDITIONS (WHICH HAVE BEEN PREVIOUSLY INSTALLED UNDER OTHER SECTIONS) ARE ACCEPTABLE FOR PRODUCT INSTALLATION IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

VERIFY CONDITIONS OF FOUNDATION/STRUCTURAL SYSTEM/SUBSTRATE AND OTHER CONDITIONS WHICH AFFECT INSTALLATION OF SIPS. ANY ADVERSE CONDITIONS SHALL BE REPORTED IN WRITING TO THE SIP MANUFACTURER AND THE DESIGN PROFESSIONAL. DO NOT PROCEED WITH INSTALLATION UNTIL ADVERSE CONDITIONS ARE CORRECTED.

**3.03 INSTALLATION**

SIP INSTALLATION:  
SIP SUPPORTS: PROVIDE LEVEL AND SQUARE FOUNDATION/STRUCTURAL SYSTEM/SUBSTRATE THAT SUPPORT WALL AND/OR ROOF SIPS. FOR WALL SIPS, HOLD SILL PLATE BACK FROM EDGE OF RIM BOARD 1/2" (12 MM) TO ALLOW FULL BEARING OF OSB SKINS. PROVIDE 1 1/2" (38 MM) DIAMETER ACCESS HOLES IN PLATING TO ALIGN WITH ELECTRICAL WIRE CHASES IN SIPS. PROVIDE ADEQUATE BRACING OF SIPS DURING ERECTION. REMOVE DEBRIS FROM PLATE AREA PRIOR TO SIP PLACEMENT.

SIP FASTENING: CONNECT SIPS BY NAILS OR STAPLES AS SHOWN ON DRAWINGS. SCREWS OF EQUAL STRENGTH MAY BE SUBSTITUTED FOR NAILS AND STAPLES AS SPECIFIED BY ENGINEER. SIP MASTIC MUST BE USED TOGETHER WITH EACH FASTENING TECHNIQUES. WHERE SIP SCREW FASTENERS ARE USED, PROVIDE A MINIMUM OF 1" (25.4 MM) PENETRATION INTO SUPPORT. JOIN SIPS USING PLATES AND SPLINES. SECURE ATTACHMENT WITH NAILS, STAPLES, OR SCREWS, AND SIP MASTIC. APPLY SIP MASTIC FOLLOWING SIP MANUFACTURER RECOMMENDATIONS.

VAPOR RETARDERS: PROVIDE VAPOR RETARDERS MANDATED BY BUILDING CODE.

THERMAL BARRIERS: INTERIOR SURFACES OF SIPS SHALL BE FINISHED WITH A MINIMUM 15-MINUTE THERMAL BARRIER, SUCH AS GYPSUM WALLBOARD, NOMINAL (25 MM) WOOD PANELING, OR OTHER APPROVED MATERIALS.

APPLY CODE APPROVED THERMAL BARRIERS ACCORDING TO SIP MANUFACTURER'S RECOMMENDATIONS.

RESTRICTIONS: DO NOT INSTALL SIPS DIRECTLY ON CONCRETE. DO NOT PUT PLUMBING IN SIPS WITHOUT CONSULTING SIP MANUFACTURER. DO NOT OVER CUT SKINS FOR FIELD-CUT OPENINGS AND DO NOT CUT SKINS FOR ELECTRICAL CHASES. SIPS SHALL BE PROTECTED FROM EXPOSURE TO SOLVENTS AND THEIR VAPORS THAT DAMAGE THE EPS FOAM CORE.

REMOVE AND REPLACE INSULATED WALL OR ROOF SIPS WHICH HAVE BECOME EXCESSIVELY WET OR DAMAGED BEFORE PROCEEDING WITH INSTALLATION OF ADDITIONAL SIPS OR OTHER WORK.

**3.04 FIELD QUALITY REQUIREMENTS**

MANUFACTURER'S FIELD SERVICES: UPON OWNER'S REQUEST, PROVIDE MANUFACTURER'S FIELD SERVICE CONSISTING OF PRODUCT USE RECOMMENDATIONS AND PERIODIC SITE VISITS FOR INSPECTION OF PRODUCT INSTALLATION IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

SITE VISITS: [SPECIFY NUMBER AND DURATION OF PERIODIC SITE VISITS.]

**3.05 PROTECTION**

PROTECTION: PROTECT INSTALLED PRODUCT AND FINISH SURFACES FROM DAMAGE DURING CONSTRUCTION.

ROOF SIPS: PROTECT ROOF SIPS FROM WEATHER BY ROOFING MATERIALS TO PROVIDE TEMPORARY PROTECTION AT THE END OF THE DAY OR WHEN RAIN OR SNOW IS IMMINENT.

AFTER INSTALLATION, COVER SIPS TO PREVENT CONTACT WITH WATER ON EACH EXPOSED SIP EDGES AND FACES.

**SECTION 07210 - BUILDING INSULATION**

PROVIDE THERMAL INSULATION AND VAPOR RETARDERS.

COMPLY WITH GOVERNING CODES AND REGULATIONS. PROVIDE PRODUCTS OF ACCEPTABLE MANUFACTURERS, WHICH HAVE BEEN IN SATISFACTORY USE IN SIMILAR SERVICE FOR THREE YEARS. USE EXPERIENCED INSTALLERS.

DELIVER, HANDLE, AND STORE MATERIALS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

**BOARD INSULATION:**

APPLICATION: UNDER SLABS-ON-GRADE.

APPLICATION: EXTERIOR CAVITY WALLS, BETWEEN LIMESTONE WYTHES.

TYPE: EXTRUDED POLYSTYRENE, RIGID.

STANDARD: ASTM C 578

THICKNESS: 2" UNLESS OTHERWISE NOTED

VAPOR RETARDER: UNDERSLAB - 10 MIL. POLYETHYLENE FILM IN ACCORDANCE WITH CIP - 29.

BLANKET/BATT INSULATION:

APPLICATION: THERMAL INSULATION IN STUDS IN INTERIOR AND EXTERIOR WALLS.

TYPE: UNFACED MINERAL FIBER.

STANDARD: ASTM C 665, TYPE I (UNFACED).

SPRAY-APPLIED POLYISOCYANURATE INSULATION:

APPLICATION: AT ROOF RAFTERS THROUGHOUT.

STANDARD: ASTM C 1029.

THERMAL BARRIER: 15 MIN. MIN RATED UL 1715 AND NFPA 286 - DC315 INTUMESCENT COATING BY RHH FOAM SYSTEM OR EQUIVALENT - EXPOSED STRUCTURE ONLY.

INSTALL MATERIALS AND SYSTEMS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND APPROVED SUBMITTALS. INSTALL MATERIALS AND SYSTEMS IN PROPER RELATION WITH ADJACENT CONSTRUCTION.

COORDINATE WITH WORK OF OTHER SECTIONS. PROVIDE FULL THICKNESS IN ONE LAYER OVER ENTIRE AREA, TIGHTLY FITTING AROUND PENETRATIONS.

INSTALL VAPOR RETARDER OVER ENTIRE AREA OF INSIDE FACE OF EXTERIOR FRAMED WALLS AND ELSEWHERE AS INDICATED. SEAL ALL SEALANT AROUND PERIMETER AND PENETRATIONS WITH DUCT TAPE TO FORM A CONTINUOUS VAPOR RETARDER FREE OF HOLES.

**SECTION 075323 - ETHYLENE PROPYLENE DIENE MONOMER (EPDM) MEMBRANE ROOFING**

**PART 1 - GENERAL**

**1.1 SECTION INCLUDES**

A. EPDM ADHERED MEMBRANE ROOFING SYSTEM.

B. COVER BOARD.

C. ROOF INSULATION.

D. VAPOR RETARDER.

E. SUBSTRATE BOARD.

**1.2 RELATED SECTIONS:**

A. DIVISION 06 SECTION "MISCELLANEOUS ROUGH CARPENTRY" FOR WOOD NAILERS, CANTS, CURBS, AND BLOCKING AND FOR WOOD-BASED, STRUCTURAL-USE ROOF DECK PANELS.

B. DIVISION 07 SECTION "SHEET METAL FLASHING AND TRIM" FOR METAL ROOF PENETRATION FLASHINGS, FLASHINGS, AND COUNTERFLASHINGS.

C. DIVISION 07 SECTION "MANUFACTURED ROOF EXPANSION JOINTS."

D. DIVISION 22 SECTION "STORM DRAINAGE PIPING SPECIALTIES" FOR ROOF DRAINS.

**1.3 REFERENCES**

A. ROOFING TERMINOLOGY: REFER TO THE FOLLOWING PUBLICATIONS FOR DEFINITIONS OF ROOFING WORK RELATED TERMS USED IN THIS SECTION:

1. ASTM D 1079 "TERMINOLOGY RELATING TO ROOFING AND WATERPROOFING."

2. GLOSSARY OF NRCA'S "THE NRCA ROOFING AND WATERPROOFING MANUAL."

3. ROOF CONSULTANTS INSTITUTE "GLOSSARY OF ROOFING TERMS."

B. SHEET METAL TERMINOLOGY AND TECHNIQUES: SMACNA ARCHITECTURAL SHEET METAL MANUAL.

**1.4 DESIGN CRITERIA**

A. GENERAL: INSTALLED ROOFING MEMBRANE SYSTEMS SHALL REMAIN WATERTIGHT; AND RESIST SPECIFIED WIND UPLIFT PRESSURES, THERMALLY INDUCED MOVEMENT, AND EXPOSURE TO WEATHER WITHOUT FAILURE.

