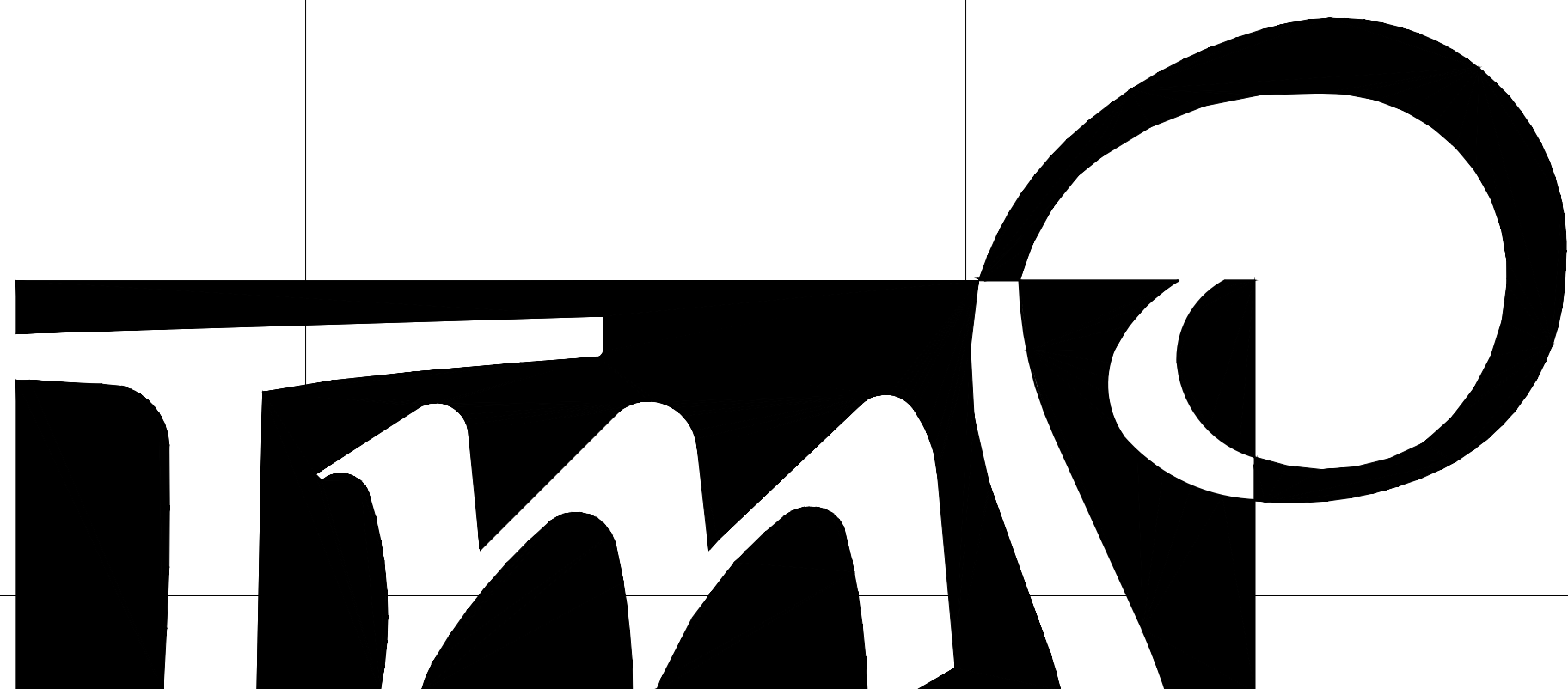


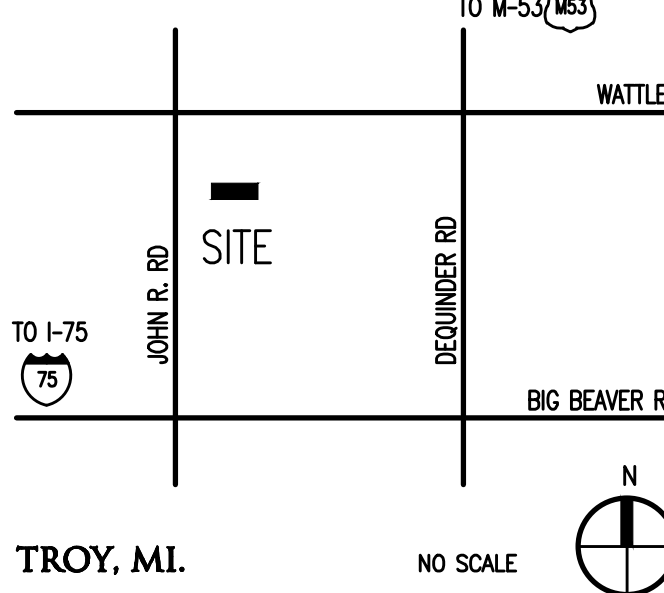


			<div><p>ARCHITECTURE</p><p>T M P ARCHITECTURE I N C</p><p>1191 WEST SQUARE LAKE ROAD · BLOOMFIELD HILLS · MICHIGAN · 48302</p><p>PH · 248.338.4561 FX · 248.338.0223 EM · INFO @TMP-ARCHITECTURE.COM</p></div>					<div><p>PROFESSIONAL ENGINEERING ASSOCIATES</p><p>2430 Rochester Ct, Suite 100 Troy, MI 48063-1072 Phone: (248) 689-8090 Fax: (248) 689-1044 website: www.peainc.com</p></div>			
								<div><p>350 East Michigan Avenue Suite #415 Kalamazoo Michigan 49007 Phone (269) 381-3357 Fax (269) 381-2944</p></div>			
<div><h1>BARNARD ELEMENTARY SCHOOL PLAYGROUND</h1><h2>TROY SCHOOL DISTRICT – TROY, MICHIGAN</h2></div>											
<div><h3>2022 BOND PROGRAM – BID PACKAGE NO 01A</h3><h3>PROJECT NUMBER 22086B</h3><h3>CONSTRUCTION DOCUMENTS</h3></div>											
<div><p>CONSULTANTS:</p><p>CIVIL ENGINEER</p><p><b>PEA GROUP</b> <b>CONSULTING ENGINEERS</b></p><p>1849 POND RUN AUBURN HILLS, MICHIGAN 48326 PHONE: (248) 689-9090</p><p>PLAYGROUND CONSULTANT</p><p><b>OCBA LANDSCAPE ARCHITECTS</b> <b>CONSULTING ENGINEERS</b></p><p>124 FULTON STREET E, SUITE 68 GRAND RAPIDS, MICHIGAN 49503 PHONE: (269) 381-3357</p></div>		<div><p>LIST OF DRAWINGS</p><p>GENERAL INFORMATION</p><p>TS.1 COVER SHEET TG.1 GENERAL INFORMATION</p></div>	<div><p>CIVIL</p><p>C2.0 OVERALL PLAYGROUND LAYOUT PLAN C2.1 PLAYGROUND LAYOUT ENLARGEMENT PLANS - KINDERGARTEN C2.2 PLAYGROUND LAYOUT ENLARGEMENT PLANS - UPPER ELEMENTARY C2.3 PLAYGROUND LAYOUT ENLARGEMENT PLANS - LOWER ELEMENTARY C3.0 OVERALL PLAYGROUND GRADING PLANS C3.1 PLAYGROUND GRADING PLAN - KINDERGARTEN C3.2 PLAYGROUND GRADING PLAN - UPPER ELEMENTARY C3.3 PLAYGROUND GRADING PLAN - LOWER ELEMENTARY C4.0 DETAILS</p></div>	<div><p>CIVIL</p><p>CE-1.1.0 TOPOGRAPHIC SURVEY CE-1.2.0 DEMOLITION PLAN CE-1.3.0 DIMENSION &amp; PAVING PLAN CE-1.4.0 GRADING, UTILITY &amp; SOIL EROSION CONTROL PLAN CE-1.5.0 NOTES &amp; DETAILS</p><p>STANDARD SOIL EROSION CONTROL DETAILS STANDARD STORM SEWER DETAILS</p></div>	<div><p>LANDSCAPE</p><p>L1.0 SITE LANDSCAPE PLAN</p></div>			<div><p>PROJECT DATA:</p><p>LOCATION MAP</p><p>TROY, MI.</p></div>	<div><p>BUILDING:</p><p>BUILDING AREA(S) = NOT APPLICABLE</p><p>CODE:</p><p>GOVERNING CODES:</p><ul style="list-style-type: none"><li>- 2016 SCHOOL FIRE SAFETY RULES (2012 Life Safety Code, plus amendments)</li><li>- 2015 MICHIGAN BUILDING CODE</li><li>- 2015 MICHIGAN REHABILITATION CODE FOR EXISTING BUILDINGS</li><li>- 2018 MICHIGAN PLUMBING CODE</li><li>- 2015 MICHIGAN MECHANICAL CODE</li><li>- 2015 MICHIGAN UNIFORM ENERGY CODE (ANSI/ASHRAE/IES Standard 90.1-2013)</li><li>- 2017 MICHIGAN ELECTRICAL CODE (2017 NEC, plus Part 8 Rules)</li><li>- 2010 MICHIGAN ELEVATOR RULES (ASME A17.1-2010, ASME A18.1-2011)</li><li>- MICHIGAN BARRIER FREE CODE (Michigan Building Code 2015 and ICC A117.1-2009)</li><li>- 2013 MICHIGAN BOILER CODE RULES (ASME Boiler and Pressure Vessel Code, 2019 edition) (National Board Inspection Code [NBIC], 2019 edition)</li></ul><p>CONSTRUCTION CLASSIFICATION: II-B(MBC)/11(000)NFPA</p><p>USE GROUP CLASSIFICATION: E-EDUCATION</p></div>		
							<div><p>ADDRESS: BARNARD ELEMENTARY SCHOOL 3601 FORGE DR. TROY, MI 48083</p></div>				
<div><p>LICENSEE'S STATEMENT:</p><p>This Document has been prepared under the supervision of the Architect, as the person in Responsible Charge with the firm of <b>TMP ARCHITECTURE, INC.</b>. An original embossed or rubber stamp seal and original signature of the Architect is required and shall be affixed to any copy of this Document submitted to a governmental agency for approval or record. This is in conformance with the State of Michigan's PA 299, Article 20 and the General Rules of the Board of Architects.</p><p>The Architect's seal provided hereon does not take responsibility for certain portions of the Documentation or project requiring the services of a licensed Professional Engineer or other design professional. An original embossed or rubber stamp seal and original signature of the Professional Engineer is required and shall be affixed to any copy of this or other Document submitted to a governmental agency for approval or record. The engineering firms associated with this document are listed above as Consultants.</p></div>		<div><p>REGISTRATION SEALS</p></div>					<div><p>COPYRIGHT</p><p>© The "architectural work" displayed on these documents is owned exclusively by TMP Architecture, Inc. and may not be used for any purpose without their involvement or express written consent.</p></div>	<div><p>PROJECT TITLE</p><p><b>Barnard Elementary School</b></p><p>PROJECT NO.</p><p><b>22086B</b></p><p>DRAWING NO.</p><p><b>TS.1</b></p></div>			

DRAWING NO.

**TG.1**



1 Overall Playground Layout Plan  
Scale: 1"=30'-0"

## 2 Basketball Lane Layout

### 3 Silly Track Layout

## BARRIER-FREE NOTES

BARRIER-FREE PARKING AND ACCESSIBLE ROUTE(S) MUST COMPLY WITH THE AMERICANS WITH DISABILITIES ACT AND MICHIGAN BARRIER-FREE CODE REQUIREMENTS, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:

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**NOTE: VERIFY LOCATION OF NEW PLAYGROUND EQUIPMENT PRIOR TO INSTALLATION OF ANY CONCRETE CURB. CONCRETE CURB TO BE INSTALLED OUTSIDE OF FALL SAFETY ZONE OF EACH PIECE OF EQUIPMENT PER ASTM 1487-05 AND MANUFACTURER'S WRITTEN RECOMMENDATIONS.**

NOTE: PLAYGROUND EQUIPMENT AND SURFACING PURCHASE AND INSTALLATION IS UNDER SEPARATE CONTRACT AND IS NOT INCLUDED IN THIS BID PACKAGE. CONTRACTOR IS REQUIRED TO COORDINATE INSTALLATION OF PLAYGROUND EQUIPMENT AND SURFACING WITH PLAYGROUND INSTALLER PRIOR TO ANY EXCAVATION AND CONCRETE CURBING OR PAVING INSTALLATION.

LAYOUT NOTES:

1. EXISTING CONDITIONS SURVEYED BY PEAK GROUP, 1949 POND RUN, AUBURN HILLS, MICHIGAN, 48326, (248)689-9090.
2. PROTECT ALL TREES AND EXISTING FEATURES TO REMAIN AS SPECIFIED.
3. PAVEMENT DIMENSIONS AND RADII ARE TO EDGE OF PAVEMENT OR BACK OF CURB. PLASTIC EDGING DIMENSIONS AND RADII ARE TO CENTER OF EDGE SEGMENT.
4. ALL NEW PAVEMENTS AND WALKS TO MEET 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN.
5. ALL EXISTING PLAYGROUND EQUIPMENT TO BE REMOVED **MUST BE DESTROYED COMPLETELY** SO THAT IT CANNOT BE RE-ASSEMBLED. THE CONTRACTOR IS NOT ALLOWED TO RE-USE, DONATE, OR SELL ANY EXISTING PLAYGROUND EQUIPMENT SCHEDULED TO BE DEMOLISHED.
6. THE PURCHASE AND INSTALLATION OF ALL PLAYGROUND EQUIPMENT, PLAY SAFETY SURFACING, AND PLAY SAFETY SURFACING EDGING IN UNDER A SEPARATE CONTRACT AND IS NOT INCLUDED IN THIS BID PACKAGE. SITE CONTRACTORS ARE REQUESTED TO COORDINATE INSTALLATION OF PLAYGROUND EQUIPMENT, PLAY SAFETY SURFACING, AND PLAY SAFETY SURFACING EDGING WITH PLAYGROUND CONTRACTOR PRIOR TO ANY EXCAVATION OR PAVING INSTALLATION.

### PROPOSED FEATURES LEGEND:

SYMBOL	DESCRIPTION	KEY	DESCRIPTION	DETAIL
	RESILIENT SURFACING (BY OTHERS)	(A)	STRAIGHT FACE CONCRETE CURB	6 /C4.0
	LOOSE FILL SAFETY SURFACING (BY OTHERS)	(B)	THICKENED EDGE CONCRETE	11 /C4.0
	SYNTHETIC TURF (BY OTHERS)	(C)	RESILIENT SURFACING (BY OTHERS)	7 /C4.0
	CONCRETE WALK	(D)	LOOSE FILL SAFETY SURFACING (BY OTHERS)	3 & 9 /C4.0
	PLAY AREA ENTRANCE RAMP	(E)	PLASTIC PLAY EDGING (BY OTHERS)	12, 13, & 18 /C4.0
	PLAY SAND	(F)	SYNTHETIC TURF (BY OTHERS)	4, 5, & 8 /C4.0
	N/A	(G)	CONCRETE WALK	2 /C4.0
	PLASTIC PLAY EDGING, BY OTHERS REFER TO PLAYGROUND CONTRACTOR'S DRAWINGS AND SPECS	(H)	PLAY AREA ENTRANCE RAMP	16 /C4.0
	STRAIGHT FACE CONCRETE CURB	(I)	CONCRETE SAND BOX	15 /C4.0
	THICKENED EDGE CONCRETE	(J)	BASKETBALL HOOP POLE (BY OTHERS)	17 /C4.0
	INTEGRAL WALK AND CURB	(M)	N/A	
	BARRIER-FREE PLAY AREA ENTRANCE RAMP	(N)	N/A	
	CHAIN LINK FENCE	(P)	PLAY SAND	SEE SPECS
	LIMIT OF WORK			
	ENLARGEMENT LIMIT LINE			



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**REGISTRATION SEAL**

## CONSULTANT



350 East Michigan Avenue Suite #415  
Kalamazoo Michigan 49007  
Phone (269) 381-3357  
Fax (269) 381-2944

**PROJECT TITLE**

# Barnard Elementary School Playground Renovation Bld Package No.01A

**Troy School District**  
**Troy, Michigan**

DRAWING TITLE  
**Overall Playground  
Layout Plan**

### ISSUE DATES

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11-09-23 CONSTRUCTION DOCUMENTS

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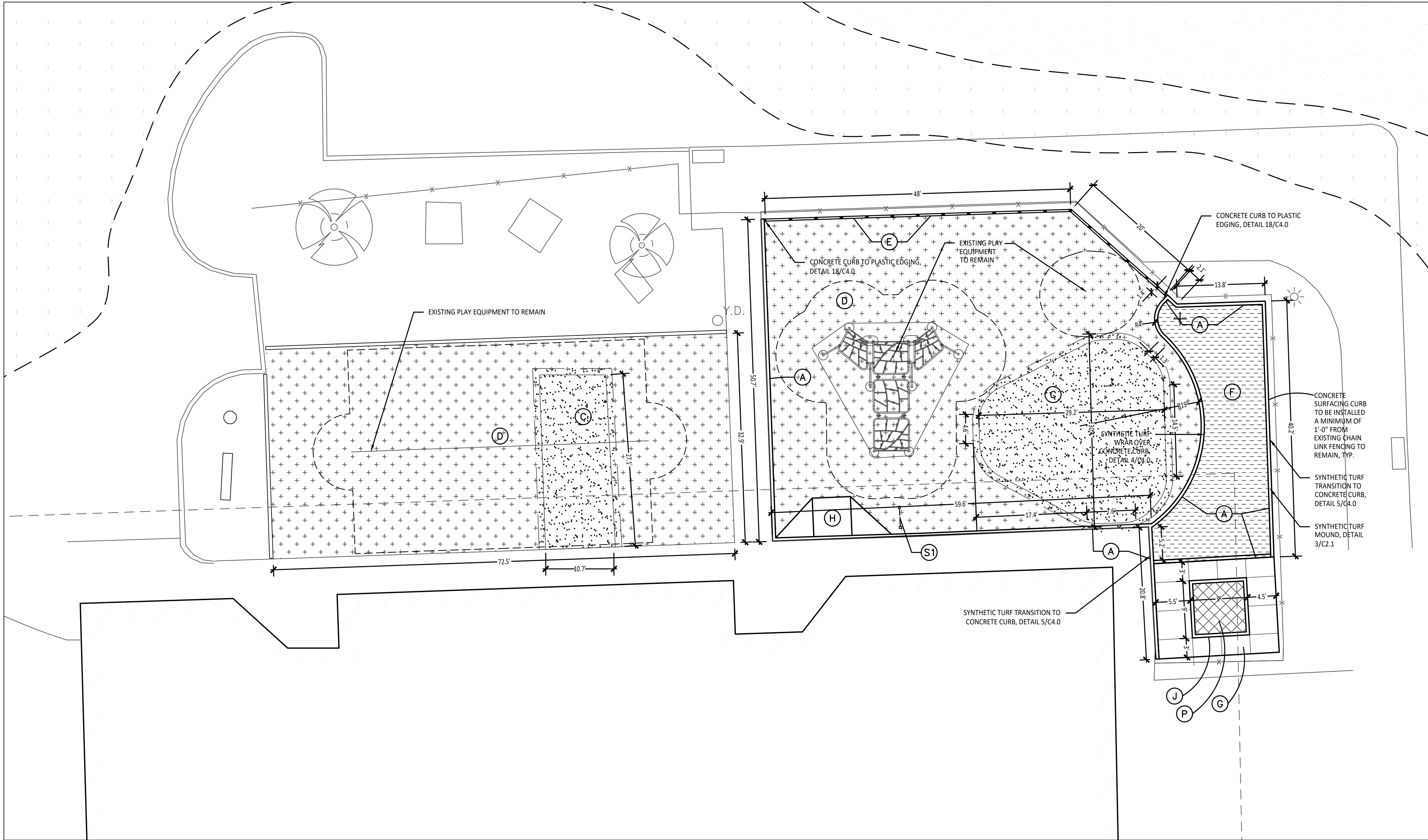
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**22086B**

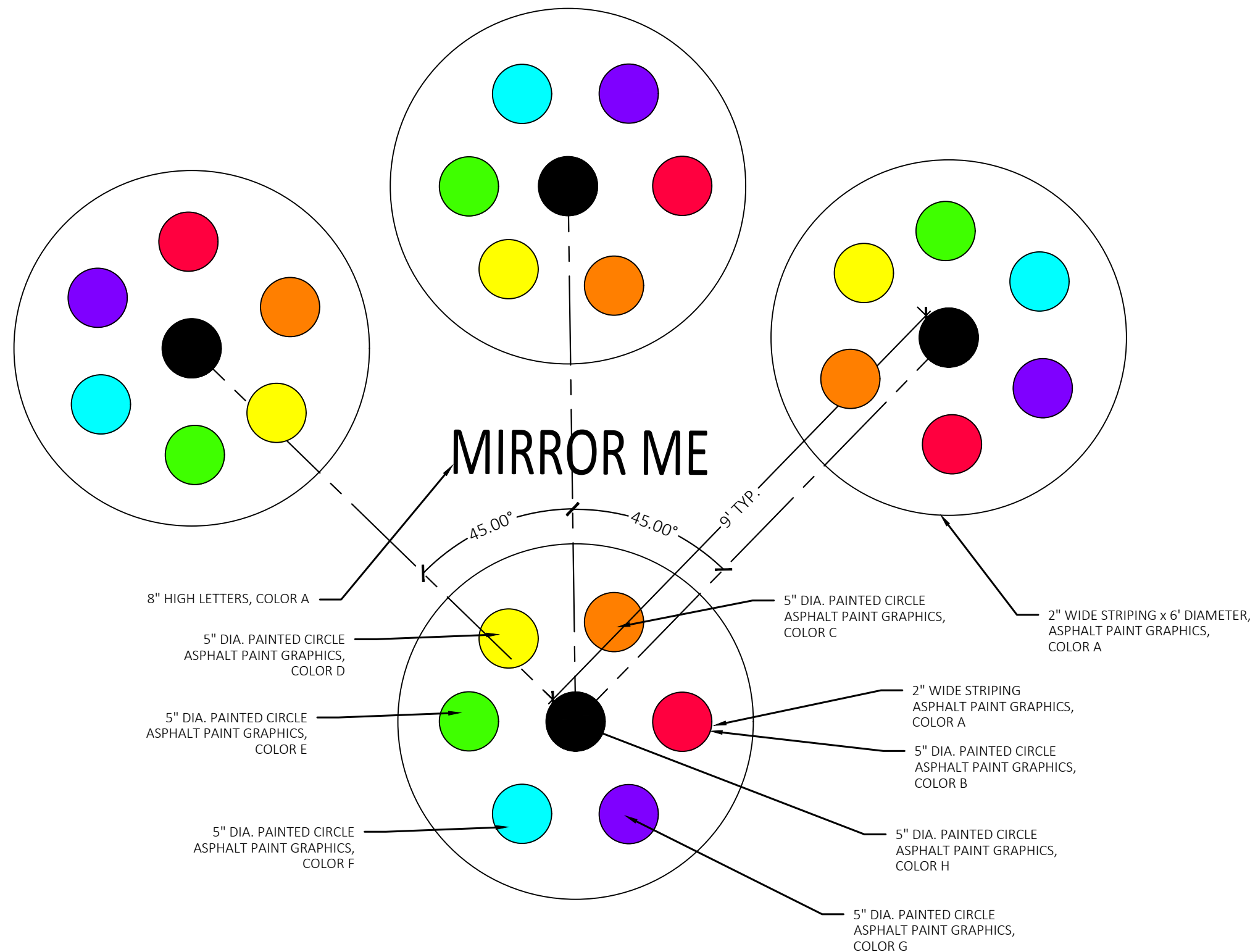
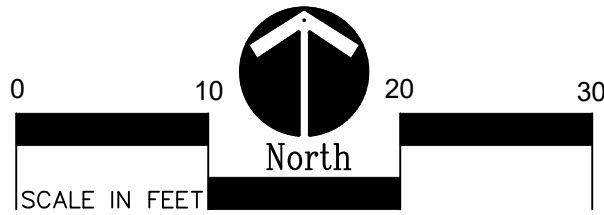
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## C2.0





1 Playground Layout Enlargement Plan - Kindergarten  
Scale: 1"=10'-0"



2 Mirror Me Detail  
Not to Scale

## BARRIER-FREE NOTES

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NOTE: VERIFY LOCATION OF NEW PLAYGROUND EQUIPMENT PRIOR TO INSTALLATION OF ANY CONCRETE CURB. CONCRETE CURB TO BE INSTALLED OUTSIDE OF FALL SAFETY ZONE OF EACH PIECE OF EQUIPMENT PER ASTM 1487-05 AND MANUFACTURER'S WRITTEN RECOMMENDATIONS.