B. MATERIAL COMPATIBILITY: ROOFING MATERIALS SHALL BE COMPATIBLE WITH ONE ANOTHER UNDER CONDITIONS OF SERVICE AND APPLICATION REQUIRED, AS DEMONSTRATED BY ROOFING SYSTEM MANUFACTURER BASED ON TESTING AND FIELD EXPERIENCE.

C. WIND UPLIFT PERFORMANCE: ROOFING SYSTEM SHALL BE IDENTICAL TO SYSTEMS THAT HAVE BEEN SUCCESSFULLY TESTED BY A QUALIFIED TESTING AND INSPECTING AGENCY TO RESIST WIND UPLIFT PRESSURE CALCULATED IN ACCORDANCE WITH ASCE-7.

1. FIELD-OF-ROOF UPLIFT PRESSURE: ~20.8 LBF/SQ. FT.

2. PERIMETER UPLIFT PRESSURE: ~34.8 LBF/SQ. FT.

3. CORNER UPLIFT PRESSURE: ~52.4LBF/SQ. FT.

D. FMG LISTING: ROOFING MEMBRANE, BASE FLASHINGS, AND COMPONENT MATERIALS SHALL COMPLY WITH REQUIREMENTS IN FMG 4470 AND FMG 4470 AS PART OF A ROOFING SYSTEM AND THAT ARE LISTED IN FMG'S "ROOFING" FOR CLASS 1 OR NONCOMBUSTIBLE CONSTRUCTION, AS APPLICABLE. IDENTIFY MATERIALS WITH FMG MARKINGS.

1. ROOFING SYSTEM SHALL COMPLY WITH ROOFNAV #:

2. FIREWINDSTORM CLASSIFICATION: CLASS 1A-INSERT NUMBER (STARTING AT 60 AND INCREMENTING BY 15)

3. HAIL RESISTANCE: [M]H [SH].

**1.5 SUBMITTALS**

A. PRODUCT DATA: MANUFACTURER'S DATA SHEETS FOR EACH PRODUCT TO BE PROVIDED.

B. DETAIL DRAWINGS: PROVIDE ROOFING SYSTEM PLANS, ELEVATIONS, SECTIONS, DETAILS, AND DETAILS OF ATTACHMENT TO OTHER WORK.

**INCLUDING:**

MEMBRANE SUPPLIER THAT IS INCLUDED IN THE NO DOLLAR LIMIT GUARANTEE. BASIS OF DESIGN: [EXPAND-O-FLASH] [EXPAND-O-GARD] [OR ARCHITECT PRE APPROVED EQUAL]

B. COPING SYSTEM: MANUFACTURER'S FACTORY FABRICATED COPING CONSISTING OF A BASE PIECE AND A SNAP-ON CAP. PROVIDE PRODUCT MANUFACTURED AND MARKETED BY SINGLE-SOURCE MEMBRANE SUPPLIER THAT IS INCLUDED IN THE NO DOLLAR LIMIT GUARANTEE. BASIS OF DESIGN: PRESTO-LOCK COPING [OR ARCHITECT PRE APPROVED EQUAL]

C. FASCIA SYSTEM: MANUFACTURER'S FACTORY FABRICATED FASCIA CONSISTING OF A BASE PIECE AND A SNAP-ON COVER. PROVIDE PRODUCT MANUFACTURED AND MARKETED BY SINGLE-SOURCE MEMBRANE SUPPLIER THAT IS INCLUDED IN THE NO DOLLAR LIMIT GUARANTEE. BASIS OF DESIGN: [PRESTO-TITE FASCIA] [OR ARCHITECT PRE APPROVED EQUAL]

D. METAL FLASHING SHEET: METAL FLASHING SHEET IS SPECIFIED IN DIVISION 07 SECTION "SHEET METAL FLASHING AND TRIM."

2.4 COVER BOARD

A. GYPSUM BOARD: ASTM C1177, GLASS-MAT FACED, WATER-RESISTANT GYPSUM SUBSTRATE, [1/4 INCH (6 MM)] THICK. BASIS OF DESIGN: JM SECUROCK GLASS MAT ROOF BOARD [OR ARCHITECT PRE APPROVED EQUAL]

2.5 ROOF INSULATION

A. GENERAL: PREFORMED ROOF INSULATION BOARDS THAT COMPLY WITH REQUIREMENTS AND REFERENCED STANDARDS, SELECTED FROM MANUFACTURER'S STANDARD SIZES AND OF THICKNESSES INDICATED.

B. POLYISOCYANURATE BOARD INSULATION: ASTM C 1289, TYPE II, BASIS OF DESIGN: ENRGY 3 [OR ARCHITECT PRE APPROVED EQUAL]

1. PROVIDE INSULATION PACKAGE WITH R VALUE GREATER THAN [MINIMUM REQUIRED BY APPLICABLE CODE].
2. PROVIDE INSULATION PACKAGE WITH MINIMUM THICKNESS [1"].

2.6 TAPERED INSULATION

A. TAPERED INSULATION: ASTM C 1289, PROVIDE FACTORY-TAPERED INSULATION BOARDS FABRICATED TO SLOPE OF [1/4 INCH PER 12 INCHES (1:48)], UNLESS OTHERWISE INDICATED. BASIS OF DESIGN: TAPERED ENRGY 3 [OR ARCHITECT PRE APPROVED EQUAL]

2.7 INSULATION ACCESSORIES

A. GENERAL: ROOF INSULATION ACCESSORIES RECOMMENDED BY INSULATION MANUFACTURER FOR INTENDED USE AND COMPATIBLE WITH MEMBRANE ROOFING.

B. PROVIDE FACTORY PREFORMED SADDLES, CRICKETS, TAPERED EDGE STRIPS, AND OTHER INSULATION SHAPES WHERE INDICATED FOR SLOPING TO DRAIN. FABRICATE TO SLOPES INDICATED. BASIS OF DESIGN: [TAPERED PRE-CUT CRICKET] [TAPERED PRE-CUT MITER] [TAPERED FESCO EDGE STRIP] [OR ARCHITECT PRE APPROVED EQUAL]

C. FASTENERS: FACTORY-COATED STEEL FASTENERS OR METAL OR PLASTIC PLATES MEETING CORROSION-RESISTANCE PROVISIONS IN FMG 4470, DESIGNED FOR FASTENING ROOF INSULATION TO SUBSTRATE, AND FURNISHED BY ROOFING SYSTEM MANUFACTURER. BASIS OF DESIGN: [ULTRAFAST FASTENERS AND PLATES] [ULTRAFAST PRE-ASSEMBLED FASTENERS] [ULTRAFAST ACCUTRAC FASTENER AND PLATE SYSTEM] [OR ARCHITECT PRE APPROVED EQUAL]

D. URETHANE ADHESIVE: MANUFACTURER'S TWO COMPONENT URETHANE ADHESIVE FORMULATED TO ADHERE INSULATION TO SUBSTRATE. BASIS OF DESIGN: [JM TWO-PART URETHANE INSULATION ADHESIVE] [JM GREEN TWO-PART URETHANE INSULATION ADHESIVE] [OR ARCHITECT PRE APPROVED EQUAL]

E. WOOD NAILER STRIPS: COMPLY WITH REQUIREMENTS IN DIVISION 06 SECTION "MISCELLANEOUS ROUGH CARPENTRY."

2.8 VAPOR RETARDER

A. POLYETHYLENE AIR BARRIER: ASTM D 4397, 6 MILS (0.15 MM) THICK, MINIMUM, WITH MAXIMUM PERMEANCE RATING OF 0.13 PERM (7.5 NG/PA X S X SQ. M).

1. TAPE: PRESSURE-SENSITIVE TAPE OF TYPE RECOMMENDED BY VAPOR-RETARDER MANUFACTURER FOR SEALING JOINTS AND PENETRATIONS IN VAPOR RETARDER.
2. ADHESIVE: MANUFACTURER'S STANDARD LAP ADHESIVE, FMG APPROVED FOR VAPOR-RETARDER APPLICATION.

2.9 SUBSTRATE BOARD

A. SUBSTRATE BOARD: ASTM C 1177, GLASS-MAT, WATER-RESISTANT GYPSUM SUBSTRATE, [5/8 INCH (16 MM)] THICK. BASIS OF DESIGN: JM SECUROCK GLASS MAT ROOF BOARD [OR ARCHITECT PRE APPROVED EQUAL]

3- EXECUTION

3.1 EXAMINATION

A. EXAMINE SUBSTRATES, AREAS, AND CONDITIONS FOR COMPLIANCE WITH THE REQUIREMENTS AFFECTING PERFORMANCE OF ROOFING SYSTEM.