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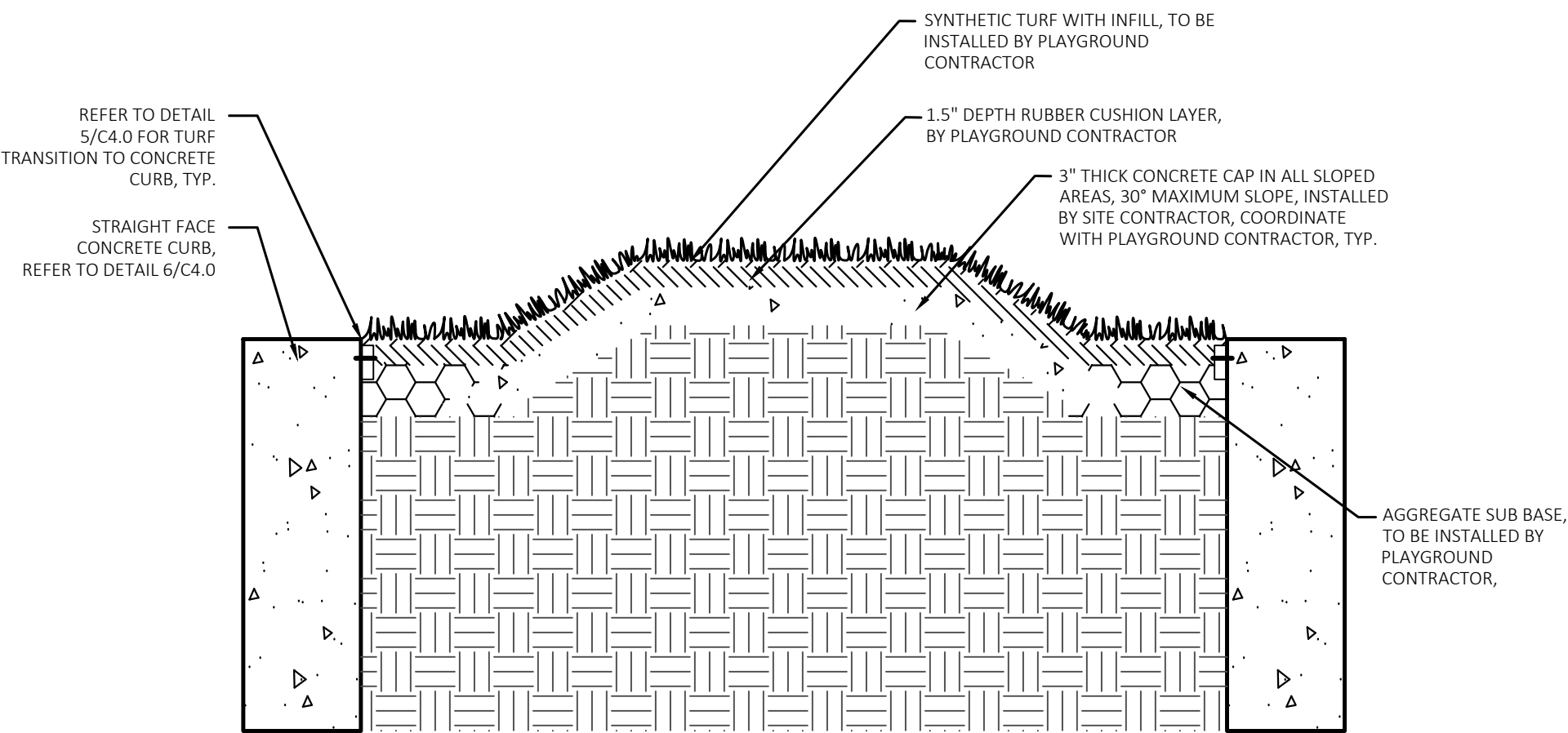
## LAYOUT NOTES:

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## PROPOSED FEATURES LEGEND:

SYMBOL	DESCRIPTION	KEY	DESCRIPTION	DETAIL
	RESILIENT SURFACING (BY OTHERS)	A	STRAIGHT FACE CONCRETE CURB	6 / C4.0
	LOOSE FILL SAFETY SURFACING (BY OTHERS)	B	THICKENED EDGE CONCRETE	11 / C4.0
	SYNTHETIC TURF (BY OTHERS)	C	RESILIENT SURFACING (BY OTHERS)	7 / C4.0
	SYNTHETIC TURF TRANSITION TO CONCRETE CURB, DETAIL 5/C4.0	D	LOOSE FILL SAFETY SURFACING (BY OTHERS)	3 & 9 / C4.0
	N/A	E	PLASTIC PLAY EDGING (BY OTHERS)	12, 13, & 18 / C4.0
	PLAY SAND	F	SYNTHETIC TURF (BY OTHERS)	4, 5, & 8 / C4.0
	PLASTIC PLAY EDGING, BY OTHERS REFER TO PLAYGROUND CONTRACTOR'S DRAWINGS AND SPECS	G	CONCRETE WALK	2 / C4.0
	STRAIGHT FACE CONCRETE CURB	H	PLAY AREA ENTRANCE RAMP	16 / C4.0
	THICKENED EDGE CONCRETE	J	CONCRETE SAND BOX	15 / C4.0
	INTEGRAL WALK AND CURB	K	BASKETBALL HOOP POLE (BY OTHERS)	17 / C4.0
	BARRIER-FREE PLAY AREA ENTRANCE RAMP	L	N/A	N/A
	CHAIN LINK FENCE	M	N/A	N/A
	LIMIT OF WORK	N	N/A	N/A
	ENLARGEMENT LIMIT LINE	P	PLAY SAND	SEE SPECS
		SIGNS		
	COMMUNICATION BOARD	S1		10 / C4.0

3 Synthetic Turf Mound Detail  
Not to Scale



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## REGISTRATION SEAL

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## PROJECT TITLE

**Barnard  
Elementary School  
Playground Renovation  
Bld Package No.01A**

**Troy School District  
Troy, Michigan**

## DRAWING TITLE

**Playground Layout  
Enlargement Plans -  
Kindergarten**

## ISSUE DATES

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11-09-23 CONSTRUCTION DOCUMENTS

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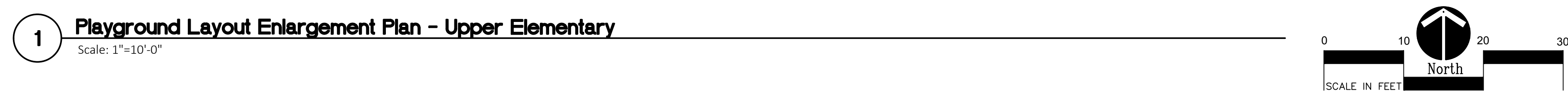
PROJECT NO.

**22086B**

DRAWING NO.

**C2.1**





## BARRIER-FREE NOTES

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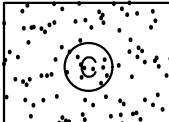
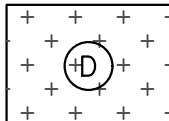
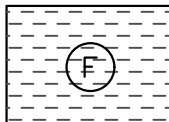

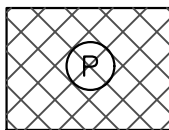
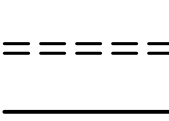
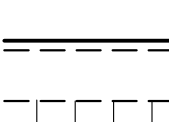
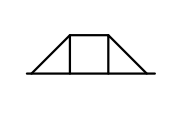






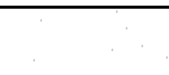




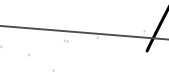


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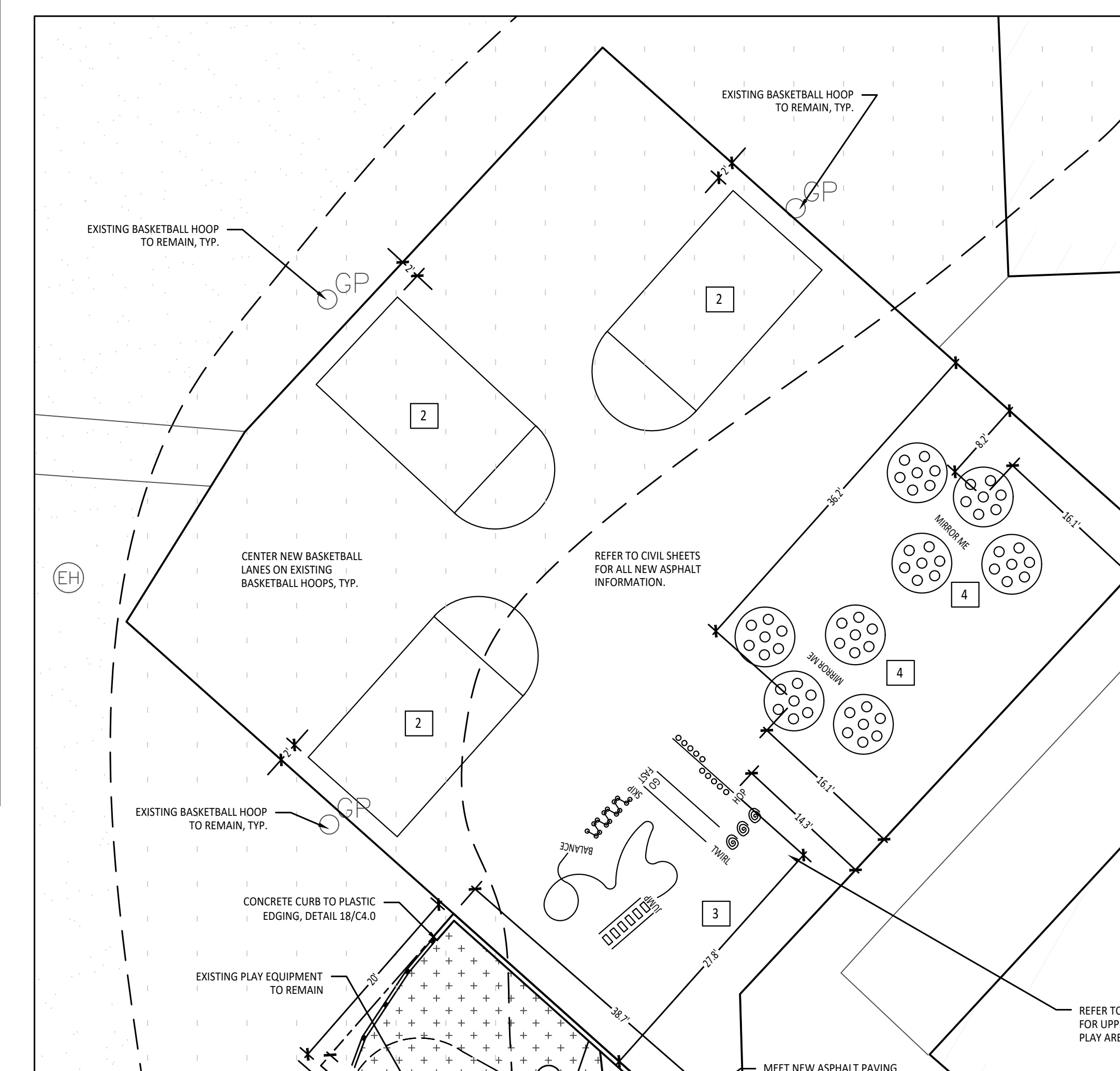
SYMBOL	DESCRIPTION	KEY	DESCRIPTION	DETAIL
	RESILIENT SURFACING (BY OTHERS)	(A)	STRAIGHT FACE CONCRETE CURB	6 / C4.0
	LOOSE FILL SAFETY SURFACING (BY OTHERS)	(B)	THICKENED EDGE CONCRETE	11 / C4.0
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	PLAY SAND	(E)	PLASTIC PLAY EDGING (BY OTHERS)	12, 13, & 18 / C4.0
		(F)	SYNTHETIC TURF (BY OTHERS)	4, 5, & 8 / C4.0
		(G)	CONCRETE WALK	2 / C4.0
		(H)	PLAY AREA ENTRANCE RAMP	16 / C4.0
		(J)	CONCRETE SAND BOX	15 / C4.0
		(K)	BASKETBALL HOOP POLE (BY OTHERS)	17 / C4.0
		(L)	N/A	
		(M)	N/A	
		(N)	N/A	
		(P)	PLAY SAND	SEE SPECS
	PLASTIC PLAY EDGING, BY OTHERS REFER TO PLAYGROUND CONTRACTOR'S DRAWINGS AND SPECS			
	STRAIGHT FACE CONCRETE CURB			
	THICKENED EDGE CONCRETE			
	INTEGRAL WALK AND CURB			
	BARRIER-FREE PLAY AREA ENTRANCE RAMP			
	CHAIN LINK FENCE			
	LIMIT OF WORK			
	ENLARGEMENT LIMIT LINE			

SIGNS ↗

(S1)	COMMUNICATION BOARD	10 / C4.0
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UPPER ELEMENTARY  
PAINTED GAMES SCHEDULE:

<u>SYMBOL</u>	<u>DESCRIPTION</u>	<u>DETAIL</u>
1	N/A	
2	BASKETBALL LANE LAYOUT	2 / C2.0
3	SILLY TRACK	4 / C2.0
4	MIRROR ME	2 / C2.1
5	N/A	



**2 Playground Layout Enlargement Plan - Upper Elementary Paved Play**  
Scale: 1"=10'-0"



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**REGISTRATION SEAL**

## CONSULTANT



350 East Michigan Avenue Suite #415  
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Phone (269) 381-3357  
Fax (269) 381-2944

**PROJECT TITLE**  
**Barnard**  
**Elementary School**  
**Playground Renovation**  
**Bld Package No.01A**

**Troy School District**  
**Troy, Michigan**

**DRAWING TITLE**  
**Playground Layout**  
**Enlargement Plans -**  
**Upper Elementary**

## ISSUE DATES

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11-09-23 CONSTRUCTION DOCUMENTS

DATE: ISSUED FOR:

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PROJECT NO.

**22086B**

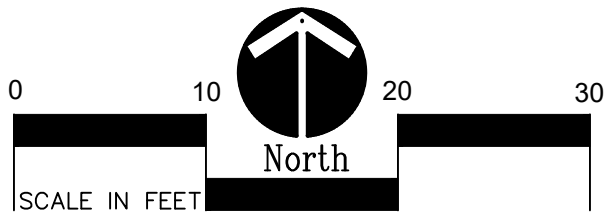
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## C2.2





1 Playground Layout Enlargement Plan - Lower Elementary  
Scale: 1"=10'-0"



BARRIER-FREE NOTES

- BARRIER-FREE PARKING AND ACCESSIBLE ROUTE(S) MUST COMPLY WITH THE AMERICANS WITH DISABILITIES ACT AND MICHIGAN BARRIER-FREE CODE REQUIREMENTS, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
- 1:50 (2%) MAXIMUM CROSS-SLOPE ON ACCESSIBLE ROUTE.
  - NO CHANGES IN LEVEL GREATER THAN 1/2" ALONG ACCESSIBLE ROUTE.
  - 1:20 (5%) MAXIMUM LONGITUDINAL SLOPE ON ACCESSIBLE ROUTE (EXCEPT WHERE RAMPS ARE PROVIDED).
  - 1:50 (2%) MAXIMUM SLOPE (IN ANY DIRECTION) IN B.F. PARKING AND ACCESS AISLES.
- NOTE: VERIFY LOCATION OF NEW PLAYGROUND EQUIPMENT PRIOR TO INSTALLATION OF ANY CONCRETE CURB. CONCRETE CURB TO BE INSTALLED OUTSIDE OF FALL SAFETY ZONE OF EACH PIECE OF EQUIPMENT PER ASTM 1487-05 AND MANUFACTURER'S WRITTEN RECOMMENDATIONS.
- NOTE: PLAYGROUND EQUIPMENT AND SURFACING PURCHASE AND INSTALLATION IS UNDER SEPARATE CONTRACT AND IS NOT INCLUDED IN THIS BID PACKAGE. CONTRACTOR IS REQUIRED TO COORDINATE INSTALLATION OF PLAYGROUND EQUIPMENT AND SURFACING WITH PLAYGROUND INSTALLER PRIOR TO ANY EXCAVATION AND CONCRETE CURBING OR PAVING INSTALLATION.

LAYOUT NOTES:

- EXISTING CONDITIONS SURVEY PROVIDED BY PEA GROUP, 1849 POND RUN, AUBURN HILLS, MICHIGAN, 48326, (248)689-9090.
- PROTECT ALL TREES AND EXISTING FEATURES TO REMAIN AS SPECIFIED.
- PAVEMENT DIMENSIONS AND RADII ARE TO EDGE OF PAVEMENT OR BACK OF CURB. PLASTIC EDGING DIMENSIONS AND RADII ARE TO CENTER OF EDGE SEGMENT.
- ALL NEW PAVEMENTS AND WALKS TO MEET 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN.
- ALL EXISTING PLAYGROUND EQUIPMENT TO BE REMOVED **MUST BE DESTROYED COMPLETELY** SO THAT IT CANNOT BE RE-ASSEMBLED. THE CONTRACTOR IS NOT ALLOWED TO RE-USE, DONATE, OR SELL ANY EXISTING PLAYGROUND EQUIPMENT SCHEDULED TO BE DEMOLISHED.
- THE PURCHASE AND INSTALLATION OF ALL PLAYGROUND EQUIPMENT, PLAY SAFETY SURFACING, AND PLAY SAFETY SURFACING EDGING IN UNDER A SEPARATE CONTRACT AND IS NOT INCLUDED IN THIS BID PACKAGE. SITE CONTRACTORS ARE REQUIRED TO COORDINATE INSTALLATION OF PLAYGROUND EQUIPMENT, PLAY SAFETY SURFACING, AND PLAY SAFETY SURFACING EDGING WITH PLAYGROUND CONTRACTOR PRIOR TO ANY EXCAVATION OR PAVING INSTALLATION.

PROPOSED FEATURES LEGEND:

SYMBOL	DESCRIPTION	KEY	DESCRIPTION	DETAIL
	RESILIENT SURFACING (BY OTHERS)	A	STRAIGHT FACE CONCRETE CURB	6 / C4.0
	LOOSE FILL SAFETY SURFACING (BY OTHERS)	B	THICKENED EDGE CONCRETE	11 / C4.0
	SYNTHETIC TURF (BY OTHERS)	C	RESILIENT SURFACING (BY OTHERS)	7 / C4.0
	PLAY SAND	D	LOOSE FILL SAFETY SURFACING (BY OTHERS)	3 & 9 / C4.0
	PLASTIC PLAY EDGING, BY OTHERS REFER TO PLAYGROUND CONTRACTOR'S DRAWINGS AND SPECS	E	PLASTIC PLAY EDGING (BY OTHERS)	12, 13, & 18 / C4.0
	STRAIGHT FACE CONCRETE CURB	F	SYNTHETIC TURF (BY OTHERS)	4, 5, & 8 / C4.0
	THICKENED EDGE CONCRETE	G	CONCRETE WALK	2 / C4.0
	INTEGRAL WALK AND CURB	H	PLAY AREA ENTRANCE RAMP	16 / C4.0
	BARRIER-FREE PLAY AREA ENTRANCE RAMP	J	CONCRETE SAND BOX	15 / C4.0
	CHAIN LINK FENCE	K	BASKETBALL HOOP POLE (BY OTHERS)	17 / C4.0
	LIMIT OF WORK	L	N/A	
	ENLARGEMENT LIMIT LINE	M	N/A	
	COMMUNICATION BOARD	N	N/A	
	SIGNS	O	PLAY SAND	SEE SPECS

LOWER ELEMENTARY  
PAINTED GAMES SCHEDULE:

SYMBOL	DESCRIPTION	DETAIL
1	N/A	
2	BASKETBALL LANE LAYOUT	2 / C2.0
3	SILLY TRACK	3 / C2.0
4	MIRROR ME	2 / C2.1
5	N/A	



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CONSULTANT



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PROJECT TITLE  
**Barnard  
Elementary School  
Playground Renovation  
Bld Package No.01A**

Troy School District  
Troy, Michigan

DRAWING TITLE  
**Playground Layout  
Enlargement Plans -  
Lower Elementary**

ISSUE DATES

11-09-23	CONSTRUCTION DOCUMENTS
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DATE: ISSUED FOR:

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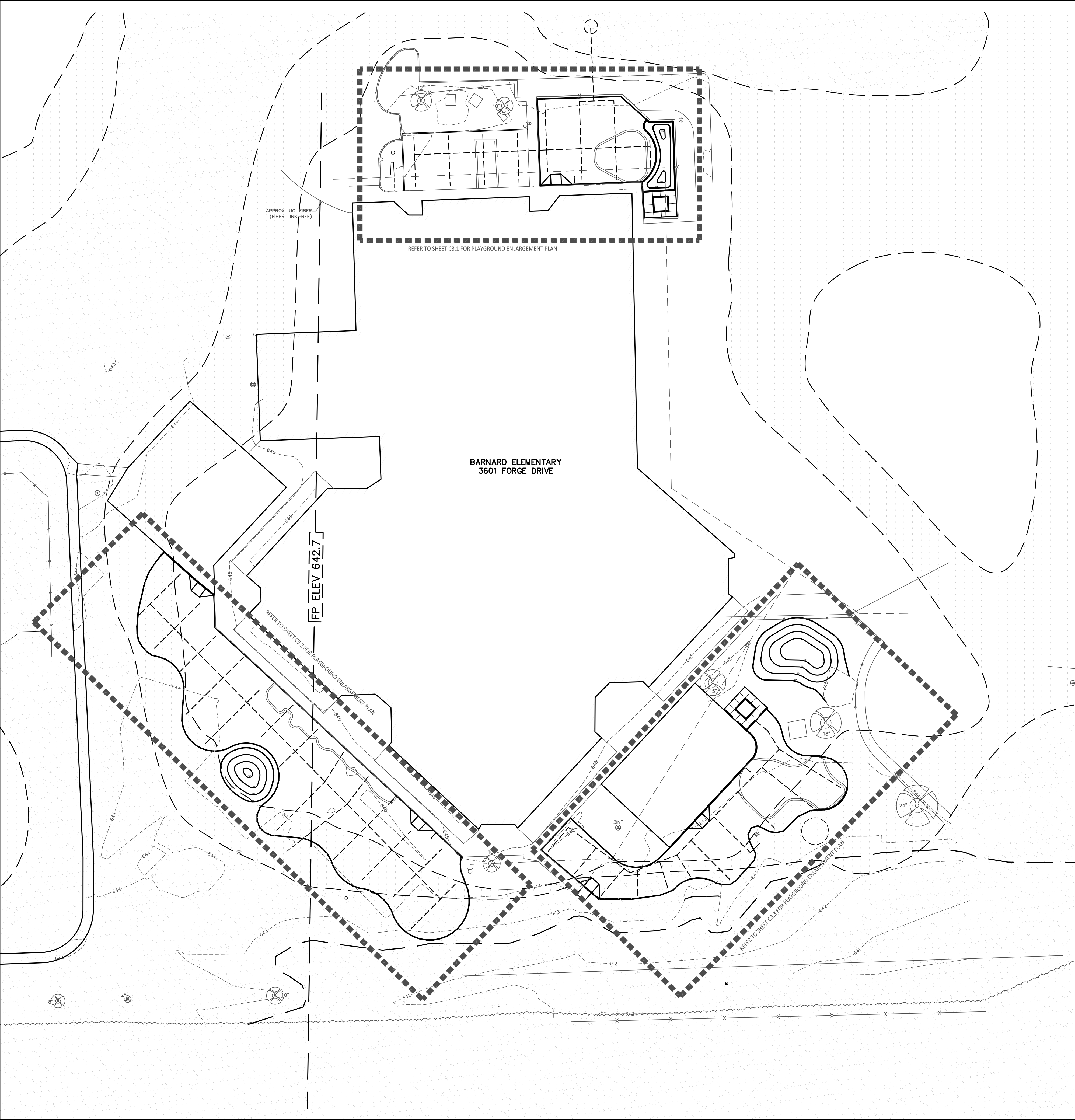
PROJECT NO.

**22086B**

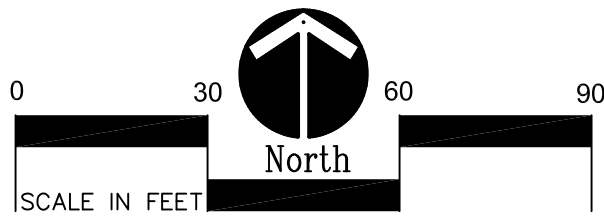
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**C2.3**





**1 Overall Playground Grading Plan**  
Scale: 1"=30'-0"



**BARRIER-FREE NOTES**

BARRIER-FREE PARKING AND ACCESSIBLE ROUTE(S) MUST COMPLY WITH THE AMERICANS WITH DISABILITIES ACT AND MICHIGAN BARRIER-FREE CODE REQUIREMENTS, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:

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- 1:50 (2%) MAXIMUM SLOPE (IN ANY DIRECTION) IN B.F. PARKING AND ACCESS AISLES.

**GRADING NOTES:**

1. SURVEY OF EXISTING CONDITIONS PROVIDED BY PEA GROUP, 1849 POND RUN, AUBURN HILLS, MICHIGAN, 48326, (248)689-9090.
2. VERIFY LOCATIONS OF ALL BELOW GRADE UTILITIES PRIOR TO BEGINNING WORK. 72 HOURS BEFORE YOU DIG CALL "MISS DIG" AT 1-800-482-7171.
3. ALL NEW PAVEMENTS AND TURF AREAS ARE INTENDED TO DRAIN FREELY WITH NO PONDING. IF THIS CANNOT BE ACHIEVED USING THE PROPOSED GRADES, NOTIFY THE OWNER'S REPRESENTATIVE IMMEDIATELY FOR RESOLUTION.
4. ALL NEW PAVEMENT ELEVATIONS AT EXTERIOR DOORS SHALL MATCH EXISTING FINISH FLOOR ELEVATIONS, TYPICAL.
5. ADJUST TOP OF EXISTING MANHOLES, CATCH BASINS, VAULT COVERS, ETC. TO NEW FINISH GRADE AS REQUIRED.
6. SEE SITE CIVIL PLANS FOR ALL ADDITIONAL SITE UTILITY DEMOLITION AND CONSTRUCTION.
7. ALL TOPSOIL AND EXCESS FILL MATERIAL SHALL BE STOCKPILED ON SITE SEPARATELY FOR LATER RE-USE. LOCATE STOCKPILES IN AREAS AS DIRECTED BY CONSTRUCTION MANAGER AND PROTECT FROM EFFECTS OF EROSION.

**IMPORTANT NOTE**

**GENERAL EARTHWORK NOTE:**

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**IMPORTANT NOTE**

**PROPOSED FEATURES LEGEND:**

	EXISTING CONTOURS
	EXISTING SPOT ELEVATIONS
	PROPOSED CONTOURS
	PROPOSED SPOT ELEVATIONS
	DIRECTION AND PERCENTAGE OF SLOPE
	NEW STORMSTRUCTURE, REFER TO CIVIL PLANS
	PLAYGROUND UNDER DRAIN PIPE, REFER TO DETAIL 14/C4.0
	FINISH FLOOR ELEVATION
	INVERT ELEVATION
	TOP OF CURB ELEVATION
	INNER BOTTOM OF CURB ELEVATION (LOOSE FILL ELEVATION)
	OUTER BOTTOM OF CURB ELEVATION (TURF ELEVATION)
	HIGH POINT
	WORK LIMIT LINE



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**REGISTRATION SEAL**

**CONSULTANT**



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Phone (269) 381-3357  
Fax (269) 381-2944

**PROJECT TITLE**

**Barnard  
Elementary School  
Playground Renovation  
Bld Package No.01A**

**Troy School District  
Troy, Michigan**

**DRAWING TITLE**

**Overall Playground  
Grading Plan**

**ISSUE DATES**

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11-09-23 CONSTRUCTION DOCUMENTS

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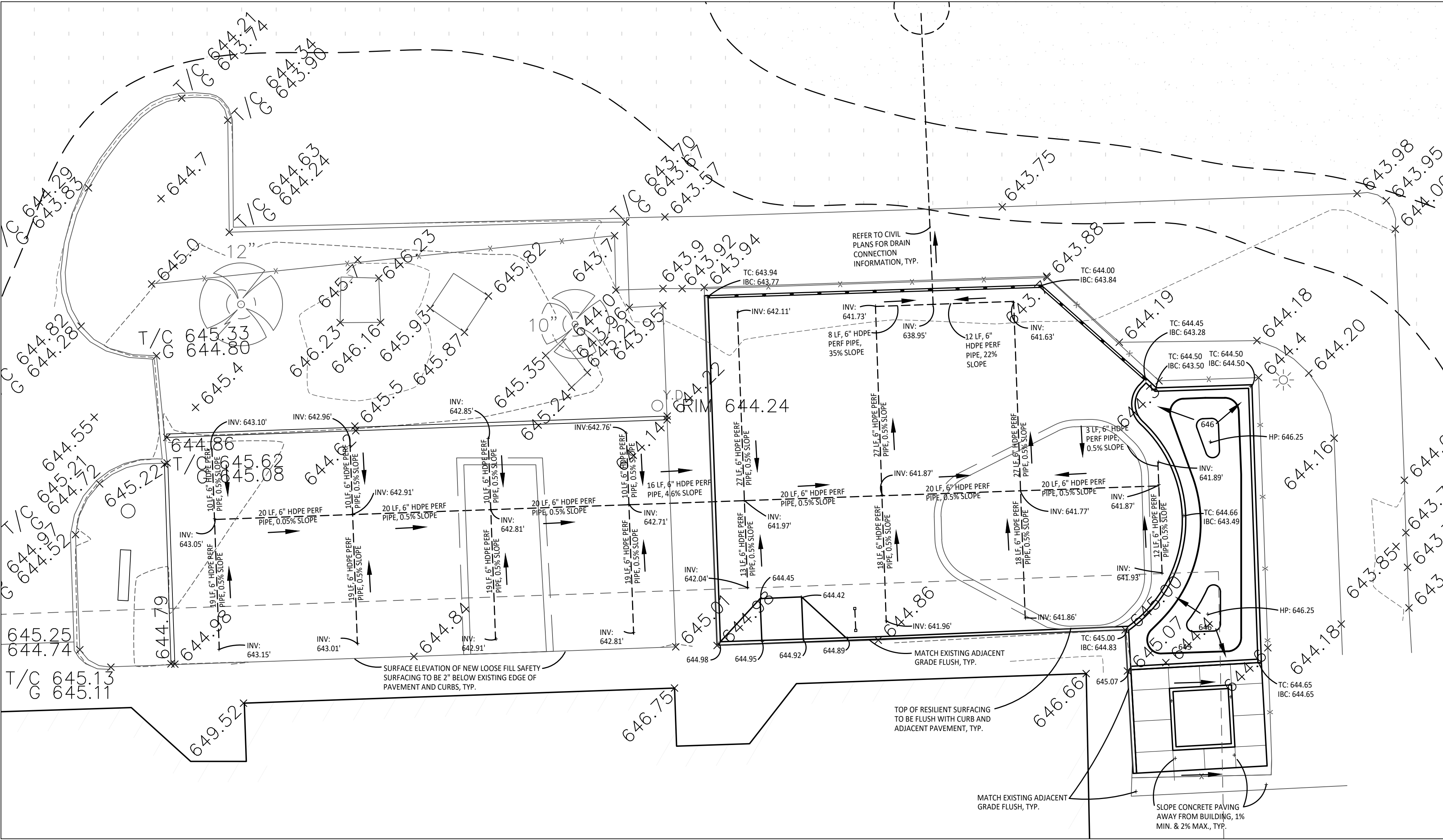
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**22086B**

**DRAWING NO.**

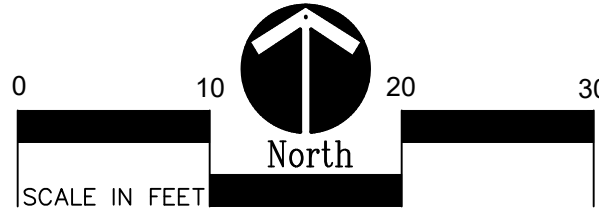
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1

**Playground Grading Enlargement Plan - Kindergarten**  
Scale: 1"=10'-0"



BARRIER-FREE NOTES

BARRIER-FREE PARKING AND ACCESSIBLE ROUTE(S) MUST COMPLY WITH THE AMERICANS WITH DISABILITIES ACT AND MICHIGAN BARRIER-FREE CODE REQUIREMENTS, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:

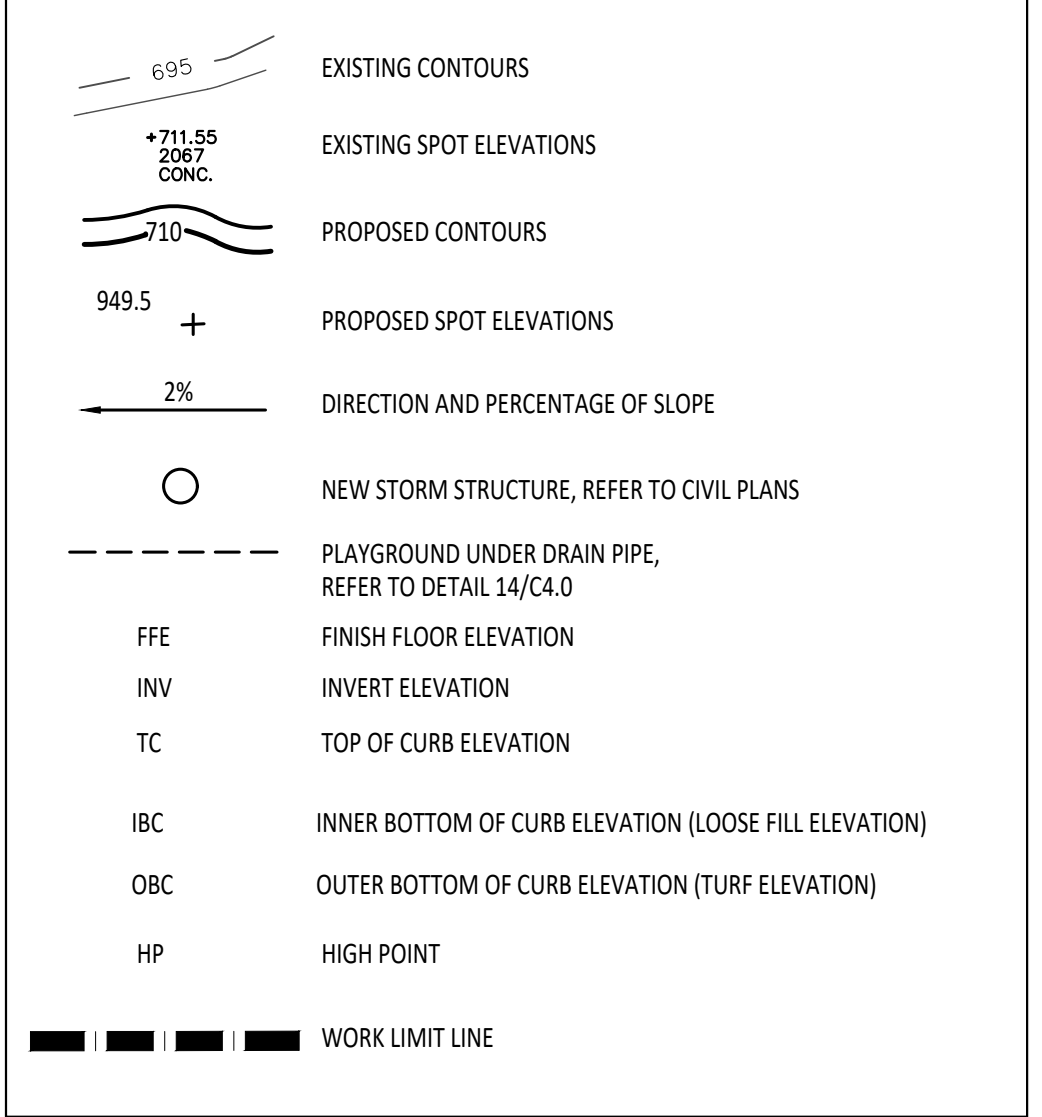
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GRADING NOTES:

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4. ALL NEW PAVEMENT ELEVATIONS AT EXTERIOR DOORS SHALL MATCH EXISTING FINISH FLOOR ELEVATIONS, TYPICAL.
5. ADJUST TOP OF EXISTING MANHOLES, CATCH BASINS, VAULT COVERS, ETC. TO NEW FINISH GRADE AS REQUIRED.
6. SEE SITE CIVIL PLANS FOR ALL ADDITIONAL SITE UTILITY DEMOLITION AND CONSTRUCTION.
7. ALL TOPSOIL AND EXCESS FILL MATERIAL SHALL BE STOCKPILED ON SITE SEPARATELY FOR LATER RE-USE. LOCATE STOCKPILES IN AREAS AS DIRECTED BY CONSTRUCTION MANAGER AND PROTECT FROM EFFECTS OF EROSION.

**GENERAL EARTHWORK NOTE:**  
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PROPOSED FEATURES LEGEND:



T M P ARCHITECTURE INC  
1191 WEST SQUARE LAKE ROAD  
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REGISTRATION SEAL

CONSULTANT

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Phone (269) 381-3357  
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PROJECT TITLE

**Barnard  
Elementary School  
Playground Renovation  
Bld Package No.01A**

Troy School District  
Troy, Michigan

DRAWING TITLE

**Playground  
Grading Plan -  
Kindergarten**

ISSUE DATES

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11-09-23	CONSTRUCTION DOCUMENTS
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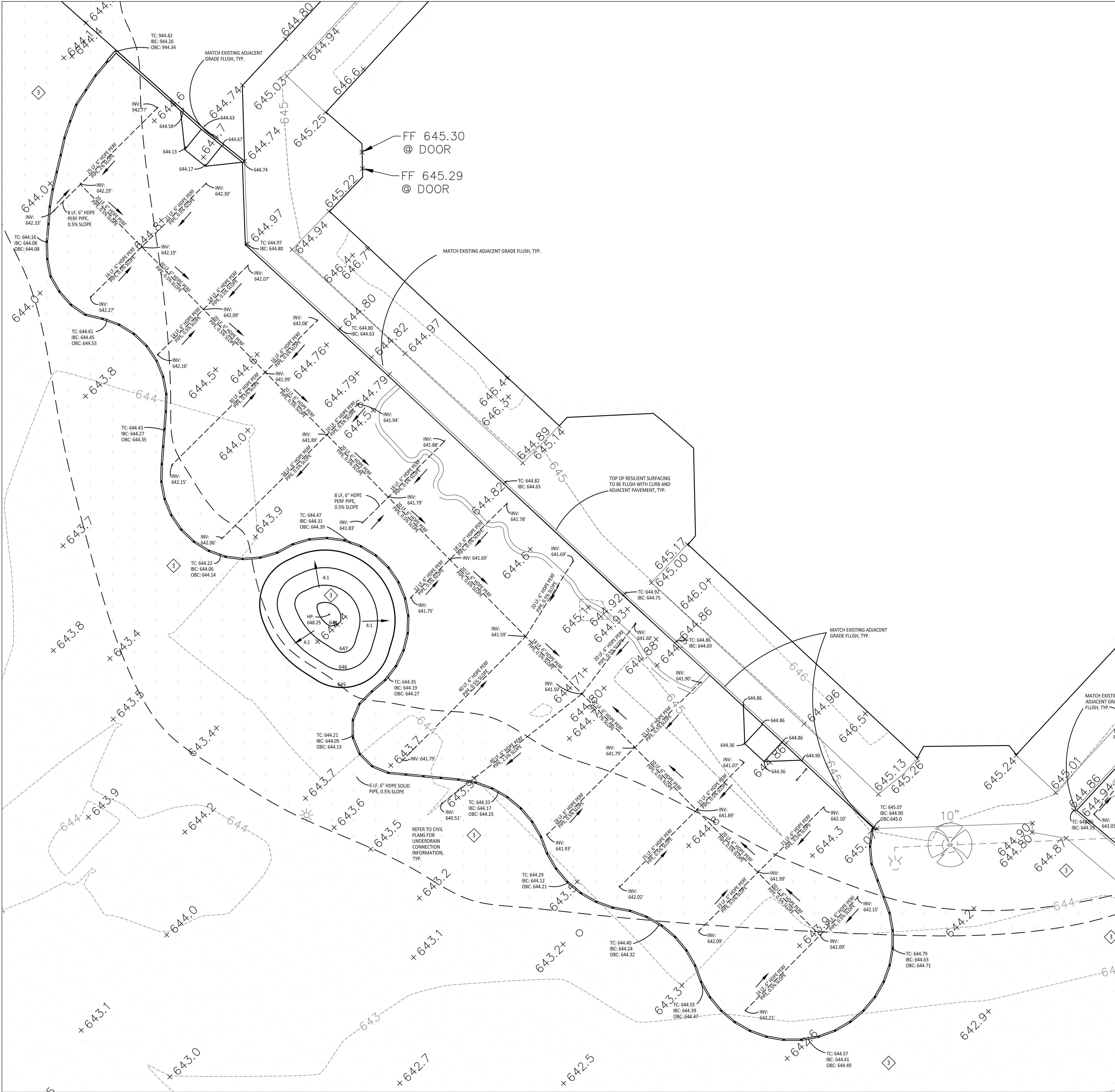
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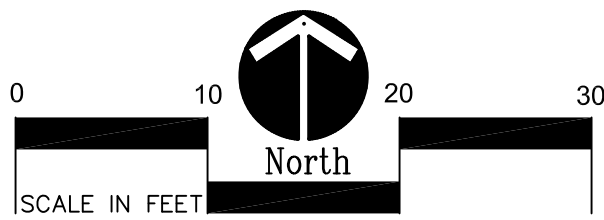
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**C3.1**