B. PROCEED WITH INSTALLATION ONLY AFTER UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED.

3.2 PREPARATION

A. CLEAN AND REMOVE FROM SUBSTRATE SHARP PROJECTIONS, DUST, DEBRIS, MOISTURE, AND OTHER SUBSTANCES DETRIMENTAL TO ROOFING INSTALLATION IN ACCORDANCE WITH ROOFING SYSTEM MANUFACTURER'S WRITTEN INSTRUCTIONS.

B. PREVENT MATERIALS FROM ENTERING AND CLOGGING ROOF DRAINS AND CONDUCTORS AND FROM SPILLING OR MIGRATING ONTO SURFACES OF OTHER CONSTRUCTION.

C. PRIME SURFACE OF CONCRETE DECK WITH ASPHALT PRIMER AT A RATE RECOMMENDED BY ROOFING MANUFACTURER AND ALLOW PRIMER TO DRY.

D. PROCEED WITH INSTALLATION ONLY AFTER UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED.

3.3 SUBSTRATE BOARD INSTALLATION

A. INSTALL SUBSTRATE BOARD WITH LONG JOINTS IN CONTINUOUS STRAIGHT LINES, PERPENDICULAR TO ROOF SLOPES WITH END JOINTS STAGGERED BETWEEN ROWS. TIGHTLY BUTT SUBSTRATE BOARDS TOGETHER.

B. FASTEN SUBSTRATE BOARD TO TOP FLANGES OF STEEL DECK ACCORDING TO RECOMMENDATIONS IN FMG'S "APPROVAL GUIDE" FOR SPECIFIED WINDSTORM RESISTANCE CLASSIFICATION.

2. FASTEN SUBSTRATE BOARD TO TOP FLANGES OF STEEL DECK TO RESIST UPLIFT PRESSURE AT CORNERS, PERIMETER, AND FIELD OF ROOF ACCORDING TO ROOFING SYSTEM MANUFACTURER'S WRITTEN INSTRUCTIONS.

B. PROCEED WITH INSTALLATION ONLY AFTER UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED.

3.4 VAPOR-RETARDER INSTALLATION

A. INSTALL POLYETHYLENE-SHEET VAPOR RETARDER AS A LOOSELY LAID SINGLE LAYER OVER AREA TO RECEIVE VAPOR RETARDER. SIDE AND END LAPPING EACH SHEET A MINIMUM OF 2 INCHES (50 MM) AND 6 INCHES (150 MM), RESPECTIVELY.

1. SEAL SIDE AND END LAPS WITH [TAPE] [ADHESIVE].
2. COMPLETELY SEAL VAPOR RETARDER AT TERMINATIONS, OBSTRUCTIONS, AND PENETRATIONS TO PREVENT AIR MOVEMENT INTO MEMBRANE ROOFING SYSTEM.

C. PROCEED WITH INSTALLATION ONLY AFTER UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED.

3.5 INSULATION INSTALLATION

A. COORDINATE INSTALLATION OF ROOF SYSTEM COMPONENTS SO INSULATION AND COVER BOARD IS NOT EXPOSED TO PRECIPITATION OR LEFT EXPOSED AT THE END OF THE WORKDAY.

B. COMPLY WITH ROOFING SYSTEM MANUFACTURER'S WRITTEN INSTRUCTIONS FOR INSTALLATION OF ROOF INSULATION AND COVER BOARD.

C. INSTALL TAPERED INSULATION UNDER AREA OF ROOFING TO CONFORM TO SLOPES INDICATED.

D. INSTALL INSULATION BOARDS WITH LONG JOINTS IN A CONTINUOUS STRAIGHT LINE WITH END JOINTS STAGGERED BETWEEN ROWS, ABUTTING EDGES AND ENDS BETWEEN BOARDS. FILL GAPS EXCEEDING 1/4 INCH (6 MM) WITH LIKE MATERIAL.

E. INSTALL ONE OR MORE LAYERS OF INSULATION UNDER AREA OF ROOFING TO ACHIEVE REQUIRED THICKNESS. WHERE OVERALL THICKNESS IS 4 INCHES OR GREATER, INSTALL 2 OR MORE LAYERS WITH JOINTS OF EACH SUCCEEDING LAYER STAGGERED FROM JOINTS OF PREVIOUS LAYER A MINIMUM OF 6 INCHES (150 MM) IN EACH DIRECTION.

F. TRIM SURFACE OF INSULATION BOARDS WHERE NECESSARY AT ROOF

DRAINS SO COMPLETED SURFACE IS FLUSH AND DOES NOT RESTRICT FLOW OF WATER.

G. INSTALL TAPERED EDGE STRIPS AT PERIMETER EDGES OF ROOF THAT DO NOT TERMINATE AT VERTICAL SURFACES.

H. MECHANICALLY FASTENED INSULATION FOR MECHANICALLY FASTENED SYSTEMS: INSTALL INSULATION WITH FASTENERS AT RATE REQUIRED BY ROOFING SYSTEM MANUFACTURER OR APPLICABLE AUTHORITY, WHICH EVER IS MORE STRINGENT.

I. ADHERED INSULATION: INSTALL EACH LAYER OF INSULATION AND COVER BOARD AND ADHERE TO SUBSTRATE AS FOLLOWS:

1. PRELIMINARILY FASTENED INSULATION FOR MECHANICALLY FASTENED TO ROOFING SYSTEM MANUFACTURER'S INSTRUCTION.

3.6 COVER BOARD INSTALLATION

A. COORDINATE INSTALLING MEMBRANE ROOFING SYSTEM COMPONENTS SO COVER BOARD IS NOT EXPOSED TO PRECIPITATION OR LEFT EXPOSED AT THE END OF THE WORKDAY.

B. COMPLY WITH MEMBRANE ROOFING SYSTEM MANUFACTURER'S WRITTEN INSTRUCTIONS FOR INSTALLING ROOF COVER BOARD.

C. INSTALL COVER BOARD WITH LONG JOINTS OF COVER BOARD IN A CONTINUOUS STRAIGHT LINE WITH END JOINTS STAGGERED BETWEEN ROWS, ABUTTING EDGES AND ENDS BETWEEN BOARDS. FILL GAPS EXCEEDING 1/4 INCH (6 MM) WITH COVER BOARD.

1. CUT AND FIT COVER BOARD WITHIN 1/4 INCH (6 MM) OF NAILERS.

D. TRIM SURFACE OF COVER BOARD WHERE NECESSARY AT ROOF DRAINS SO COMPLETED SURFACE IS FLUSH AND DOES NOT RESTRICT FLOW OF WATER.

1. INSTALL TAPERED EDGE STRIPS AT PERIMETER EDGES OF ROOF THAT DO NOT TERMINATE AT VERTICAL SURFACES.
2. PRELIMINARILY FASTENED INSULATION FOR MECHANICALLY FASTENED SYSTEMS: INSTALL INSULATION WITH FASTENERS AT RATE REQUIRED BY ROOFING SYSTEM MANUFACTURER OR APPLICABLE AUTHORITY, WHICH EVER IS MORE STRINGENT.
3. ADHERED COVER BOARD: ADHERE COVER BOARD TO SUBSTRATE AS FOLLOWS:
  1. INSTALL IN A TWO-PART URETHANE ADHESIVE ACCORDING TO ROOFING SYSTEM MANUFACTURER'S INSTRUCTION.
  2. PROCEED WITH INSTALLATION ONLY AFTER UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED.

3.7 ROOFING MEMBRANE INSTALLATION, GENERAL

A. INSTALL ROOFING MEMBRANE IN ACCORDANCE WITH ROOFING SYSTEM MANUFACTURER'S WRITTEN INSTRUCTIONS, APPLICABLE TO SPECIFICATIONS OF THE ROOFING MANUFACTURER AND REQUIREMENTS IN THIS SECTION.

B. START INSTALLATION OF ROOFING MEMBRANE IN PRESENCE OF ROOFING SYSTEM MANUFACTURER'S TECHNICAL PERSONNEL.

C. WHERE ROOF SLOPE EXCEEDS 1/2 INCH PER 12 INCHES (1:24, CONTACT THE MEMBRANE MANUFACTURER FOR INSTALLATION INSTRUCTIONS REGARDING ROOFING INCLINATION DIRECTION AND BACKSAILING).

D. COOPERATE WITH TESTING AND INSPECTING AGENCIES ENGAGED OR REQUIRED TO PERFORM SERVICES FOR INSTALLING ROOFING SYSTEM.

E. COORDINATE INSTALLING ROOFING SYSTEM SO INSULATION AND OTHER COMPONENTS OF THE ROOFING MEMBRANE SYSTEM NOT PERMANENTLY EXPOSED ARE NOT SUBJECTED TO PRECIPITATION OR LEFT UNCOVERED AT THE END OF THE WORKDAY OR WHEN RAIN IS IMMINENT.