1 Overall Playground Grading Plan - Upper Elementary  
Scale: 1"=10'-0"



### GRADING NOTES:

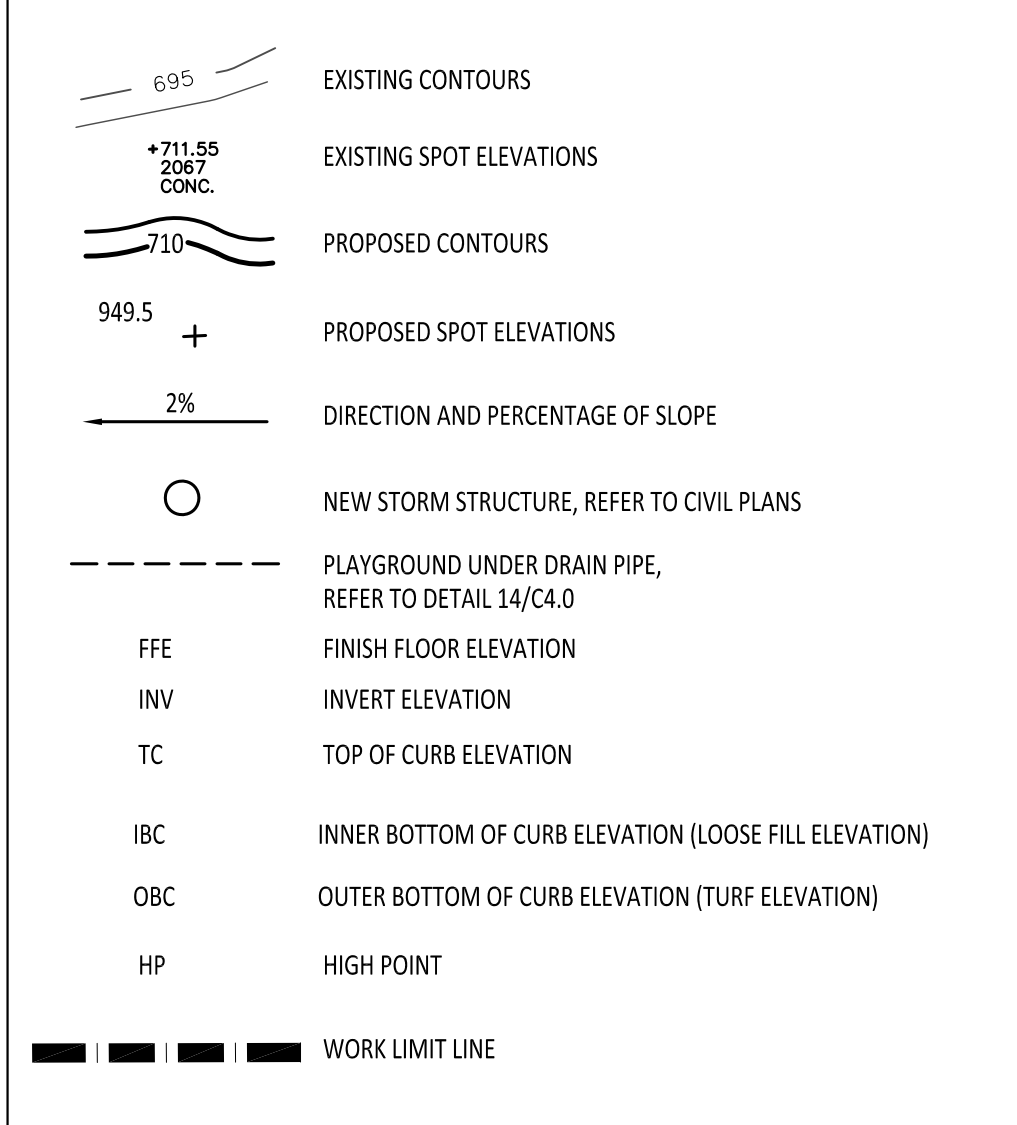
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### PROPOSED FEATURES LEGEND:



#### IMPORTANT NOTE

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#### IMPORTANT NOTE



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#### REGISTRATION SEAL

#### CONSULTANT



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Fax (269) 381-2944

#### PROJECT TITLE

**Barnard  
Elementary School  
Playground Renovation  
Bid Package No.01A**

**Troy School District  
Troy, Michigan**

#### DRAWING TITLE

**Playground  
Grading Plan -  
Upper Elementary**

#### ISSUE DATES

11-09-23	CONSTRUCTION DOCUMENTS
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#### DATE ISSUED FOR:

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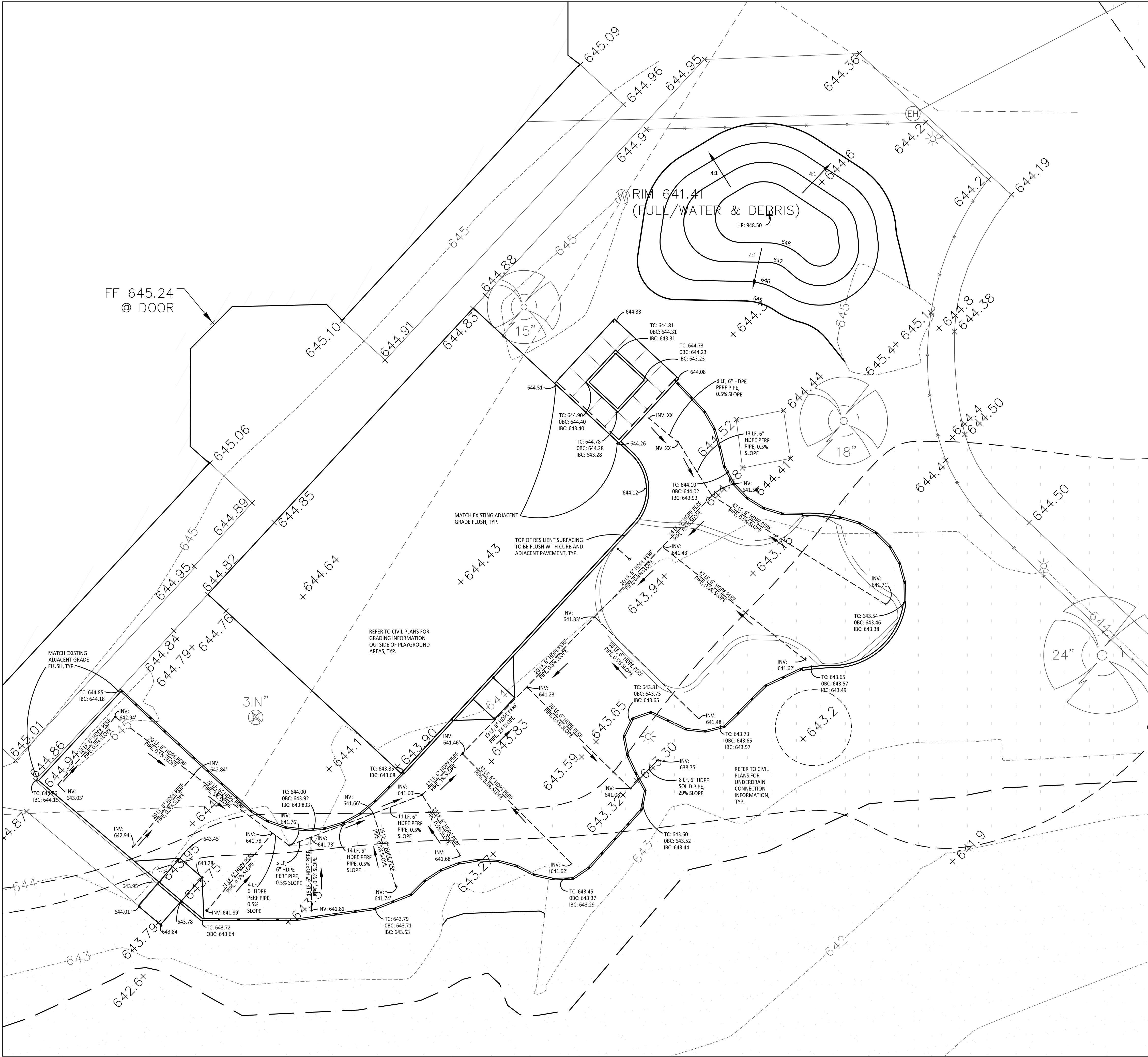
#### PROJECT NO.

**22086B**

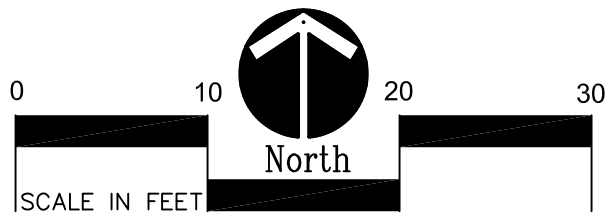
#### DRAWING NO.

**C3.2**





1 Overall Playground Grading Plan - Lower Elementary  
Scale: 1"=10'-0"



GRADING NOTES:

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PROPOSED FEATURES LEGEND:

	EXISTING CONTOURS
	EXISTING SPOT ELEVATIONS
	PROPOSED CONTOURS
	PROPOSED SPOT ELEVATIONS
	DIRECTION AND PERCENTAGE OF SLOPE
	NEW STORM STRUCTURE, REFER TO CIVIL PLANS
	PLAYGROUND UNDER DRAIN PIPE, REFER TO DETAIL 14/C4.0
	FINISH FLOOR ELEVATION
	INVERT ELEVATION
	TOP OF CURB ELEVATION
	INNER BOTTOM OF CURB ELEVATION (LOOSE FILL ELEVATION)
	OUTER BOTTOM OF CURB ELEVATION (TURF ELEVATION)
	HIGH POINT
	WORK LIMIT LINE

IMPORTANT NOTE

GENERAL EARTHWORK NOTE:

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REGISTRATION SEAL

CONSULTANT



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Kalamazoo Michigan 49007  
Phone (269) 381-3357  
Fax (269) 381-2944

PROJECT TITLE

**Barnard  
Elementary School  
Playground Renovation  
Bid Package No.01A**

**Troy School District  
Troy, Michigan**

DRAWING TITLE

**Playground  
Grading Plan -  
Lower Elementary**

ISSUE DATES

11-09-23	CONSTRUCTION DOCUMENTS
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DATE: ISSUED FOR:

DRAWN	...
CHECKED	...
APPROVED	...

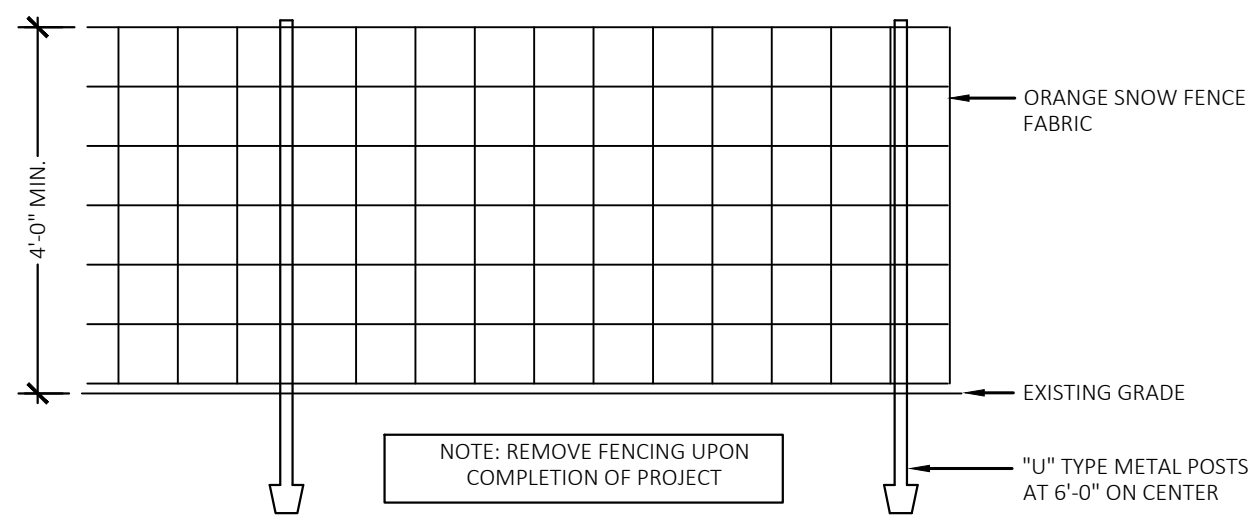
PROJECT NO.

**22086B**

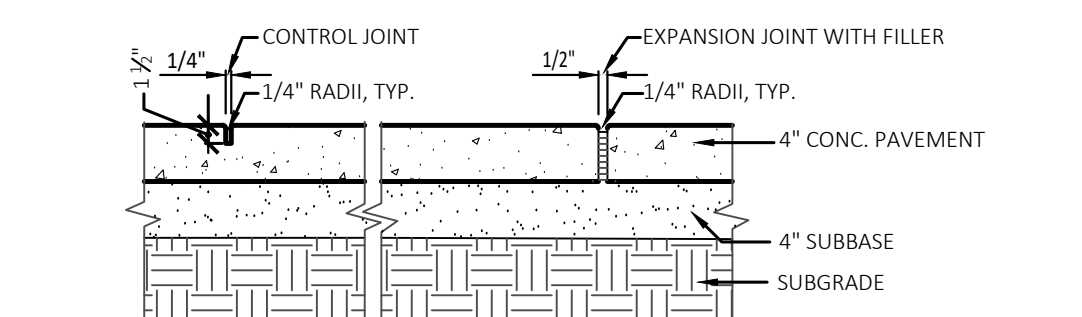
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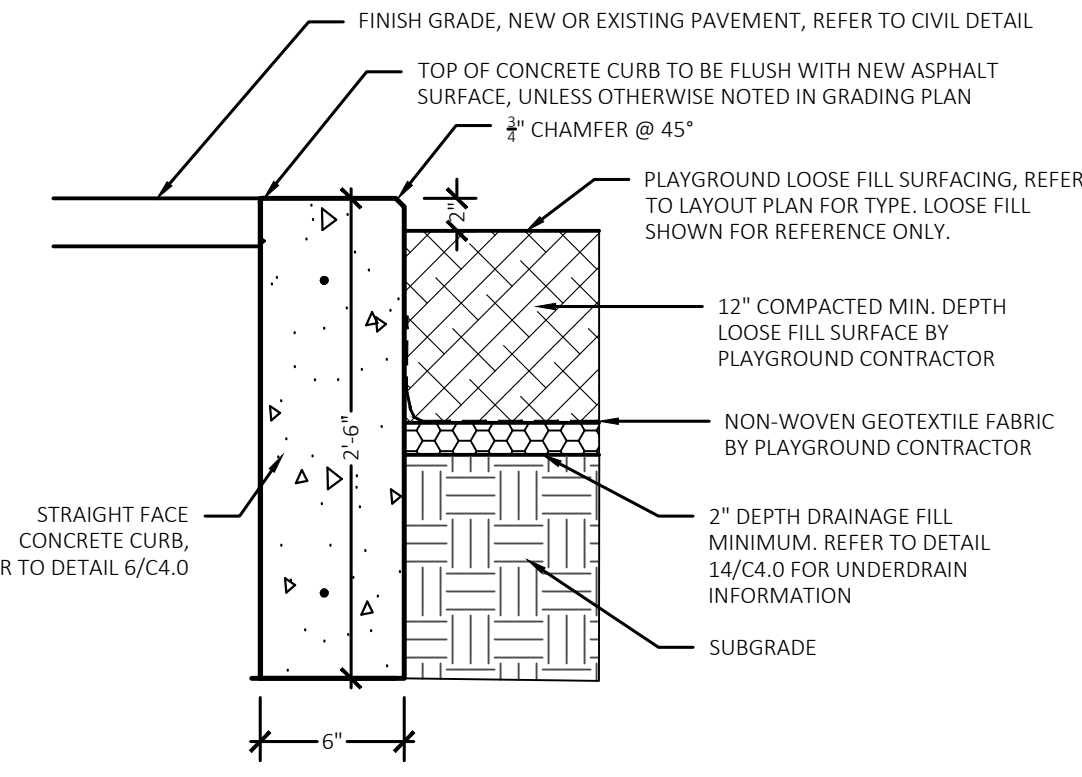




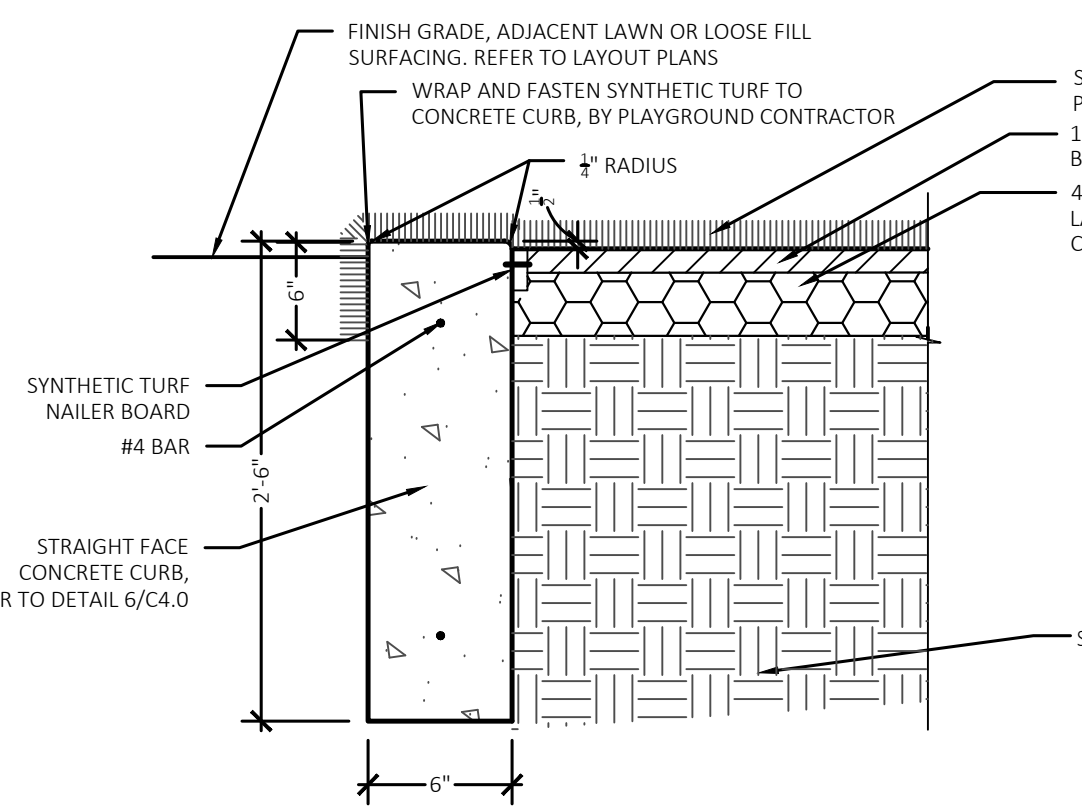
**1 Tree Protection Fencing Detail**  
NOT TO SCALE



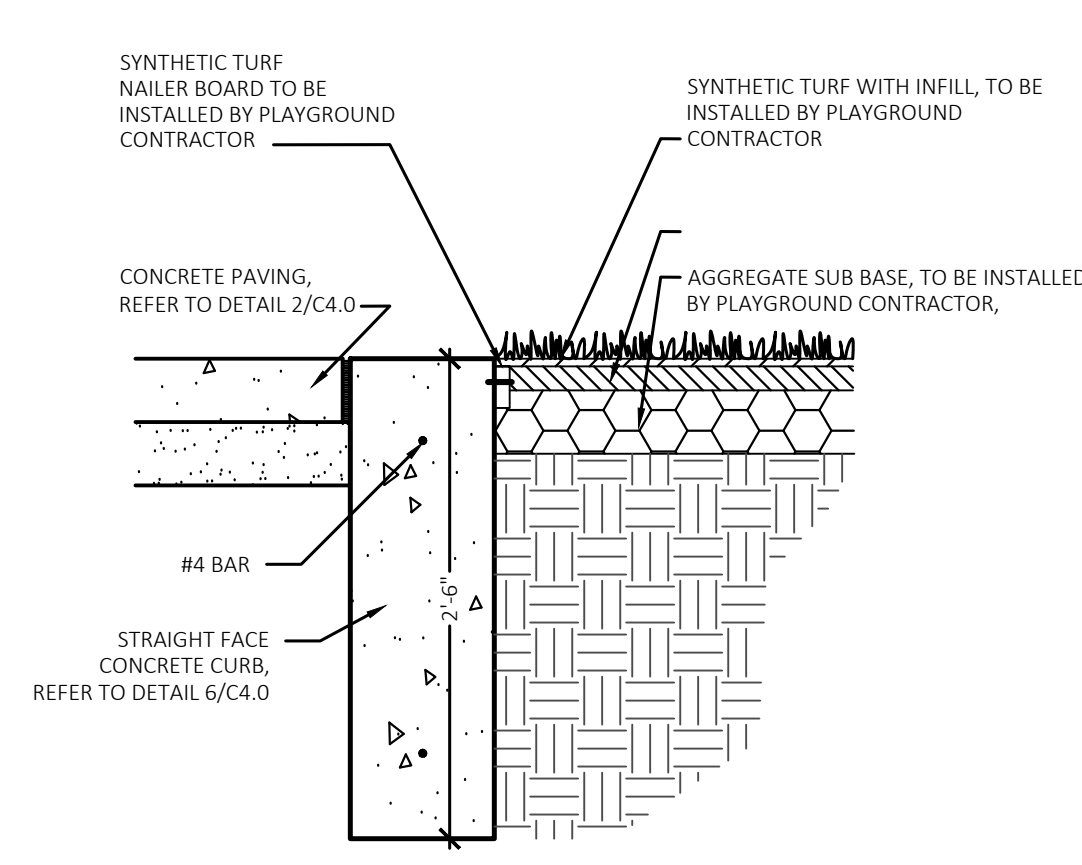
**2 Section-Conc. Paving + Jointing**  
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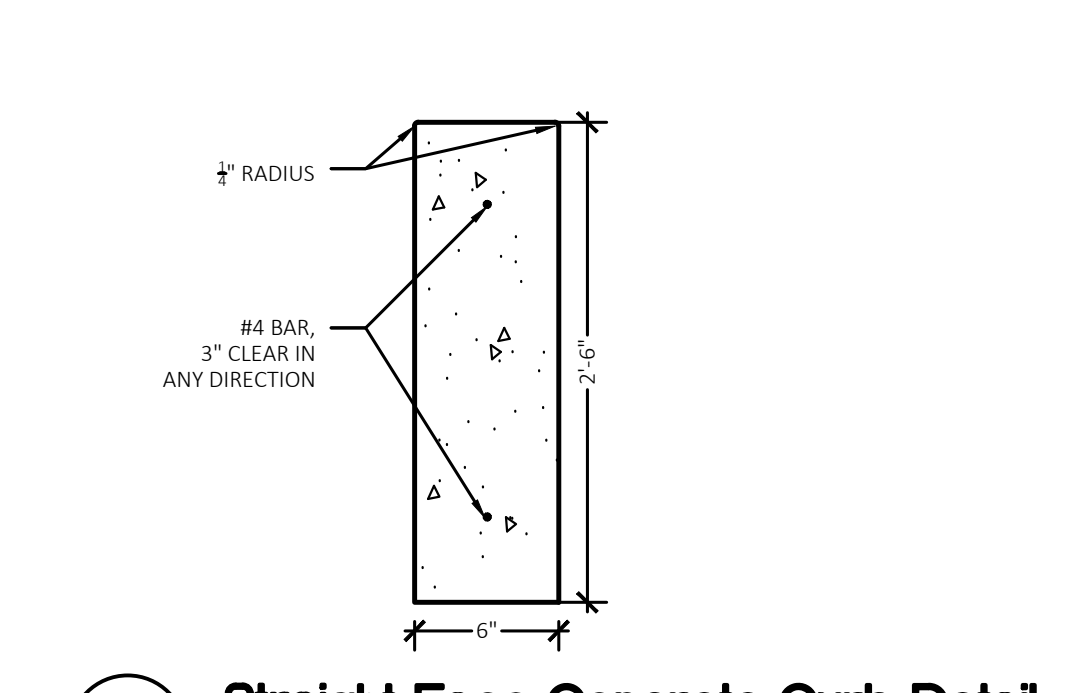
**3 New Concrete Curb to Paving Loose Fill Play Surfacing Detail**  
Not to Scale



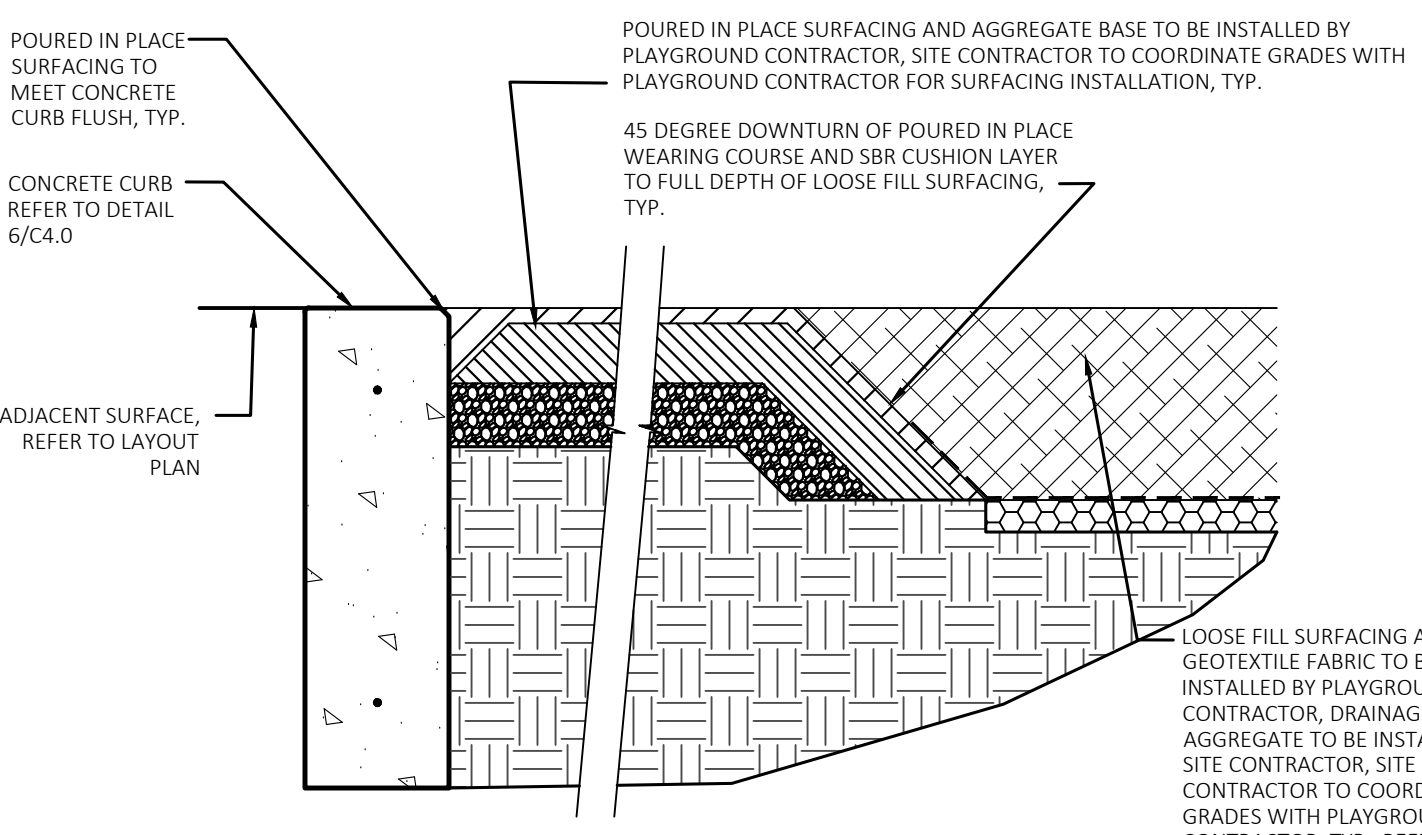
**4 Synthetic Turf Wrap Over Concrete Curb Detail**  
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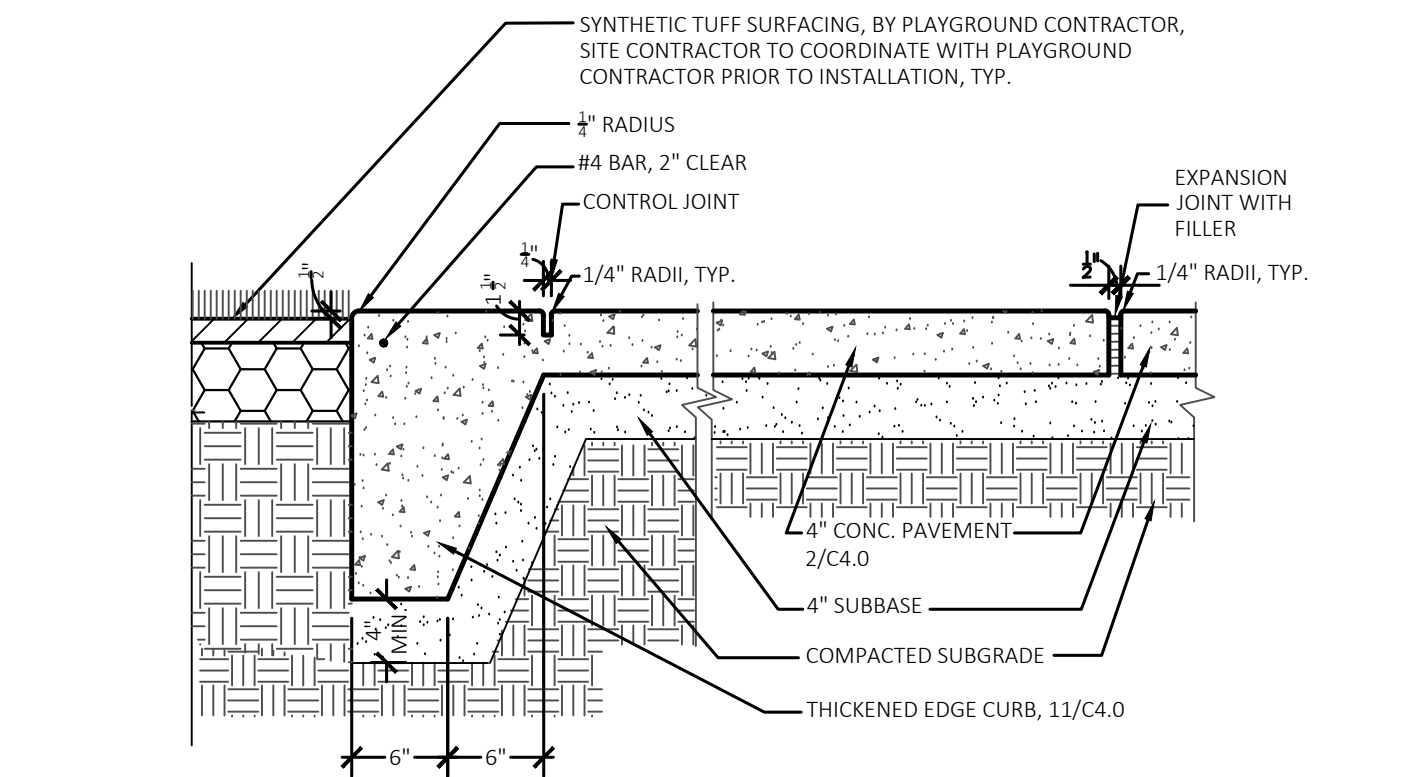
**5 Synthetic Turf Transition to Concrete Curb Detail**



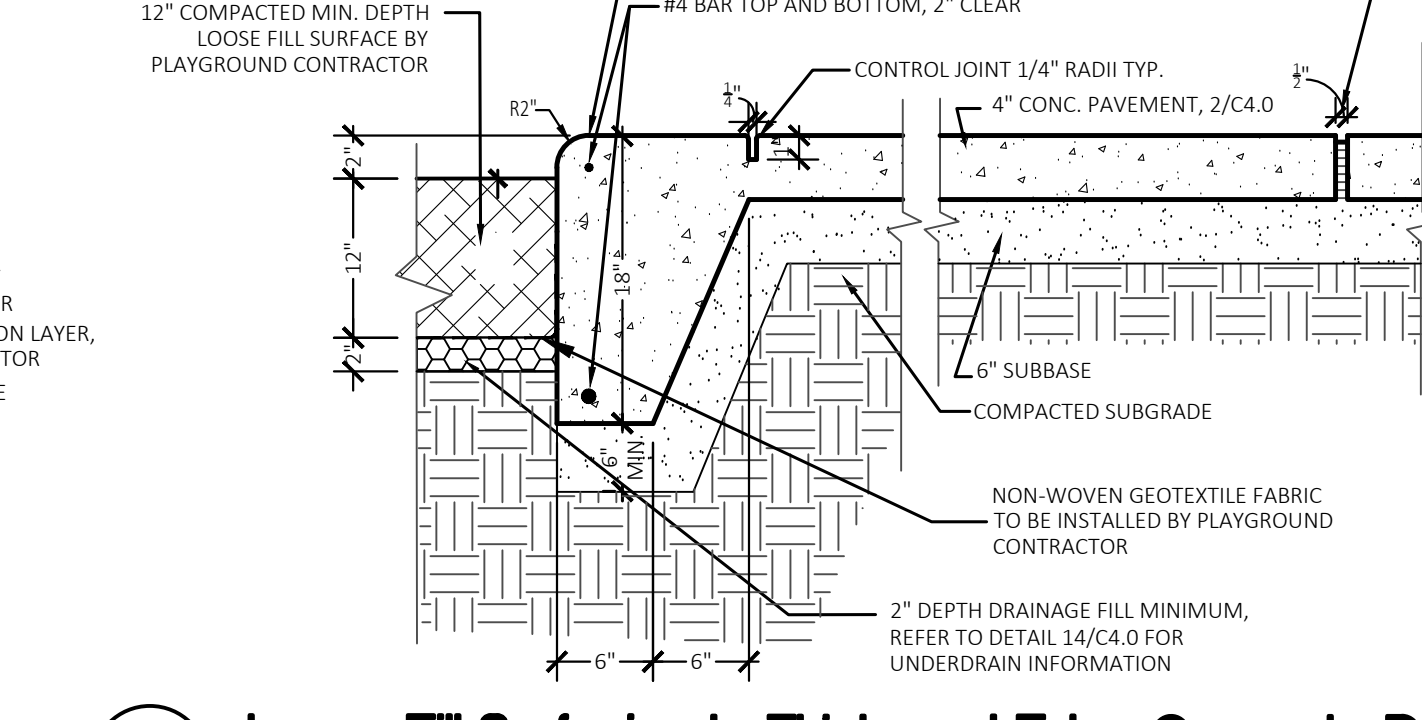
**6 Straight Face Concrete Curb Detail**  
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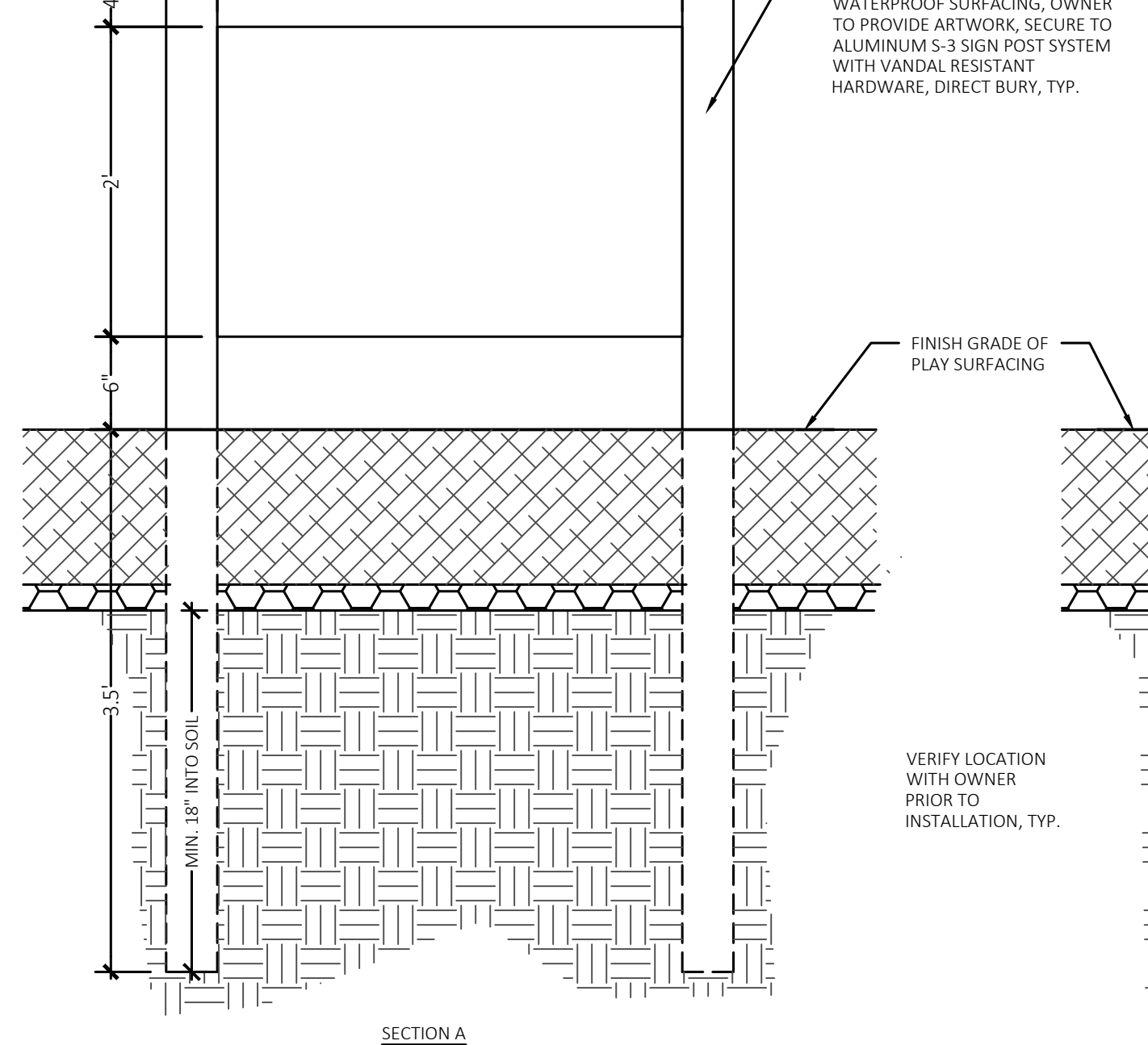
**7 Poured in Place Surfacing Transition to Loose Fill Surfacing and Concrete Curb Detail**  
NOT TO SCALE