F. PROVIDE TIE-OFFS AT END OF EACH DAY'S WORK TO COVER EXPOSED ROOFING MEMBRANE SHEETS AND INSULATION WITH A COURSE OF COATED FELT SET IN ROOFING CEMENT OR HOT ROOFING ASPHALT WITH JOINTS AND EDGES SEALED.

2. COMPLETE TERMINATIONS AND BASE FLASHINGS AND PROVIDE TEMPORARY SEALS TO PREVENT WATER FROM ENTERING COMPLETED SECTIONS OF ROOFING SYSTEM.

3. REMOVE AND DISCARD TEMPORARY SEALS BEFORE BEGINNING WORK ON ADJOINING ROOFING.

F. PROCEED WITH INSTALLATION ONLY AFTER UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED.

3.8 ADHERED ROOFING MEMBRANE INSTALLATION

A. PRELIMINARILY FASTENED INSULATION: PROVIDE ROOFING IN ACCORDANCE WITH MEMBRANE ROOFING SYSTEM MANUFACTURER'S WRITTEN INSTRUCTIONS. UNROLL ROOFING MEMBRANE AND ALLOW TO RELAX BEFORE INSTALLING.

1. INSTALL SHEET IN ACCORDANCE WITH ASTM D 5036 AND ROOFING SYSTEM MANUFACTURER'S WRITTEN INSTRUCTIONS.
2. START INSTALLATION OF ROOFING MEMBRANE IN PRESENCE OF MEMBRANE ROOFING SYSTEM MANUFACTURER'S TECHNICAL REPRESENTATIVE.
3. ACCURATELY ALIGN ROOFING MEMBRANE AND MAINTAIN UNIFORM SIDE AND END LAPS OF MINIMUM DIMENSIONS REQUIRED BY MANUFACTURER. STAGGER END LAPS.
4. BONDING ADHESIVE: APPLY SOLVENT-BASED BONDING ADHESIVE TO SUBSTRATE AND UNDERSIDE OF ROOFING MEMBRANE AT RATE REQUIRED BY MANUFACTURER AND ALLOW TO PARTIALLY DRY BEFORE INSTALLING ROOFING MEMBRANE. DO NOT APPLY BONDING ADHESIVE TO SPLICE AREA OF ROOFING MEMBRANE.
5. BONDING ADHESIVE: APPLY WATER-BASED BONDING ADHESIVE TO SUBSTRATE AT RATE REQUIRED BY MANUFACTURER AND IMMEDIATELY INSTALL ROOFING MEMBRANE. DO NOT APPLY BONDING ADHESIVE TO SPLICE AREA OF ROOFING MEMBRANE.
6. URETHANE MEMBRANE ADHESIVE: APPLY 2-PART URETHANE ADHESIVE SUBSTRATE AT RATE REQUIRED BY MANUFACTURER AND INSTALL FLEECE-BACKED ROOFING MEMBRANE. DO NOT APPLY BONDING ADHESIVE TO SPLICE AREA OF ROOFING MEMBRANE.
7. MECHANICALLY FASTEN ROOFING MEMBRANE SECURELY AT TERMINATIONS, PENETRATIONS, AND PERIMETER OF ROOFING.
8. APPLY ROOFING MEMBRANE WITH SIDE LAPS SHINGLED WITH SLOPE OF ROOF DECK WHERE POSSIBLE.
9. ADHESIVE SEAM INSTALLATION: CLEAN BOTH FACES OF SPLICE AREAS, APPLY SPLICING CEMENT, AND FIRMLY ROLL SIDE AND END LAPS OF OVERLAPPING ROOFING MEMBRANES ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS TO ENSURE A WATERTIGHT SEAM INSTALLATION. APPLY LAP SEALANT AND SEAL EXPOSED EDGES OF ROOFING MEMBRANE TERMINATIONS.
10. APPLY A CONTINUOUS BEAD OF IN-SEAM SEALANT BEFORE CLOSING SPLICE IF REQUIRED BY MEMBRANE ROOFING SYSTEM MANUFACTURER.
11. TAPE SEAM INSTALLATION: CLEAN AND PRIME BOTH FACES OF SPLICE AREAS, APPLY TAPE AND PRIME, AND FIRMLY ROLL SIDE AND END LAPS OF OVERLAPPING ROOFING MEMBRANES ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS TO ENSURE A WATERTIGHT SEAM INSTALLATION. APPLY LAP SEALANT AND SEAL EXPOSED EDGES OF ROOFING MEMBRANE TERMINATIONS.
12. SEAMS: CLEAN SEAM AREAS, OVERLAP ROOFING MEMBRANE, AND HOT-AIR WELD SIDE AND END LAPS OF ROOFING MEMBRANE ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS TO ENSURE A WATERTIGHT SEAM INSTALLATION.
13. TEST LAP EDGES WITH PROBE TO VERIFY SEAM WELD CONTINUITY. APPLY LAP SEALANT TO SEAL CUT EDGES OF ROOFING MEMBRANE.
14. VERIFY FIELD STRENGTH OF SEAMS A MINIMUM OF TWICE DAILY AND REPAIR SEAM SAMPLE AREAS.
15. REMOVE AND REPAIR ANY UNSATISFACTORY SECTIONS BEFORE PROCEEDING WITH WORK.
16. REPAIR TEARS, VOIDS, AND LAPPED SEAMS IN ROOFING MEMBRANE THAT DO NOT MEET REQUIREMENTS.
17. SPREAD SEALANT OR MASTIC BED OVER DECK DRAIN FLANGE AT DECK DRAINS AND SECURELY SEAL ROOFING MEMBRANE IN PLACE WITH CLAMPING RING.
18. INSTALL ROOFING MEMBRANE AND AUXILIARY MATERIALS TO TIE IN TO EXISTING ROOFING.
19. PROCEED WITH INSTALLATION ONLY AFTER UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED.

3.9 BASE FLASHING INSTALLATION

A. INSTALL SHEET FLASHINGS AND PREFORMED FLASHING ACCESSORIES AND ADHERE TO SUBSTRATE IN ACCORDANCE WITH MEMBRANE ROOFING SYSTEM MANUFACTURER'S WRITTEN INSTRUCTIONS.

B. APPLY SOLVENT-BASED BONDING ADHESIVE TO SUBSTRATE AND UNDERSIDE OF SHEET FLASHING AT REQUIRED RATE AND ALLOW TO PARTIALLY DRY. DO NOT APPLY BONDING ADHESIVE TO SEAM AREA OF FLASHING.

C. FLASH PENETRATIONS AND FIELD-FORMED INSIDE AND OUTSIDE CORNERS WITH SHEET FLASHING.

D. FLASH PENETRATIONS AND FIELD-FORMED INSIDE AND OUTSIDE CORNERS WITH CURED OR UNCURED SHEET FLASHING.

E. CLEAN SEAM AREAS AND OVERLAP AND FIRMLY ROLL SHEET FLASHINGS INTO THE ADHESIVE. WELD SIDE AND END LAPS TO ENSURE A WATERTIGHT SEAM INSTALLATION.

F. TERMINATE AND SEAL TOP OF SHEET FLASHINGS AND MECHANICALLY ANCHOR TO SUBSTRATE THROUGH TERMINATION BARS.

G. PROCEED WITH INSTALLATION ONLY AFTER UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED.

3.10 FIELD QUALITY CONTROL

A. TESTING AGENCY: OWNER WILL ENGAGE A QUALIFIED INDEPENDENT TESTING AND INSPECTING AGENCY TO PERFORM ROOF TESTS AND INSPECTIONS AND TO PREPARE TEST REPORTS.

B. FINAL ROOF INSPECTION: ARRANGE FOR ROOFING SYSTEM MANUFACTURER'S REGISTERED ROOF OBSERVER (RRO) TO INSPECT ROOFING INSTALLATION ON COMPLETION AND SUBMIT REPORT TO ARCHITECT.

C. REPAIR OR REMOVE AND REPLACE COMPONENTS OF ROOFING SYSTEM WHERE TEST RESULTS OR INSPECTIONS INDICATE THAT THEY DO NOT COMPLY WITH SPECIFIED REQUIREMENTS.

3.11 PROTECTION AND CLEANING

A. PROTECT ROOFING SYSTEM FROM DAMAGE AND WEAR DURING REMAINDER OF CONSTRUCTION PERIOD.

B. CLEAN OVERSPRAY AND SPILLAGE FROM ADJACENT CONSTRUCTION USING CLEANING AGENTS AND PROCEDURES RECOMMENDED BY MANUFACTURER OF AFFECTED CONSTRUCTION.