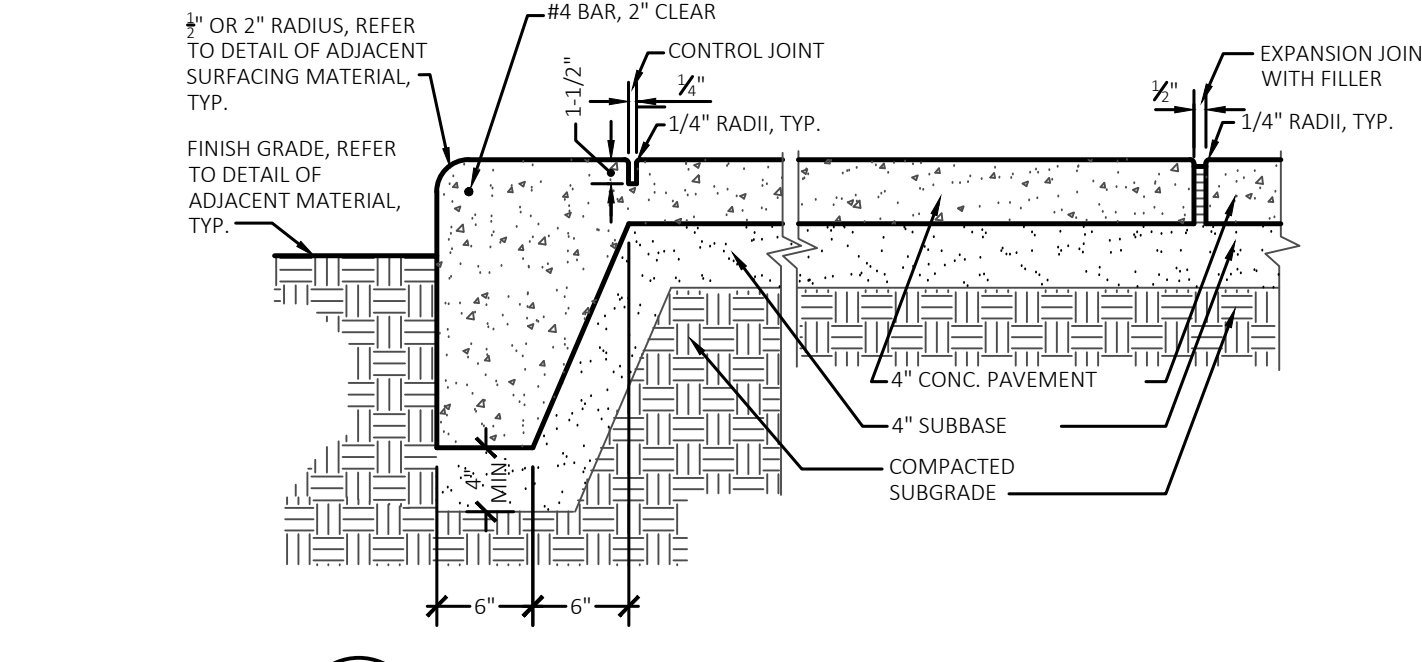
**8 Synthetic Turf Transition to Thickened Edge Concrete**  
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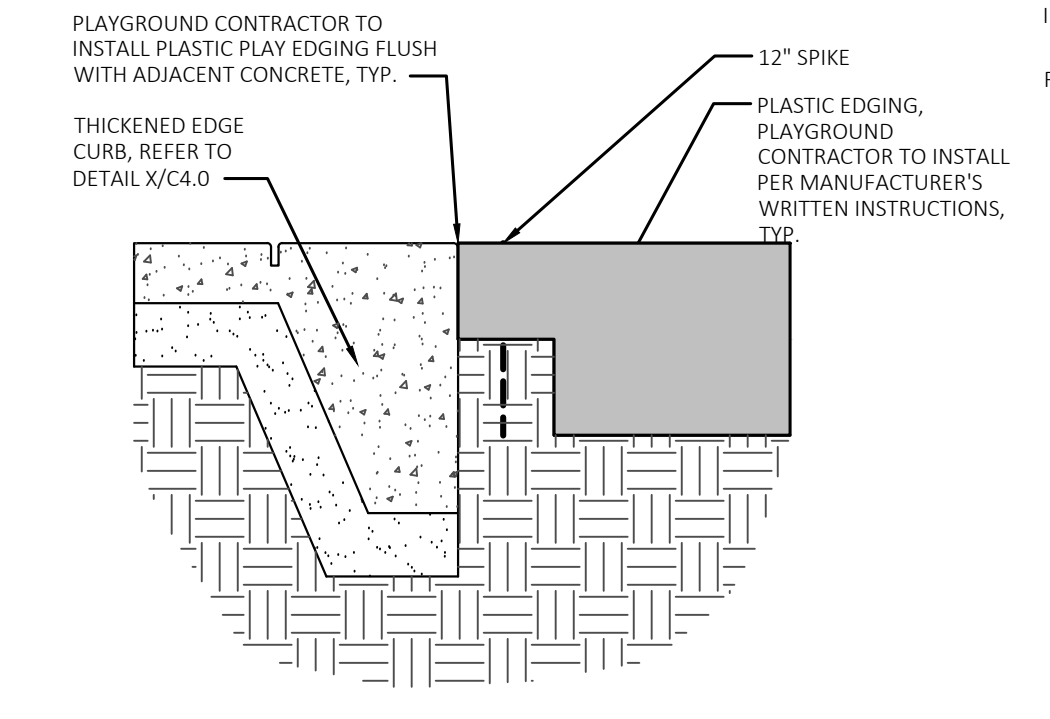
**9 Loose Fill Surfacing to Thickened Edge Concrete Detail**  
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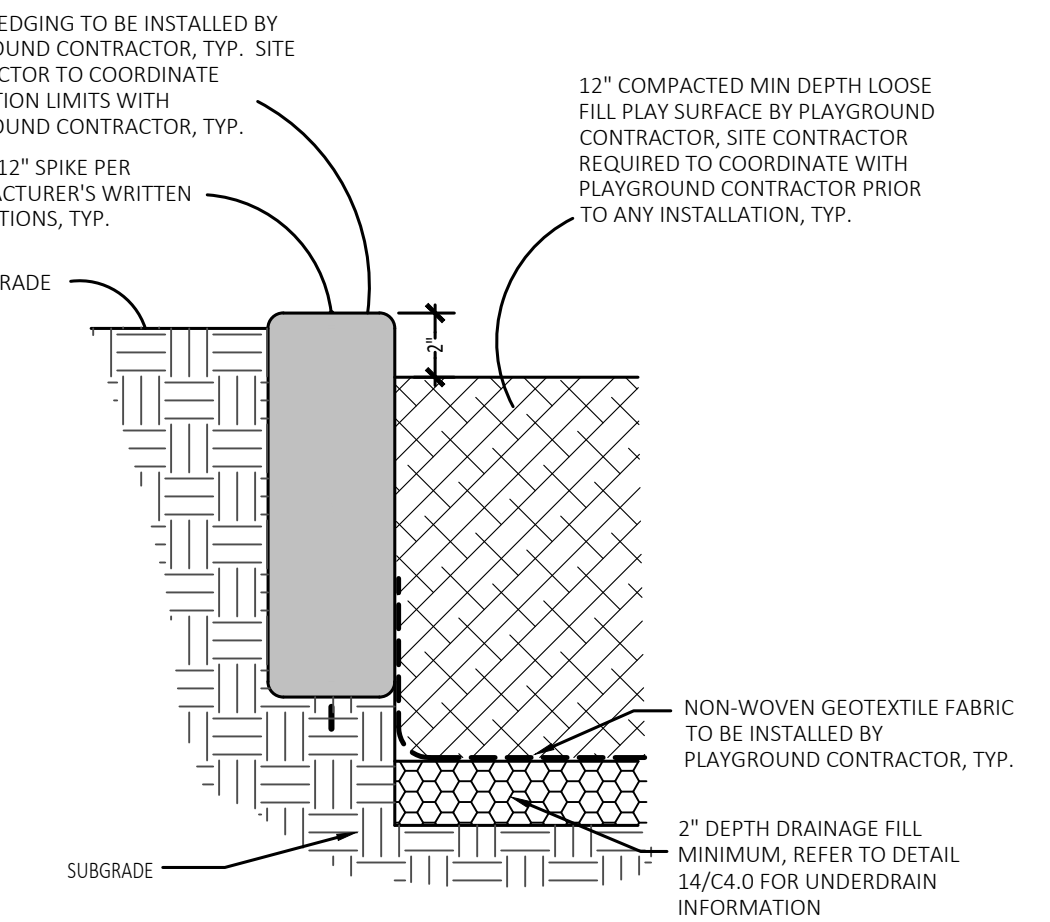
**10 Communication Board Detail**  
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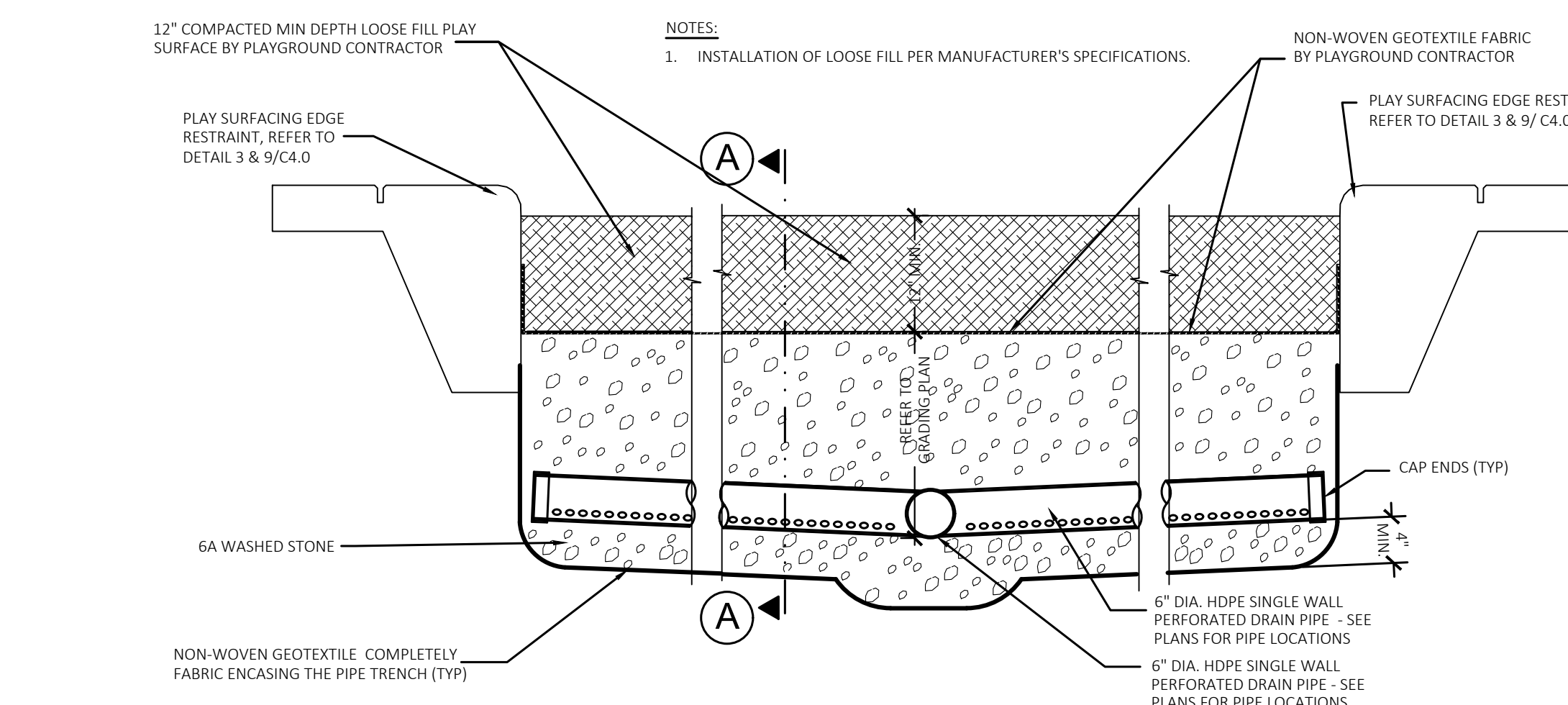
**11 Thickened Edge Curb Detail**  
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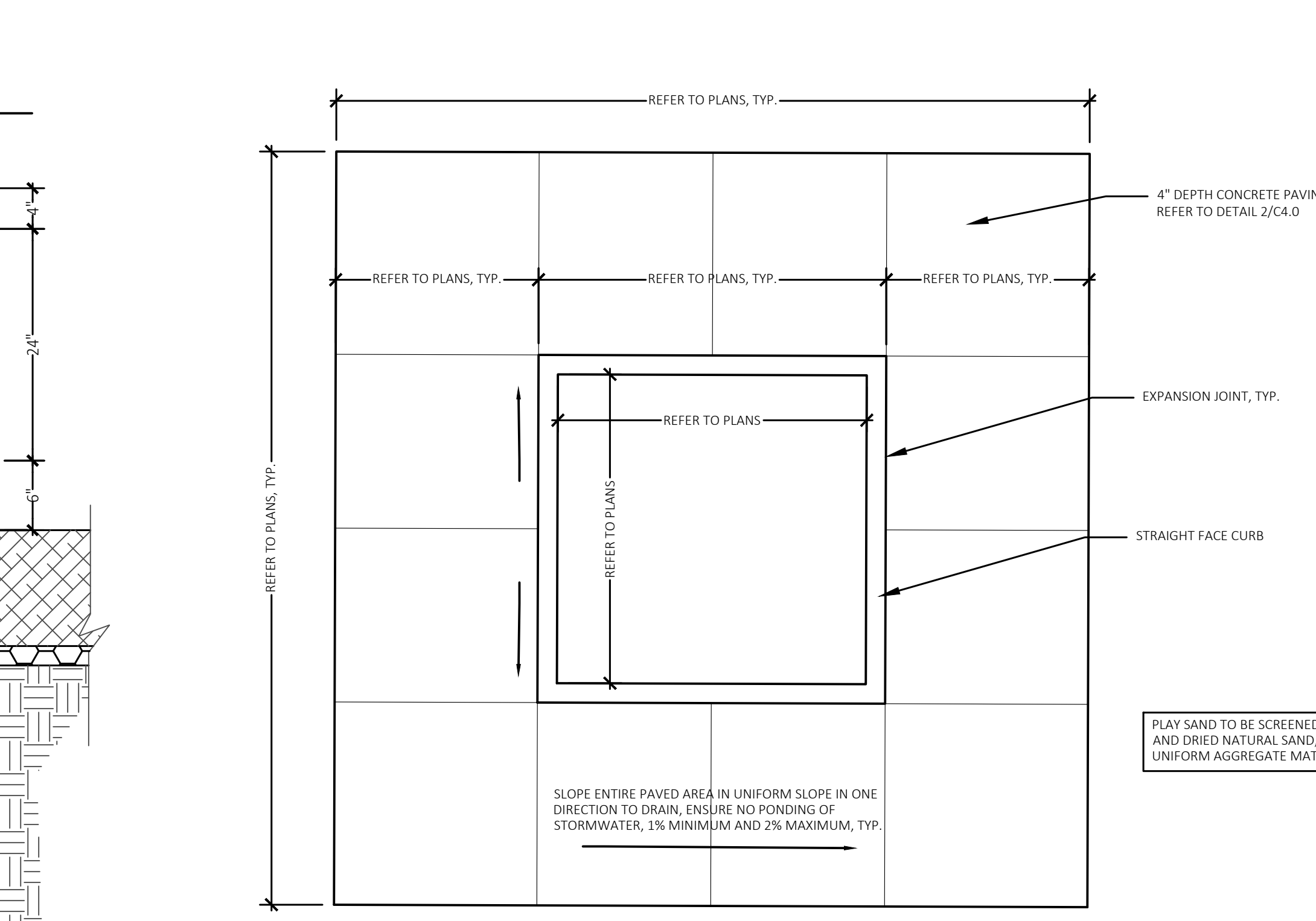
**12 Thickened Edge Curb to Plastic Edging Transition Detail**  
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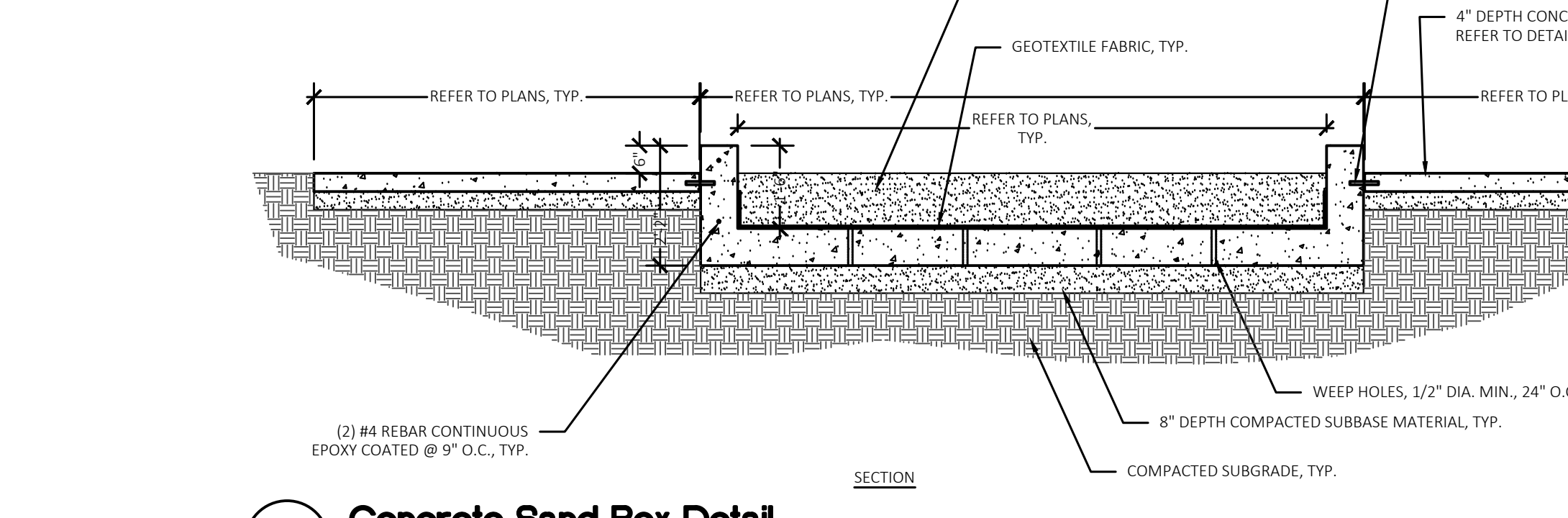
**13 Plastic Edging Detail**  
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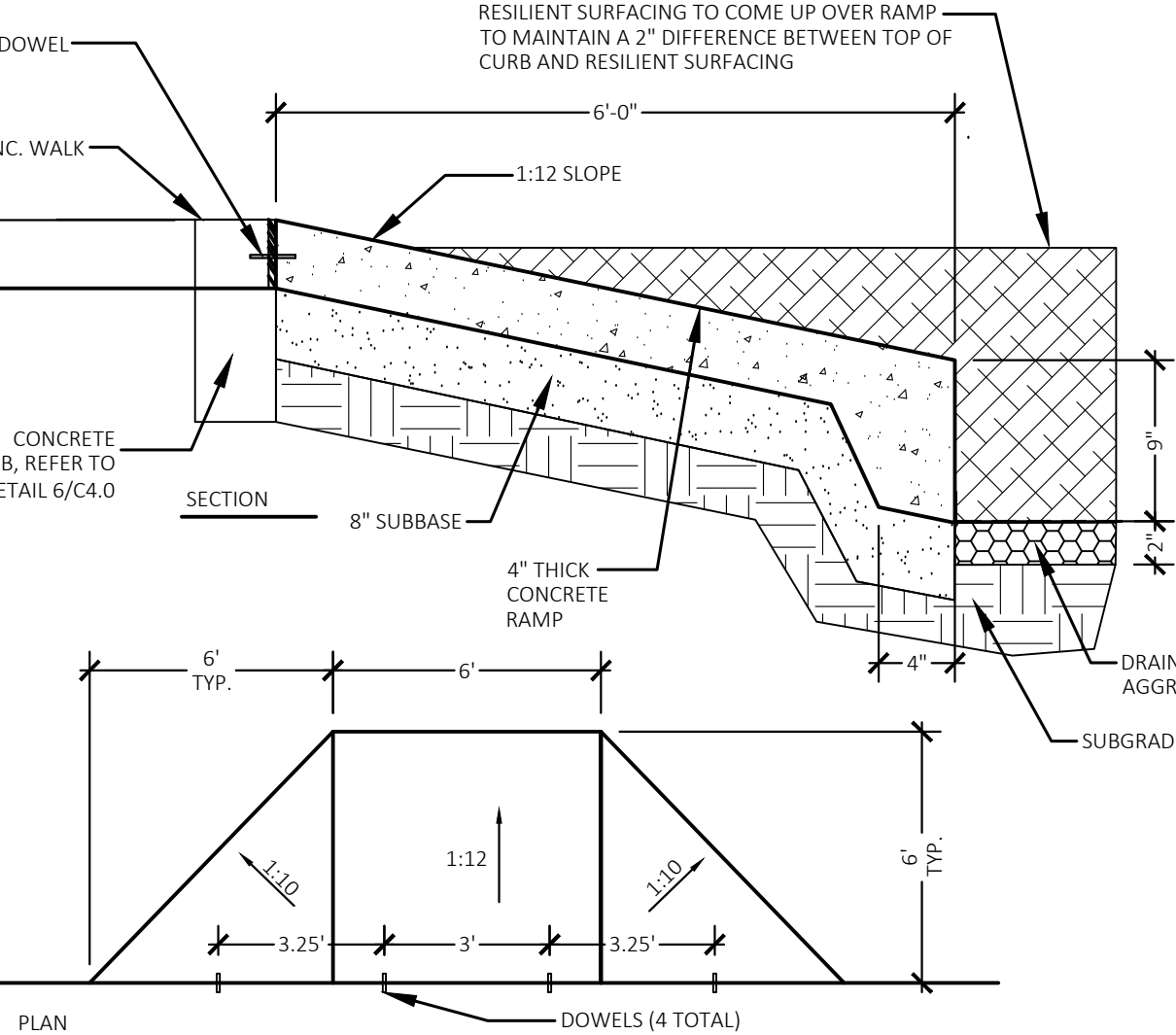
**14 Playground Drainage Detail**  
NOT TO SCALE



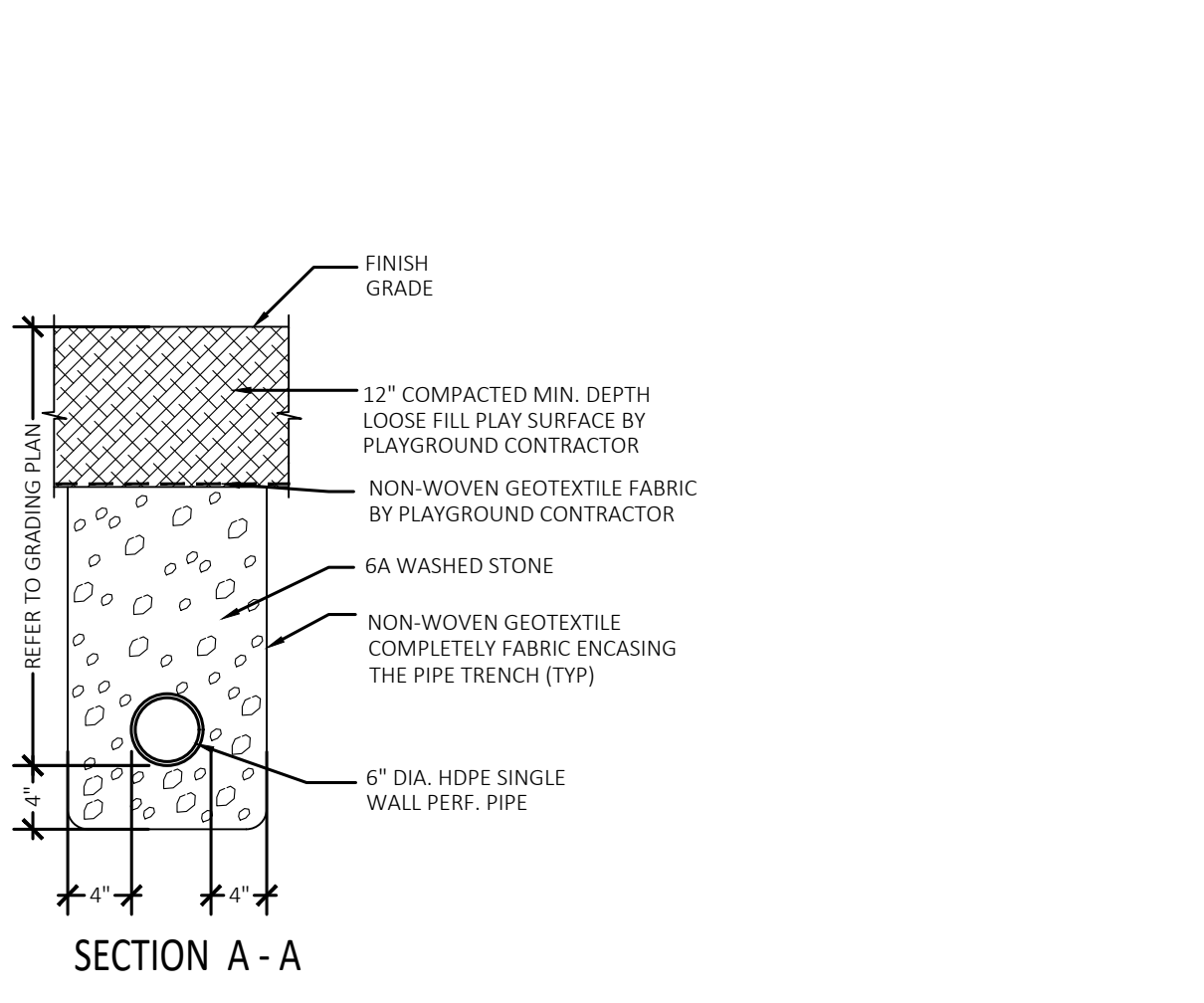
**17 'For Reference' Basketball Post Footing Detail**  
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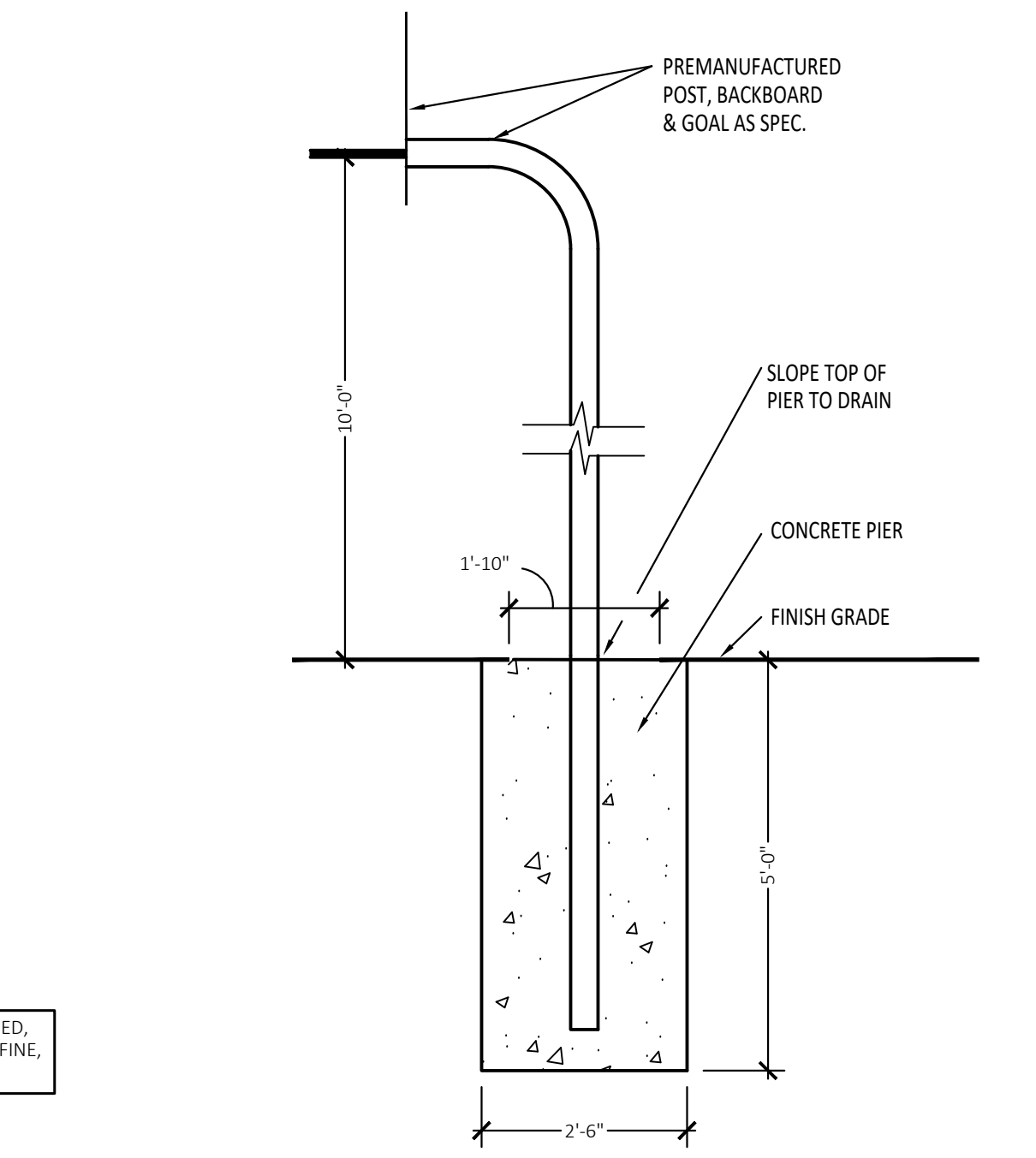
**15 Concrete Sand Box Detail**  
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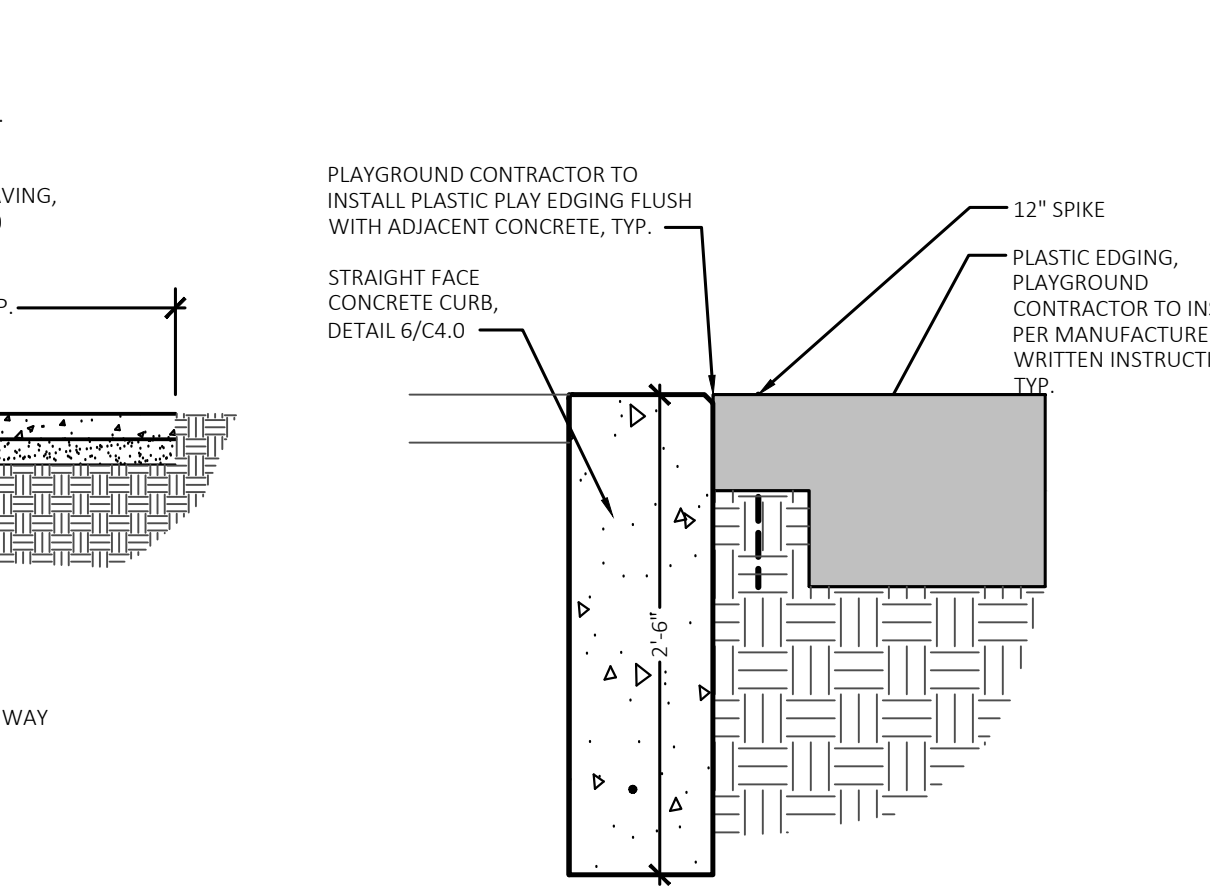
**16 Access Ramp to Play Areas Detail**  
NOT TO SCALE



**Section A-A**



**Troy School District Troy, Michigan**



**18 Concrete Curb to Plastic Edging Transition Detail**  
Not to Scale



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REGISTRATION SEAL



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PROJECT TITLE  
**Barnard Elementary School Playground Renovation Bld Package No.01A**

Troy School District  
Troy, Michigan

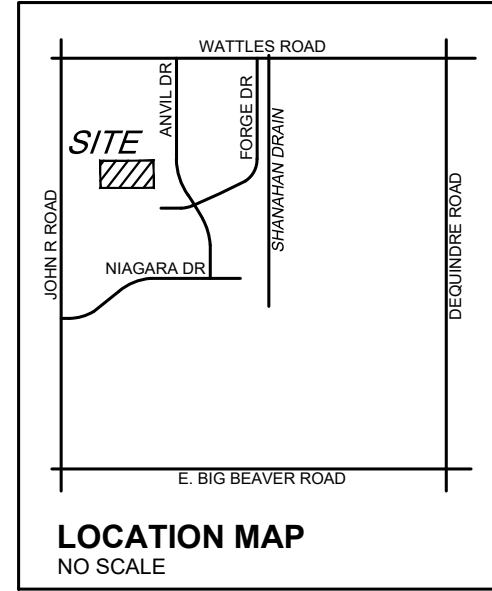
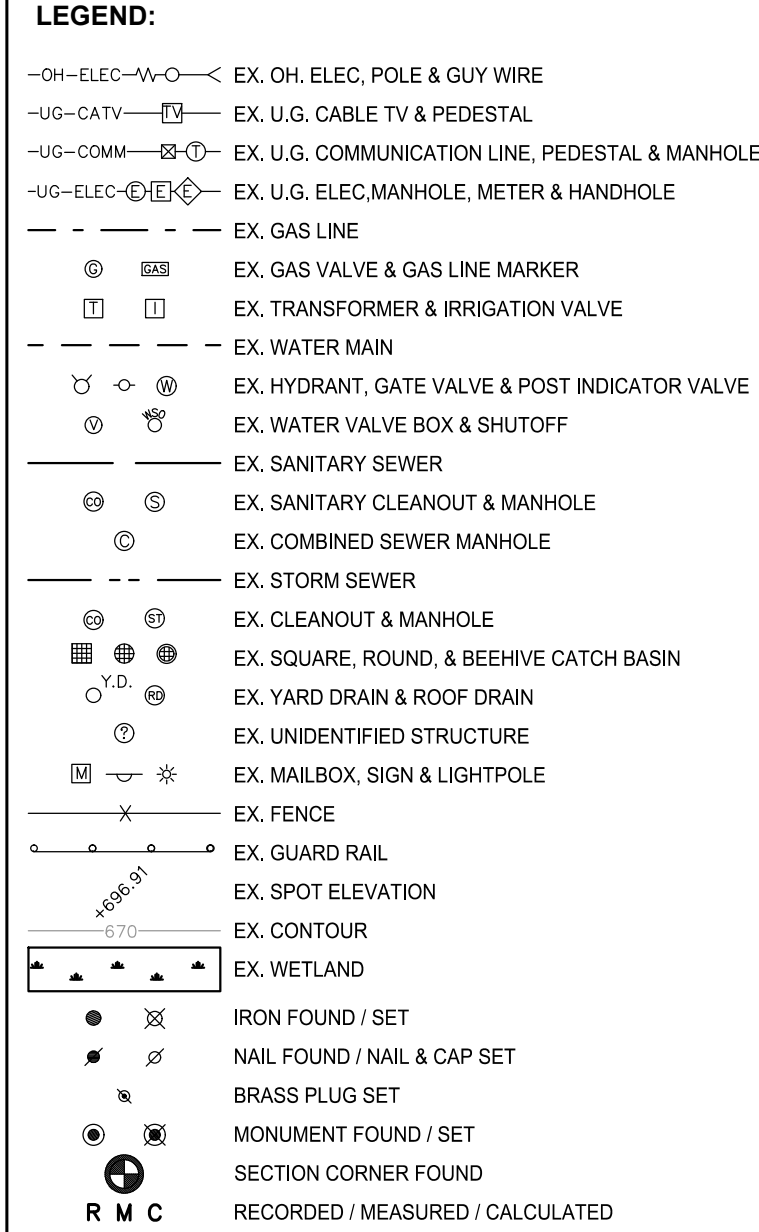
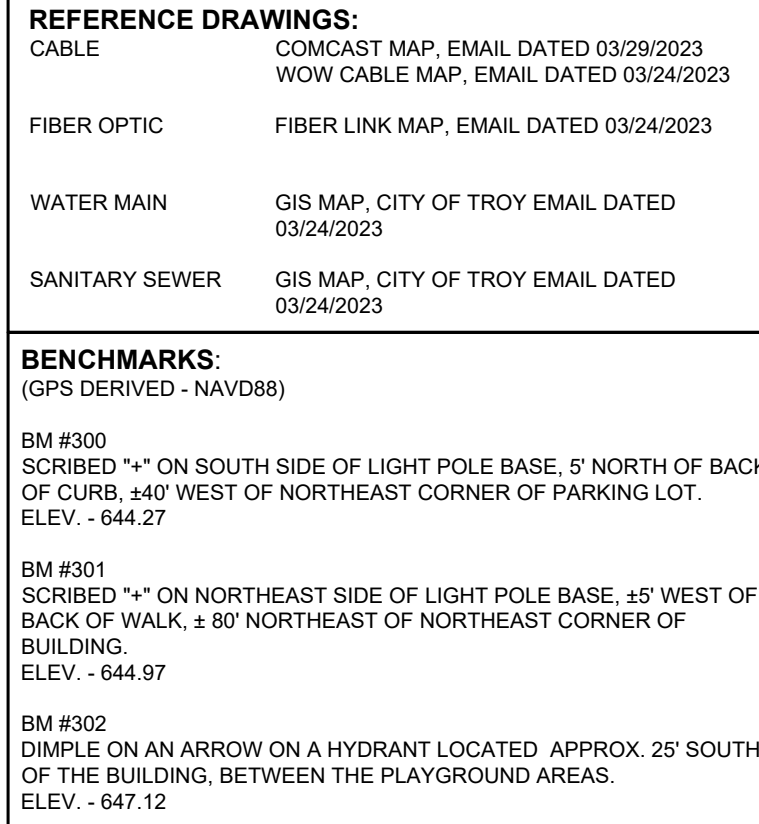
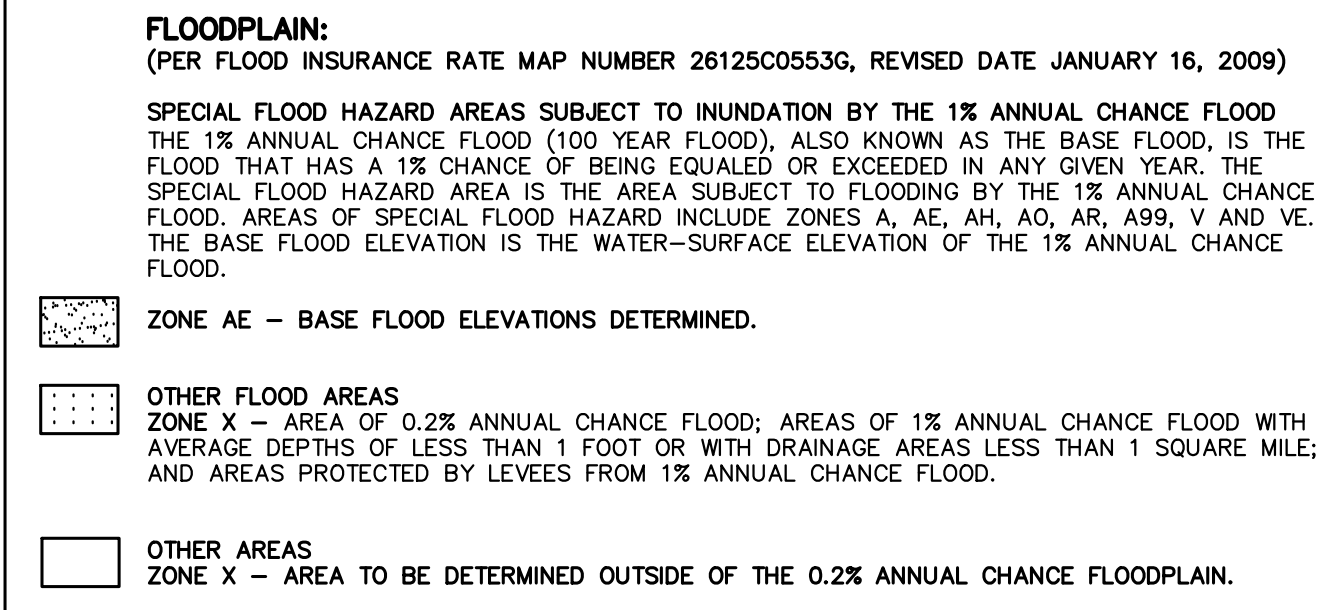
DRAWING TITLE  
**Details**

ISSUE DATES

11-09-23	CONSTRUCTION DOCUMENTS
DATE:	ISSUED FOR:
DRAWN	...
CHECKED	...
APPROVED	...

PROJECT NO.  
**22086B**  
DRAWING NO.  
**C4.0**





**PEA**  
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**Barnard  
Elementary School**  
3601 FORGE DRIVE

**Troy School District**  
**Troy, Michigan**

DRAWING TITLE  
**Topographic Survey**

## ISSUE DATES

11-9-2023	CONSTRUCTION DOCUMENTS
DATE:	ISSUED FOR:
DRAWN	WR
CHECKED	RR
APPROVED	TD

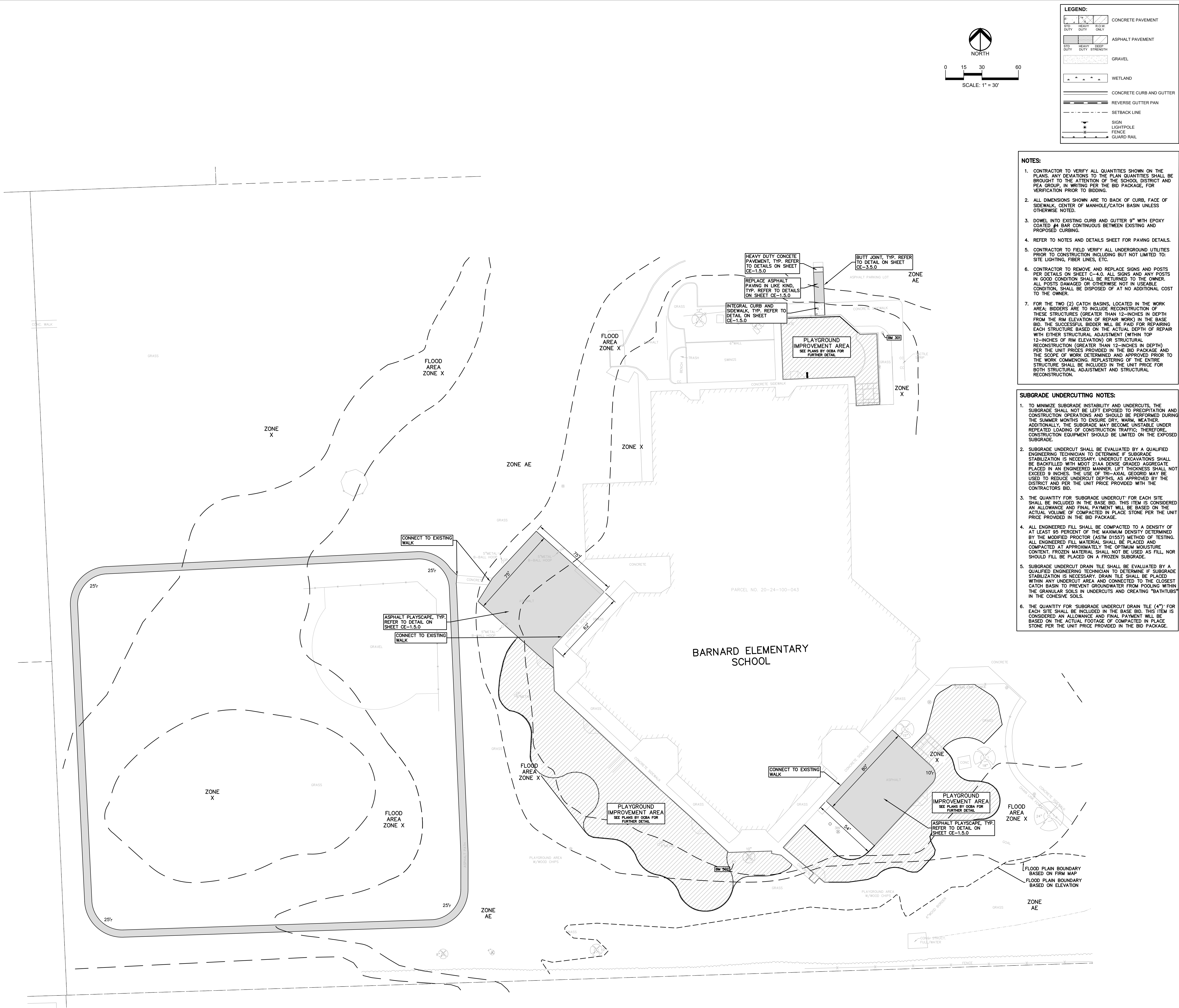
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**22086B**

DRAWING NO.  
**CE-1.1.0**









REGISTRATION SEAL

CONSULTANT

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GROUP

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PROJECT TITLE  
**Barnard  
Elementary School**  
3601 FORGE DRIVE

**Playground Renovation  
Bid Package No.01A**

**Troy School District  
Troy, Michigan**

DRAWING TITLE  
**Dimension & Paving Plan**

ISSUE DATES

11-9-2023	CONSTRUCTION DOCUMENTS
DATE:	ISSUED FOR:
DRAWN: WR	
CHECKED: RR	
APPROVED: TD	

PROJECT NO.