END OF SECTION 075323

SECTION 7900 - JOINT SEALERS

SEALANTS AND PRIMERS - GENERAL: PROVIDE ONLY PRODUCTS HAVING LOWER VOLATILE ORGANIC COMPOUND (VOC) CONTENT THAN REQUIRED BY SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT RULE NO.1168. GENERAL PURPOSE EXTERIOR SEALANT: POLYURETHANE; ASTM C 920, GRADE NS, CLASS 25, USES M, G, AND A; SINGLE COMPONENT. COLOR: STANDARD COLORS MATCHING FINISHED SURFACES. APPLICATIONS: USE FOR: CONTROL, EXPANSION, AND SOFT JOINTS IN MASONRY, JOINTS BETWEEN CONCRETE AND OTHER MATERIALS, JOINTS BETWEEN METAL FRAMES AND OTHER MATERIALS, OTHER EXTERIOR JOINTS FOR WHICH NO OTHER SEALANT IS INDICATED. EXTERIOR METAL LAP JOINT SEALANT: BUTYL OR POLYISOBUTYLENE, NONDRYING, NON-SKINNING, NON-CURING. APPLICATIONS: USE FOR: CONCEALED SEALANT BEAD IN SHEET METAL WORK.

GENERAL PURPOSE INTERIOR SEALANT: ACRYLIC EMULSION LATEX; ASTM C 834, TYPE OP, GRADE NF SINGLE COMPONENT, PAINTABLE. COLOR: STANDARD COLORS MATCHING FINISHED SURFACES. APPLICATIONS: USE FOR: INTERIOR WALL AND CEILING CONTROL JOINTS, JOINTS BETWEEN DOOR AND WINDOW FRAMES AND WALL SURFACES, JOINTS BETWEEN KITCHEN AND BATH COUNTERTOPS AND WALL SURFACES, OTHER INTERIOR JOINTS FOR WHICH NO OTHER TYPE OF SEALANT IS INDICATED. BATH/TUB/TILE SEALANT: WHITE SILICONE; ASTM C 920, USES I, M AND A; SINGLE COMPONENT, MILDEW RESISTANT. APPLICATIONS: USE FOR: JOINTS BETWEEN PLUMBING FIXTURES AND FLOOR AND WALL SURFACES. INTERIOR FLOOR JOINT SEALANT: POLYURETHANE, SELF-LEVELING; ASTM C 920, GRADE P, CLASS 25, USES T, M AND A; SINGLE COMPONENT. COLOR: STANDARD COLORS MATCHING FINISHED SURFACES. APPLICATIONS: USE FOR: EXPANSION AND CONTROL JOINTS IN FLOORS, CONCRETE PAVING JOINT SEALANT: POLYURETHANE, SELF-LEVELING; ASTM C 920, CLASS 25, USES T, M AND A; SINGLE COMPONENT.

G.2 APPLICATIONS: USE FOR: JOINTS IN SIDEWALKS AND VEHICULAR PAVING. PRIMER: NON-STAINING TYPE, RECOMMENDED BY SEALANT MANUFACTURER TO SUIT APPLICATION. JOINT CLEANER: NON-CORROSIVE AND NON-STAINING TYPE, RECOMMENDED BY SEALANT MANUFACTURER, COMPATIBLE WITH JOINT FORMING MATERIALS. JOINT BACKING: ROUND FOAM ROD COMPATIBLE WITH SEALANT; ASTM D 1667, CLOSED CELL PVC; OVERSIZED 30 TO 50 PERCENT LARGER THAN JOINT WIDTH. BOND BREAKER: PRESSURE SENSITIVE TAPE RECOMMENDED BY SEALANT MANUFACTURER TO SUIT APPLICATION.

SECTION 08110 - STANDARD STEEL DOORS AND FRAMES

STANDARDS: SDI-100, RECOMMENDED SPECIFICATIONS FOR STANDARD STEEL DOORS AND FRAMES.

STEEL DOORS:

DOOR TYPE: FLUSH STEEL DOORS WITH COMPOSITE CONSTRUCTION. EXTERIOR DOORS: SDI-100, GRADE II, HEAVY DUTY MINIMUM 16 GAUGE COLD ROLLED GALVANIZED STEEL, 1 1/4" THICK. PROVIDE THERMAL INSULATION IN ACCORDANCE WITH ASTM C236.

FINISH: FACTORY PRIMED AND FIELD PAINTED. SEAMS TO BE CONTINUOUSLY WELDED AND GROUND SMOOTH.

STEEL FRAMES:

EXTERIOR FRAMES: WELDED TYPE, 16 GAUGE GALVANIZED SHEET STEEL MITERED OR COPED CORNERS. PROVIDE THERMAL INSULATION IN ACCORDANCE WITH ASTM C 236.

FRAME DEPTH: SEE DRAWINGS.

ACCESSORIES: DOOR SILENCERS AND PLASTIC GUARDS. FINISH: FACTORY PRIMED AND FIELD PAINTED. SEAMS TO BE CONTINUOUSLY WELDED AND GROUND SMOOTH.

SECTION - DOOR HARDWARE

HANDICAPPED ACCESSIBILITY: ANSI A117.1 AND LOCAL REQUIREMENTS MATERIALS AND APPLICATION: ANSI A156 SERIES STANDARDS DOOR HARDWARE WARRANTY: MANUFACTURER'S 1-YEAR WARRANTY DOOR HARDWARE:

GRADE: HEAVY DUTY COMMERCIAL TYPE - VANDAL RESISTANT CYLINDER LOCKS: INTEGRAL TYPE: DOUBLE CYLINDER HINGES: FULL-MORTISE TYPE WITH NONREMOVABLE PINS AT EXTERIOR DOORS

FINISH: STAINLESS STEEL ACCESSORIES:

BITUMINOUS COATING: BETWEEN THRESHOLDS AND RISER SHIM AND RISER SHIMS AND THRESHOLD ANGLES. HARDWARE TYPE:

EXTERIOR DOORS: 101A - 101B DEADBOLT LOCK W/ REMOVABLE COORS: ADAMS-RITE MS1850S W/ BEST CYLINDER 1E SERIES

HINGE: STANLEY FBB168NRP 4 1/2 X 4 1/2, 3 EACH CLOSER: LCN: CUSH SERIES OR NORTON 8301 SERIES - 1 EACH PULL/PUSH BAR: ROCKWOOD T111447 - SS OR EQUIVALENT THRESHOLD: REESE MILL ALUMINUM, THERMAL BREAK SADDLE THRESHOLD (ADA)

DOOR SWEEP: 3432 CN8 36" PEMKO

b. TOILET ROOM DOORS: 105 - 107

MEN'S ROOM 107: EXISTING DOOR AND HARDWARE TO REMAIN. CLEAN AND REPAIR AS REQUIRED.

WOMEN'S ROOM 105: REMOVE AND RELOCATE DOOR AND FRAME FROM EXISTING STORAGE ROOM. REMOVE AND RELOCATE EXISTING HARDWARE FROM EXISTING WOMEN'S RESTROOM DOOR. CLEAN AND REPAIR AS REQUIRED.

c. MECHANICAL/STORAGE ROOMS: 103, 105, 107

SHORT FORM SPECIFICATIONS

STANDARD TOPS INCLUDE ONE-PIECE 14 GAUGE WORKSURFACE IN TYPE 304 STAINLESS STEEL, SUPPORTED BY A TREATED PLYWOOD BACKER.

CLOSER: 1540 SERIES STANDARD DUTY - "S" STOP - FIN. 626 PULL: ROCKWOOD - 908 - SS OR BURNS - 1005

SECTION 08915 - GLAZED ALUMINUM CURTAIN WALL SYSTEMS

MANUFACTURER: MANKO

NON-OPERABLE AND EXTERIOR DOORS: SERIES 175 OPERABLE: SERIES 3000

TYPE: ALUMINUM STICK-TYPE GLAZED ALUMINUM CURTAIN WALL WITH INTERIOR AND EXTERIOR EXPOSED METAL FLASHING.

PRIMARY COMPONENTS: EXTRUDED ALUMINUM FRAMING, INTERNAL REINFORCEMENT, TRIM, AND FILLER UNITS; SEALANTS, AND GASKETS. CONSTRUCTION: THERMAL-BREAK TYPE. ANCHORS, CLIPS, AND ACCESSORIES: ALUMINUM, NONMAGNETIC STAINLESS STEEL, OR GALVANIZED STEEL. GLAZING: SOLARBAN 60 CLEAR-CLEAR TEMPERED INSULATED GLAZING - SEE GLAZING SECTION.

ALUMINUM FINISH: FLUOROPOLYMER, PER MANUFACTURER'S STANDARDS. COLOR: HEMLOCK GREEN

SECTION 08800 - GLASS AND GLAZING

TYPE: INSULATING GLASS UNITS, TEMPERED AT LOCATIONS AS REQUIRED BY CODE.

AUXILIARY MATERIALS:

COMPRESSION GASKETS. ELASTOMERIC GLAZING SEALANTS. PREFORMED GLAZING TAPES. GLAZING GASKETS. SETTING BLOCKS, SPACERS, AND COMPRESSIBLE FILLER RODS.

SECTION 9670 - FLUID APPLIED FLOORING

TYPE: CHEMICAL RESISTANT EPOXY FLOORING. LOCATION: RESTROOM - FLOOR AND AT CONCRETE CURB. PREPARE SURFACE PER MANUFACTURER'S RECOMMENDATION. SURFACE: STANDARD SURFACE.

SECTION 09900 - PAINTING

LOCATIONS: EXPOSED WOOD BLOCKING AND BUCKS; PLYWOOD; AS INDICATED ON DRAWINGS.

PROVIDE LOW VOC PRODUCTS. FIRST-LINE COMMERCIAL QUALITY PRODUCTS ON ALL COATING SYSTEMS PREPARATION: PERFORM PREPARATION AND CLEANING PROCEDURES IN ACCORDANCE WITH PAINT MANUFACTURER'S INSTRUCTIONS AND AS SPECIFIED. FOR EACH PARTICULAR SUBSTRATE CONDITION. EXTERIOR FINISHES:

METAL - FERROUS:

1ST COAT: KEMKROMIK UNIVERSAL PRIMER, B50Z SERIES (6 MILS WET, 3 MILS DRY).

2ND COAT: DTM ACRYLIC GLOSS COATING B66 SERIES (10 MILS WET, 4 DRY)

3RD COAT: SAME AS SECOND.

SURFACE PREPARATION:

GALVANIZED METAL: CLEAN FREE OF OIL AND SURFACE CONTAMINATES WITH NON-PETROLEUM BASED SOLVENT.

b. EXTERIOR EXISTING WOOD: STRUCTURAL, TRIM, EXPOSED SURFACES

1. FINISH: SATIN
2. SYSTEM:
  - 1ST COAT: S-W EXTERIOR LATEX WOOD PRIMER, B42W8041 (4 MILS WET, 1.4 MILS DRY)
  - 2ND COAT: S-W RESILIENCE LATEX SATIN, K43 SERIES
  - 3RD COAT: S-W RESILIENCE LATEX SATIN, K43 SERIES (4 MILS WET, 1.52 MILS DRY PER COAT)

SCHEDULE - INTERIOR SURFACES:

METAL GALVANIZED:

1ST COAT: SW PRO-CRYL UNIVERSAL METAL PRIMER B66-310 SERIES, 110 GIL VOC

2ND COAT: SW PROCLASSIC WATERBORNE SEMI-GLOSS B31 SERIES, 147 GIL VOC

METAL FERROUS:

1ST COAT: SW PRO-CRYL UNIVERSAL METAL PRIMER B66-310 SERIES, 110 GIL VOC

2ND COAT: SW PROCLASSIC WATERBORNE SEMI-GLOSS B31 SERIES, 147 GIL VOC

SECTION 09930 - STAINS AND TRANSPARENT FINISHES

COMPLY WITH GOVERNING CODES AND REGULATIONS. PROVIDE PRODUCTS OF ACCEPTABLE MANUFACTURERS, WHICH HAVE BEEN IN SATISFACTORY USE IN SIMILAR SERVICE FOR THREE YEARS. USE EXPERIENCED INSTALLERS. DELIVER, HANDLE, AND STORE MATERIALS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. REGULATIONS: COMPLIANCE WITH VOC AND ENVIRONMENTAL REGULATIONS. MOCK-UPS: PROVIDE MOCK-UP AS REQUIRED TO DEMONSTRATE QUALITY OF WORKMANSHIP. STAINING AND TRANSPARENT FINISHES:

MANUFACTURERS: MINWAX®; PRATT & LAMBERT PAINTS; SIKKENS WOOD FINISHES;

APPLICATION: EXTERIOR UNFINISHED SURFACES. PRIMARY COATING TYPE: PENETRATING OIL-BASED FINISHES. FINISHING SCHEDULE: CEDAR ROOF FASCIA, CEDAR PLYWOOD CLADDING AT UNDERSIDE OF ROOF

INSPECT SURFACES, REPORT UNSATISFACTORY CONDITIONS IN WRITING; BEGINNING WORK MEANS ACCEPTANCE OF SUBSTRATE. COMPLY WITH MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS FOR PREPARATION, PRIMING AND COATING WORK. COORDINATE WITH WORK OF OTHER SECTIONS.

MATCH APPROVED MOCK-UPS FOR COLOR, TEXTURE, AND PATTERN. RE-COAT OR REMOVE AND REPLACE WORK WHICH DOES NOT MATCH OR SHOWS LOSS OF ADHESION. CLEAN UP, TOUCH UP AND PROTECT WORK.

SECTION 10800 - TOILET ACCESSORIES

STANDARDS: ANSI A117.1 AND LOCAL REQUIREMENTS. TOILET AND BATH ACCESSORIES:

MANUFACTURERS: AMERICAN SPECIALTIES, INC.; BRADLEY CORP.; BOBRICK; OR EQUIVALENT.

ACCESSORY: TOILET TISSUE DISPENSERS, DOUBLE ROLL.

ACCESSORY: GRAB BARS.

ACCESSORY: UNDERCOUNTER LAVATORY PIPE GUARDS.

ACCESSORY: RECESSED ELECTRIC HAND DRYERS - PALMER FIXTURES HD0955-09 OR EQUIVALENT.

FINISH: STAINLESS STEEL

INSTALL MATERIALS AND SYSTEMS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND APPROVED SUBMITTALS. INSTALL MATERIALS AND SYSTEMS IN PROPER RELATION WITH ADJACENT CONSTRUCTION AND WITH UNIFORM APPEARANCE. COORDINATE WITH WORK OF OTHER SECTIONS.

SECTION 10520 - FIRE PROTECTION SPECIALTIES

STANDARDS: UL AND FM LISTED PRODUCTS, NFPA 10. REGULATIONS: ADAAG AND ANSI 117.1.

FIRE EXTINGUISHERS:

TYPE: MULTIPURPOSE DRY CHEMICAL TYPE.

FE TYPE A: TYPE ABC DRY CHEMICAL

FE TYPE B: TYPE K CHEMICAL

RATING: SIZED FOR PROJECT REQUIREMENTS.

MOUNTING: METAL BRACKETS. INSTALL FIRE EXTINGUISHERS WITH WALL-HUNG BRACKETS AT LOCATIONS AND HEIGHTS INDICATED AND ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION.

SECTION 12355 - COUNTERTOPS

SHORT FORM SPECIFICATIONS

STANDARD TOPS INCLUDE ONE-PIECE 14 GAUGE WORKSURFACE IN TYPE 304 STAINLESS STEEL, SUPPORTED BY A TREATED PLYWOOD BACKER.

gēnus

[landscape architects]

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TITLE & LOGO

WINDFIELD PARK SITE  
IMPROVEMENT PROJECT

KEY MAP

PRELIMINARY  
NOT FOR CONSTRUCTION

NO. DATE REVISION

PRINCIPAL IN CHARGE PROJECT MANAGER

BD AP

PROJECT TEAM MEMBER(S)

CHECK

SEAL / STAMP

TITLE

PROJECT NO.

14005

DATE

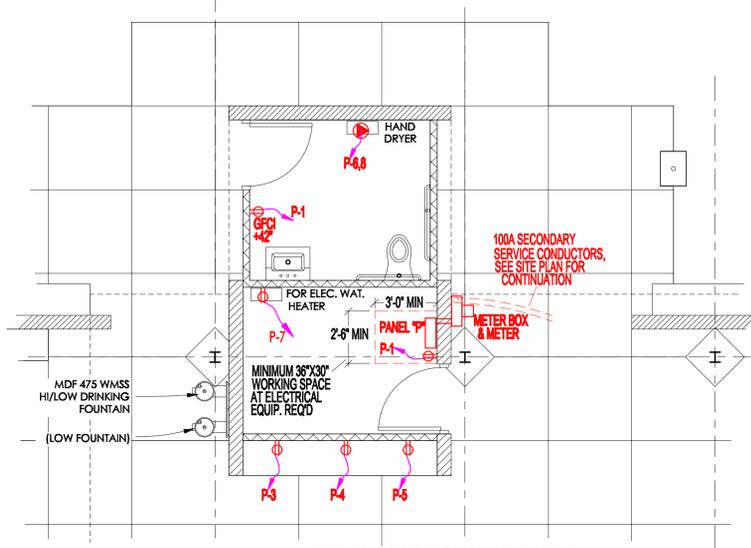
9-29-14

PROJECT NETWORK PLAN

SHEET NUMBER

A702

SPEC.

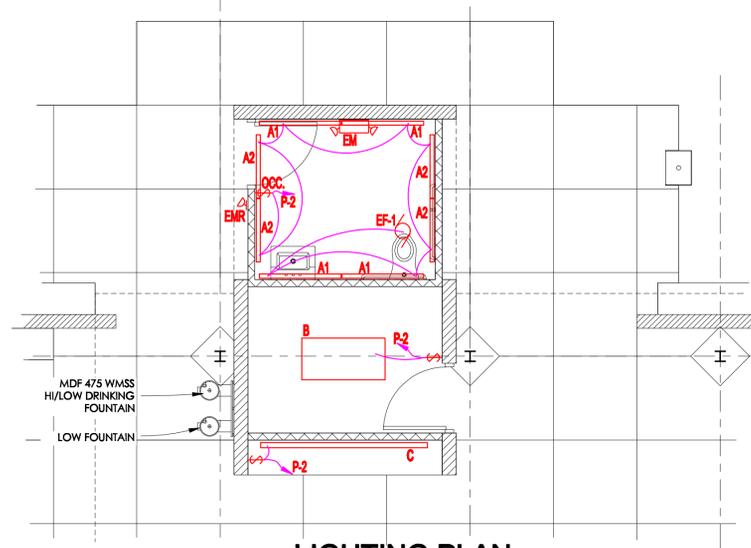


**1 ELECTRICAL PLAN**  
1/4" = 1'-0"

NEW PANEL "P"

PANEL NO.: P		MAIN BREAKER: YES		AMPS: 100							
VOLTAGE: 120/240V/1Ø 3-WIRE		MAIN LUGS: NO		FEEDERS: 2-1/0 W/ 1-1/0 NEUTRAL & #6 GRD							
MAKE & MODEL: SQUARE D QO112M100 BOX & INTERIOR, W/ QOC12US SURFACE COVER/DOOR & PK9GTA EQUIP. G.B.											
NO.	SERVICE	LOAD VA	WIRE SIZE	AMP TRIP	POLE	LOAD (VA)	POLE	AMP TRIP	WIRE SIZE	LOAD VA	SERVICE
1	OUTLETS-RESTROOM AND UTILITY ROOM (2)	360	12	20	1	588	---	1	20	228	LIGHTING - ALL FIXTURES
3	COUNTER OUTLET (1 DUPLEX OUTLET)	180	12	20	1	---	---	---	---	180	COUNTER OUTLET (1 DUPLEX OUTLET)
5	COUNTER OUTLET (1 DUPLEX OUTLET)	180	12	20	1	1680	---	---	---	1500	HAND DRYER
7	ELECTRIC WATER HEATER	1440	12	20	1	---	---	---	---	1440	SPACE 8
9	SPACE	---	---	---	---	---	---	---	---	---	SPACE 10
11	SPACE	---	---	---	---	---	---	---	---	---	SPACE 12
<b>TOTALS</b>						2268				1800	<b>TOTALS</b>
						18.9A				15.0A	

NOTE: LOADS SHOWN ARE ESTIMATED, BASED ON THE BEST INFORMATION AVAILABLE. CONTRACTOR SHALL FIELD VERIFY ALL ACTUAL EQUIPMENT LOADS BEFORE ORDERING PANEL AND BREAKERS.



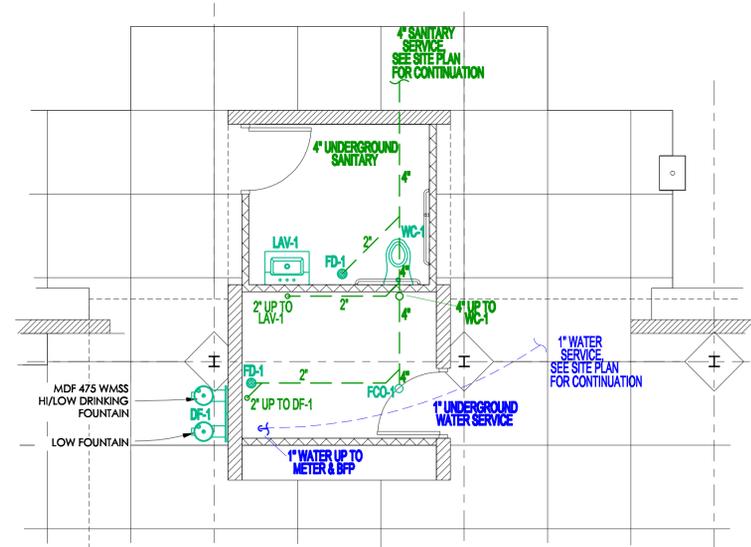
**2 LIGHTING PLAN**  
1/4" = 1'-0"

**GENERAL ELECTRICAL & LIGHTING NOTES:**

- ALL INSTALLATIONS SHALL CONFORM TO ALL APPLICABLE LOCAL, STATE, AND NATIONAL CODES AND ORDINANCES INCLUDING, BUT NOT LIMITED TO, THE PROVISIONS OF 2009 IBC, 2009 IMC, 2009 IPC, 2011 NEC, 2010 ADAAG, 2012 IECC, 2009 IFC, AND LOCAL CITY OF WAUKEE AMENDMENTS TO THE ABOVE CODES.
- CONTRACTORS SHALL INSTALL NEW MATERIALS. INSTALLATIONS SHALL MAINTAIN ADEQUATE CLEARANCES AND ACCESS FOR SERVICE TO ALL INSTALLED EQUIPMENT.
- ALL EXIT AND EMERGENCY LIGHTS TO BE FED FROM OTHER CIRCUITS IN THE AREA OF THE EXIT OR EMERGENCY LIGHT.
- PROVIDE EMERGENCY EGRESS LIGHT FIXTURES AT EXTERIOR DOOR LANDINGS PER IBC 1006.3.
- RESTROOM OCCUPANCY SENSOR SHALL BE HUBBELL MODEL NO. OMNI DT500 DUAL TECHNOLOGY CEILING MOUNT SENSORS.
- CONTRACTOR TO ENSURE CODE COMPLIANT WORKING AND DEDICATED SPACES FOR THE ELECTRICAL EQUIPMENT. IN PARTICULAR ENSURE THAT ADEQUATE SPACE IS LEFT RELATED TO CONFLICTS WITH PLUMBING FIXTURE INSTALLATIONS AND RELATED PIPING AND HARDWARE. SEE 2011 NEC SECTION 110.26 FOR MORE SPECIFICS AND DETAILS.

**LIGHT FIXTURE NOTES:**

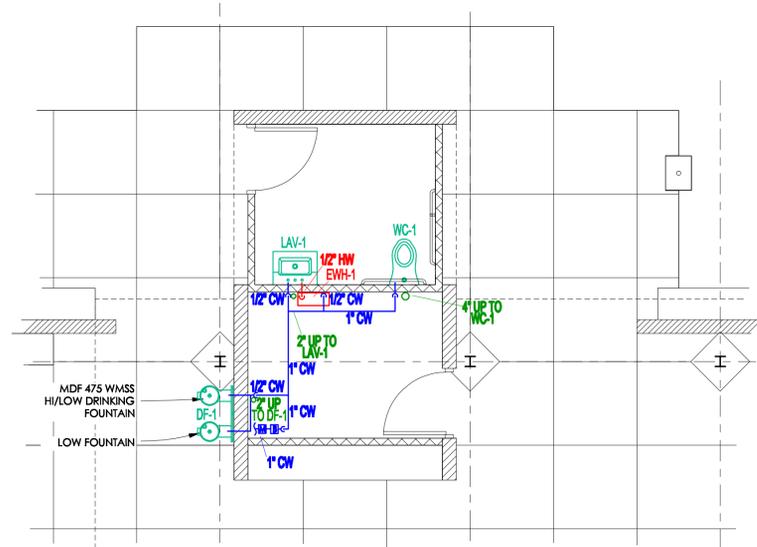
- A1 PROVIDE (4) LUMINAIRE MODEL LVP524-48"-28W HP-3500K-120-CP-WHT-AL-TX/SD "JUDGE" VANDAL RESISTANT HIGH PERFORMANCE LED LINEAR WALL MOUNT FIXTURES, 48" LONG, 28W HP LED LAMP ARRANGEMENT, 3500K CCT, 120V, CLEAR PRISMATIC LENS, WHITE, ALUMINUM HOUSING, W/ TORX HEAD SCREWS.
- A2 PROVIDE (4) LUMINAIRE MODEL LVP523-36"-21W HP-3500K-120-CP-WHT-AL-TX/SD "JUDGE" VANDAL RESISTANT HIGH PERFORMANCE LED LINEAR WALL MOUNT FIXTURES, 36" LONG, 21W HP LED LAMP ARRANGEMENT, 3500K CCT, 120V, CLEAR PRISMATIC LENS, WHITE, ALUMINUM HOUSING, W/ TORX HEAD SCREWS.
- B LITHONIA LB-232-120-1/2-GEB10IS, 4'LONG 2-LAMP LOW PROFILE WRAPAROUND, WIDE BODY, W/ PRISMATIC ACRYLIC DIFFUSER, W/ INSTANT START ELECTRONIC BALLAST.
- C PRUDENTIAL P61-2T8-08-PCL-YGW-D1-SC-120-WB-LT. 8' WALL BRACKET MOUNT, GLOSS WHITE, CLEAR POLY-CARBONATE LENS DIRECT DISTRIBUTION, SINGLE CIRCUIT, 120V, W/ LOW TEMP BALLAST. PROVIDE PHOTOCCELL SWITCH FOR THIS FIXTURE.
- EM COOPER "SURE-LITE" MODEL APEL DUAL HEAD EMERGENCY LIGHT.
- EMR COOPER "SURE-LITE" MODEL APWR1 SINGLE HEAD EMERGENCY EGRESS LIGHT-REMOTE HEAD, WET LOCATION.



**3 UNDERGROUND PLUMBING PLAN**  
1/4" = 1'-0"

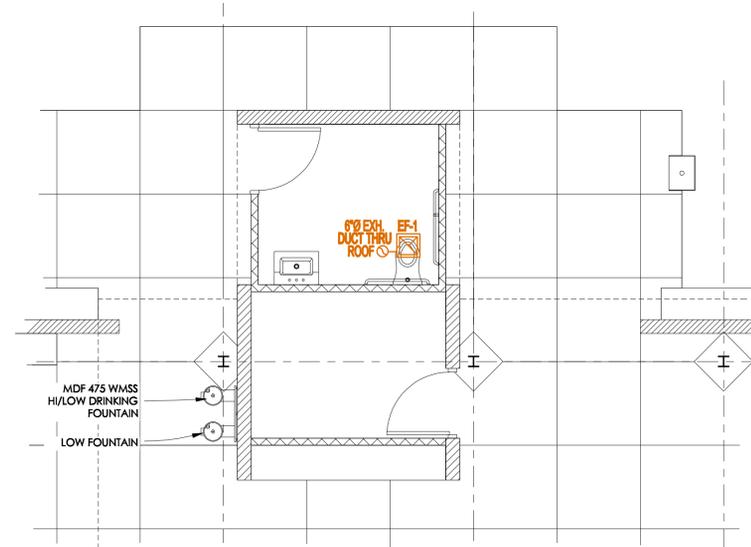
**GENERAL PLUMBING NOTES:**

- ALL INSTALLATIONS SHALL CONFORM TO ALL APPLICABLE LOCAL, STATE, AND NATIONAL CODES AND ORDINANCES INCLUDING, BUT NOT LIMITED TO, THE PROVISIONS OF 2009 IBC, 2009 IMC, 2009 IPC, 2011 NEC, 2010 ADAAG, 2009 IFC, 2012 IECC, AND LOCAL CITY OF WAUKEE AMENDMENTS TO THE ABOVE CODES.
- CONTRACTORS SHALL INSTALL NEW MATERIALS. INSTALLATIONS SHALL MAINTAIN ADEQUATE CLEARANCES AND ACCESS FOR SERVICE TO ALL INSTALLED EQUIPMENT.
- NOT ALL PIPING AND ACCESSORIES HAVE BEEN SHOWN. CONTRACTOR SHALL INSTALL SUPPLIES AND STOPS PER APPLICABLE CODES AND PER GOOD PLUMBING PRACTICE.
- WATER PIPING SIZES SHOWN ON PLANS ARE APPROXIMATE. ACTUAL PIPING SHALL BE SIZED PER APPLICABLE PLUMBING CODE.
- PLUMBING VENT PIPING HAS NOT BEEN SHOWN. CONTRACTOR SHALL INSTALL PLUMBING VENT PIPING PER APPLICABLE CODES AND PER GOOD PLUMBING PRACTICE.
- NOT ALL CLEANOUPS HAVE BEEN SHOWN. CONTRACTORS SHALL INSTALL CLEANOUPS PER APPLICABLE CODES AND AS NEEDED FOR PROPER SERVICE. CLEANOUPS SHALL ALSO BE INSTALLED AT ALL CHANGES OF DIRECTION.
- NOT ALL ABOVE-FLOOR WASTE PIPING HAS BEEN SHOWN. CONTRACTOR SHALL INSTALL WASTE PIPING PER APPLICABLE CODES AND AS NEEDED FOR PROPER SERVICE. EXACT ROUTING CAN BE DETERMINED BY THE CONTRACTOR, IN CONJUNCTION WITH THE GENERAL CONTRACTOR AND WITH OTHER TRADES.
- ALL WATER SUPPLY AND DISTRIBUTION SYSTEMS SHALL HAVE A CROSS CONNECTION CONTROL USING BACKFLOW PREVENTION DEVICES AS APPLICABLE AND REQUIRED BY PROVISIONS OF THE UNIFORM PLUMBING CODE, CHAPTER 6.
- WATER PIPING MAY BE PEX TUBING, EXCEPT WHERE EXPOSED, WHERE IT SHALL BE COPPER.
- UNDERGROUND SANITARY PIPING MAY BE PVC UNLESS THE PROJECT SITE IS NEAR A LUST SITE. VERIFY WITH THE DNR.
- SHELTER HOUSE WATER WILL BE SHUT DOWN FOR WINTER. CONTRACTOR SHALL INSTALL BRANDOWN VALVES AND FITTINGS TO ALLOW MAINTENANCE PERSONNEL TO DRAIN LINES FOR WINTER SHUTDOWN.



**4 ABOVE-GROUND PLUMBING PLAN**  
1/4" = 1'-0"

MARK	BASIS OF DESIGN	NOTES	REMARKS
EWH-1	BOSCH MODEL ES4 ELECTRIC POINT-OF-USE WATER HEATER	4 GALLON TANK VOLUME, 120V, 12.0A, 75° TEMP. RISE (65° TO 140°), 6.80HP RECOVERY, 98% THERMAL EFFICIENCY	FURNISH WITH T&P VALVE. EQUAL POINT-OF-USE WATER HEATERS ARE ACCEPTABLE.
FCO-1	ZURN 2-1400 FLOOR CLEANOUT	W/ BRONZE COVER	LOCATE FLUSH WITH FLOOR LEVEL. EQUALS BY WATTS OR SIOUX CHIEF IS ACCEPTABLE.
FD-1	SIOUX CHIEF MODEL 834-430NRP, 4" ON-GRADE ADJUSTABLE FLOOR DRAIN	4" DIA. OUTLET W/ 6.5" ROUND NICKEL-BRONZE STRAINER. 4" PUSH JOINT CONN AND PUSH-JOINT GASKET FOR SCH. 40.	LOCATE FLUSH WITH FLOOR LEVEL. EQUAL BY ZURN OR JAY R. SMITH IS ACCEPTABLE.
LAV-1	GRANE 1412V "HARWICH" 20"x18" WHITE VITREOUS CHINA WALL-HUNG LAVATORY	INCLUDE DELTA 501 SINGLE-HANDLE DECK-MOUNT FAUCET, 4" CENTERSET P-TRAP, CLEARBORN BRASS 760-1 TAILPIECE, AND WATTS CARRIER ARMS.	CONTRACTOR TO FURNISH AND INSTALL SUPPLIES, STOPS, P-TRAP, TAILPIECE, AND DRAIN FITTINGS, AS WELL AS TRIBRO 102W WHITE LAVATORY INSULATION KIT.
WC-1	AMERICAN STANDARD 2254.127 "AFWALL" FLUSH VALVE TYPE WATER CLOSET, ADA HEIGHT, ELONGATED, WALL MOUNTED W/ CARRIER	PACIFIC PPH550 OPEN FRONT WHITE SEAT, W/ CLOSET BOLTS AND BOWL WAX, AND ZURN 26000-AV-W51 FLUSH VALVE	EQUALS BY TOTO, GERBER, GRANE, OR KOHLER AND OLSONITE OR PACIFIC ARE ACCEPTABLE.



**5 VENTILATION PLAN**  
1/4" = 1'-0"

**GENERAL VENTILATION NOTES:**

- ALL INSTALLATIONS SHALL CONFORM TO ALL APPLICABLE LOCAL, STATE, AND NATIONAL CODES AND ORDINANCES INCLUDING, BUT NOT LIMITED TO, THE PROVISIONS OF 2009 IBC, 2009 IMC, 2009 IFC, 2011 NEC, 2010 ADAAG, 2009 IFC, 2012 IECC, AND LOCAL CITY OF WAUKEE AMENDMENTS TO THE ABOVE CODES.
- CONTRACTORS SHALL INSTALL NEW MATERIALS. INSTALLATIONS SHALL MAINTAIN ADEQUATE CLEARANCES AND ACCESS FOR SERVICE TO ALL INSTALLED EQUIPMENT.
- RESTROOM EXHAUST FAN (EF-1) TO BE BRON L050NE L100, OR EQUAL, 109 CFM @ 0.125 E.S.P., 120V-1PH. SWITCH ON WITH LIGHT, 30 MINUTE (ADJUSTABLE) DELAY OFF.

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TITLE & LOGO

**WINDFIELD PARK SITE  
IMPROVEMENT PROJECT**

KEY MAP

**PRELIMINARY  
NOT FOR CONSTRUCTION**

NO. DATE REVISION

PRINCIPAL IN CHARGE PROJECT MANAGER  
**DAC DAC**

CHECK

SCALE / STAMP

TITLE  
**MECHANICAL/ELECTRICAL PLAN**

CEA PROJECT NO.  
**1467**  
DATE  
**11-30-14**  
PROJECT NETWORK PATH

SHEET NUMBER

**ME101  
MECH-ELEC  
PLAN**