**22086B**

DRAWING NO.

**CE-1.3.0**







- GENERAL NOTES:**
- THESE NOTES APPLY TO ALL CONSTRUCTION ACTIVITIES ON THIS PROJECT.
1. ALL CONSTRUCTION, WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH CURRENT OSHA, MDOT AND MUNICIPALITY STANDARDS AND REGULATIONS.
  2. THE CONTRACTOR SHALL NOTIFY THE CITY OF TROY ENGINEER AND/OR THE AUTHORITY HAVING JURISDICTION 3 BUSINESS DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.
  3. THE CONTRACTOR MUST CONTACT THE ENGINEER SHOULD THEY ENCOUNTER ANY DESIGN ISSUES DURING CONSTRUCTION. IF THE CONTRACTOR MAKES DESIGN MODIFICATIONS WITHOUT THE WRITTEN DIRECTION OF THE DESIGN ENGINEER, THE CONTRACTOR DOES SO AT HIS OWN RISK.
  4. ALL NECESSARY PERMITS, TESTING, BONDS AND INSURANCES ETC., SHALL BE PAID FOR BY THE CONTRACTOR. THE OWNER SHALL PAY FOR ALL CITY INSPECTION FEES.
  5. THE CONTRACTOR SHALL NOTIFY THE APPROPRIATE 811/ONE CALL UTILITY LOCATING CENTER, THE CITY ENGINEER AND/OR THE AUTHORITY HAVING JURISDICTION 3 BUSINESS DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION. IF NO NOTIFICATION IS GIVEN AND DAMAGE RESULTS, SAID DAMAGE WILL BE REPAIRED AT SOLE EXPENSE OF THE CONTRACTOR. IF EXISTING UTILITY LINES ARE ENCOUNTERED THAT CONFLICT IN LOCATION WITH NEW CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER SO THAT THE CONFLICT MAY BE RESOLVED.
  6. CONTRACTOR TO VERIFY THAT THE PLANS AND SPECIFICATIONS ARE THE VERY LATEST PLANS AND SPECIFICATIONS AND FURTHERMORE, VERIFY THAT THESE PLANS AND SPECIFICATIONS HAVE BEEN APPROVED. ALL ITEMS CONSTRUCTED BY THE CONTRACTOR PRIOR TO RECEIVING FINAL APPROVAL, HAVING TO BE ADJUSTED OR RE-DONE, SHALL BE AT THE CONTRACTORS EXPENSE. SHOULD THE CONTRACTOR ENCOUNTER A CONFLICT BETWEEN THESE PLANS AND/OR SPECIFICATIONS, THEY SHALL SEEK CLARIFICATION IN WRITING FROM THE ENGINEER BEFORE COMMENCEMENT OF CONSTRUCTION. FAILURE TO DO SO SHALL BE AT SOLE EXPENSE TO THE CONTRACTOR.
  7. ANY WORK WITHIN THE STREET OR HIGHWAY RIGHTS-OF-WAY SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE AGENCIES HAVING JURISDICTION AND SHALL NOT BEGIN UNTIL ALL NECESSARY PERMITS HAVE BEEN ISSUED FOR THE WORK.
  8. ALL PROPERTIES OR FACILITIES IN THE SURROUNDING AREAS, PUBLIC OR PRIVATE, DESTROYED OR OTHERWISE DISTURBED DUE TO CONSTRUCTION, SHALL BE REPLACED AND/OR RESTORED TO THE ORIGINAL CONDITION BY THE CONTRACTOR.
  9. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY BARRICADING, SIGNAGE, LIGHTS AND TRAFFIC CONTROL DEVICES TO PROTECT THE WORK AND SAFELY MAINTAIN TRAFFIC IN ACCORDANCE WITH LOCAL REQUIREMENTS AND THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (LATEST EDITION). THE DESIGN ENGINEER, OWNER, CITY OF TROY AND STATE SHALL NOT BE HELD LIABLE FOR ANY CLAIMS RESULTING FROM ACCIDENTS OR DAMAGES CAUSED BY THE CONTRACTORS FAILURE TO COMPLY WITH TRAFFIC AND PUBLIC SAFETY REGULATIONS DURING THE CONSTRUCTION PERIOD.
  10. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ADJUST THE TOP OF ALL EXISTING AND PROPOSED STRUCTURES (MANHOLES, CATCH BASINS, INLETS, GATE WELLS ETC.) WITHIN GRADDED AND /OR PAVED AREAS TO FINAL GRADE, SHOWN ON THE PLANS, ALL SUCH ADJUSTMENTS SHALL BE INCIDENTAL TO THE JOB AND WILL NOT BE PAID FOR SEPARATELY.

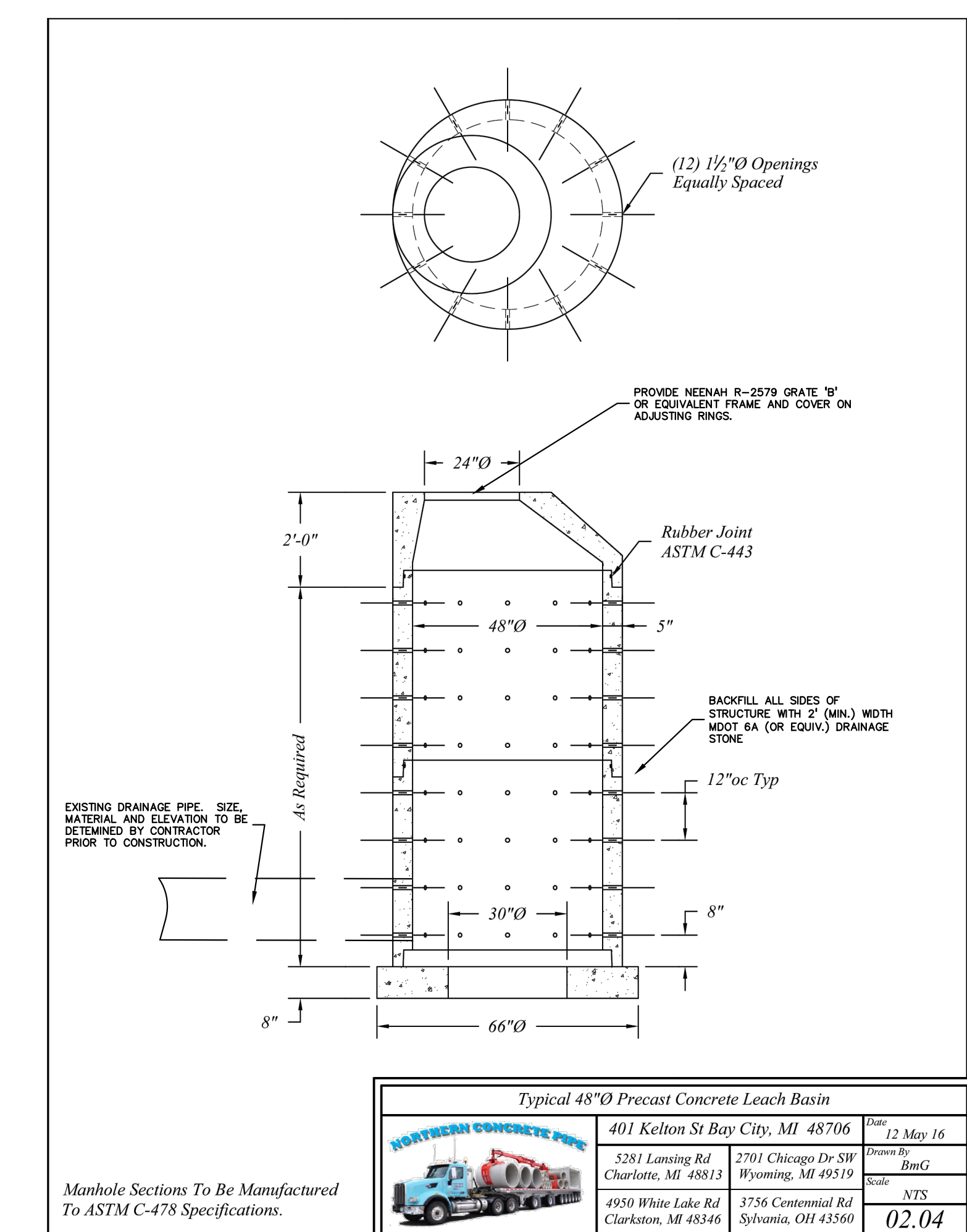
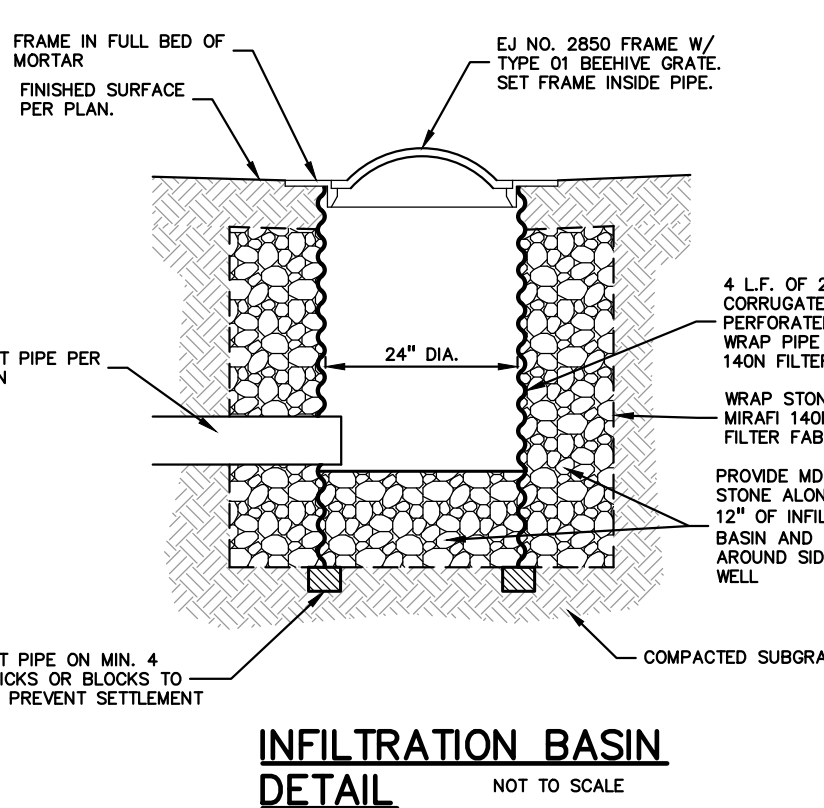
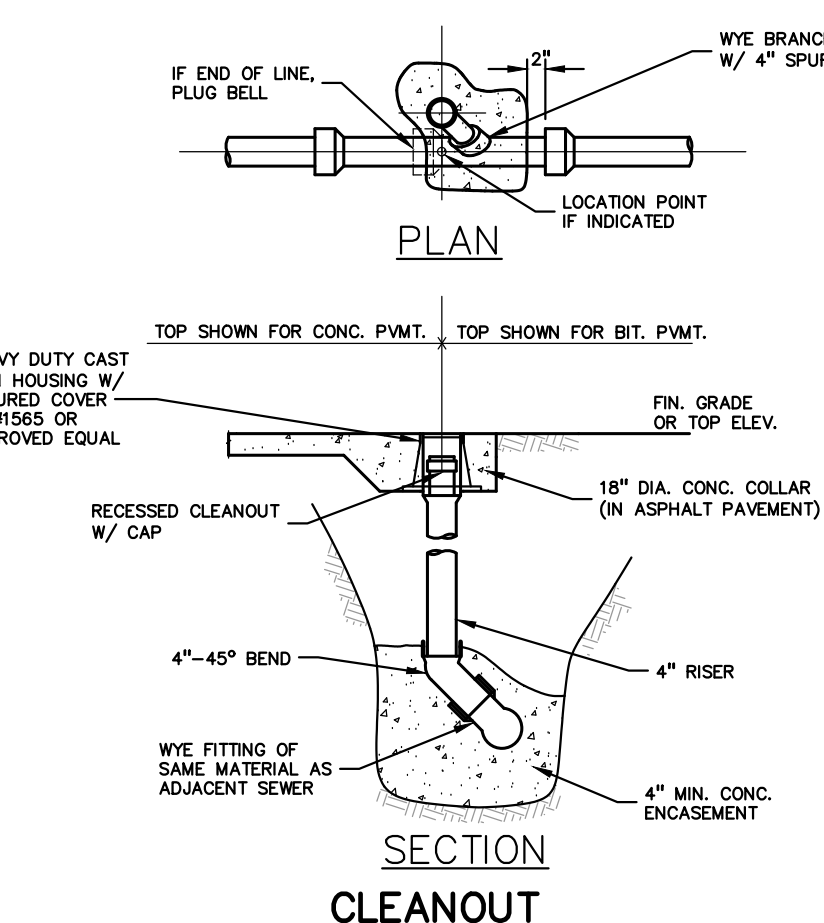
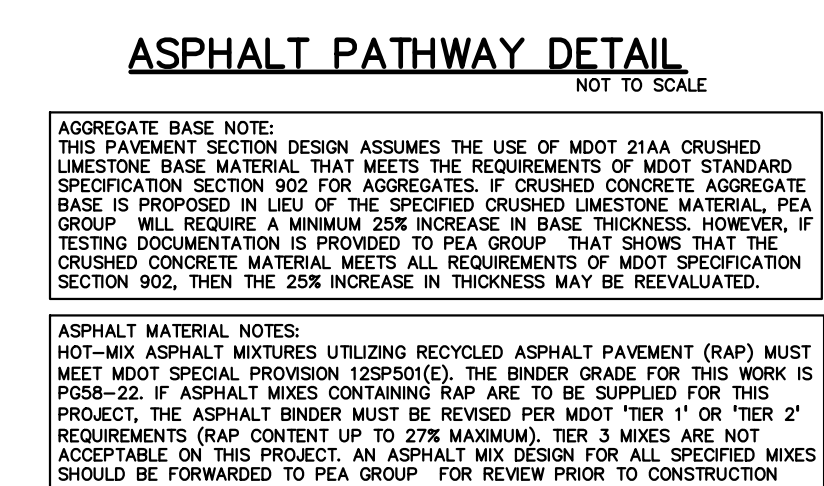
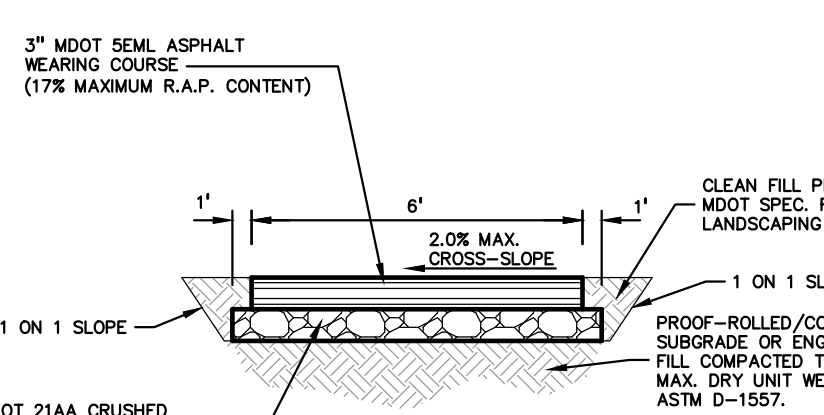
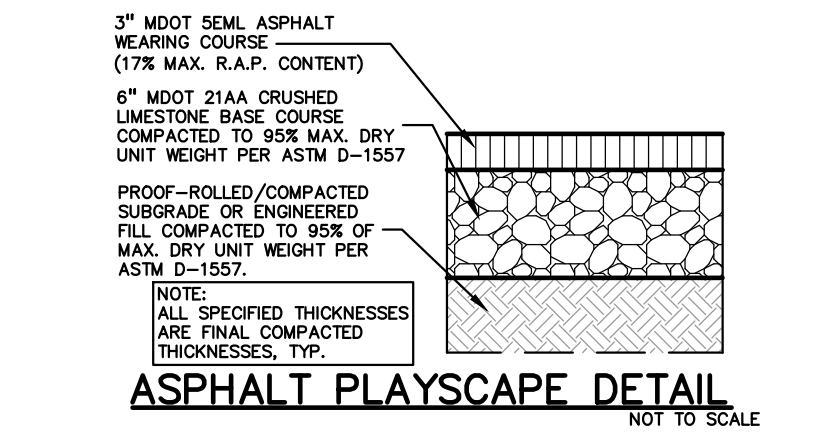
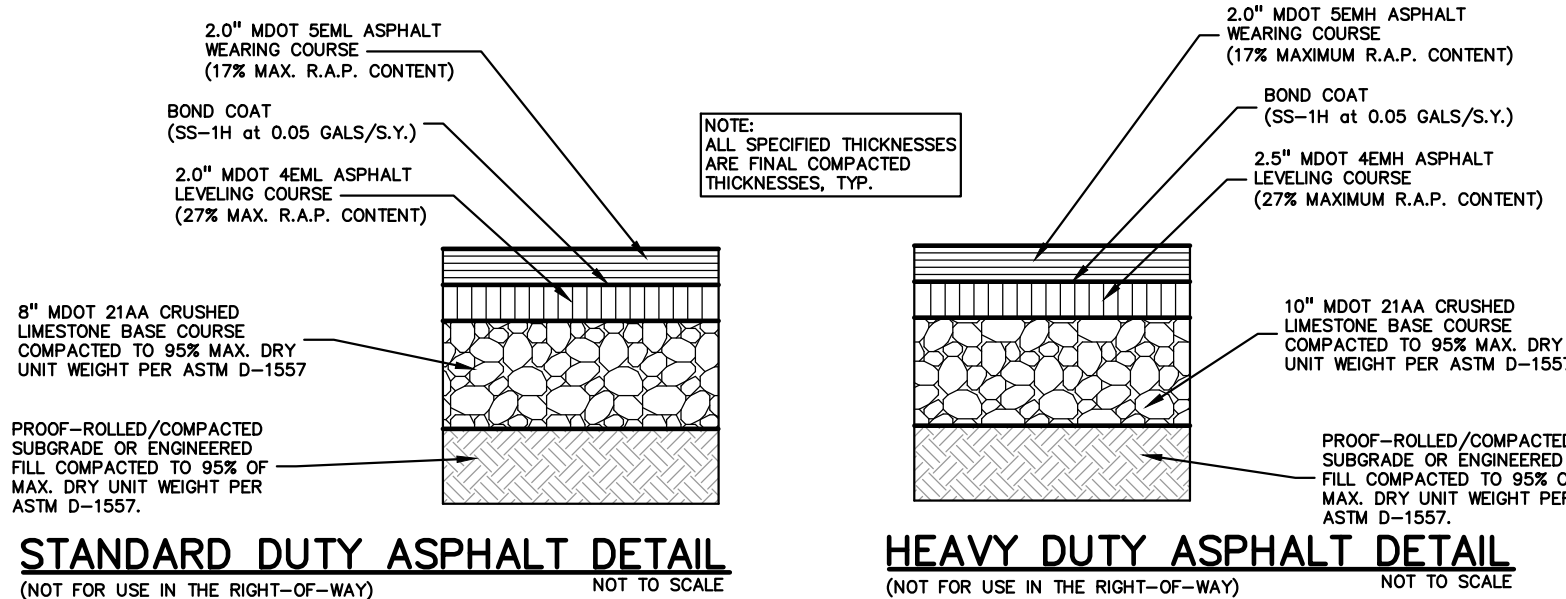
- PAVING NOTES:**
1. IN AREAS WHERE NEW PAVEMENTS ARE BEING CONSTRUCTED, THE TOPSOIL AND SOIL CONTAINING ORGANIC MATTER SHALL BE REMOVED PRIOR TO PAVEMENT CONSTRUCTION.
  2. REFER TO ARCHITECTURAL PLANS FOR DETAILS OF FROST SLAB AT EXTERIOR BUILDING DOORS.
  3. CONSTRUCTION TRAFFIC SHOULD BE MINIMIZED ON THE NEW PAVEMENT. IF CONSTRUCTION TRAFFIC IS ANTICIPATED ON THE PAVEMENT STRUCTURE, THE INITIAL LIFT THICKNESS COULD BE INCREASED AND THE REMAINING OF THE FINAL LIFT COULD BE DELAYED UNTIL THE MAJORITY OF THE CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED. THIS ACTION WILL ALLOW REPAIR OF LOCALIZED FAILURE, IF ANY DOES OCCUR, AS WELL AS REDUCE LOAD DAMAGE ON THE PAVEMENT SYSTEM.
  4. ALL EXPANSION JOINTS AND CONCRETE PAVEMENT JOINTS TO BE SEALED.
  5. CONCRETE PAVEMENT JOINTING – UNLESS SHOWN OTHERWISE IN THE PLANS OR REQUIRED BY THE AUTHORITY HAVING JURISDICTION:
    - 5.1. WHERE PROPOSED CONCRETE ABUTS A STRUCTURE, PROVIDE A MINIMUM 1/2" EXPANSION JOINT, THE JOINT FILLER BOARD MUST BE AT LEAST THE FULL DEPTH OF THE CONCRETE AND HELD DOWN A 1/2" TO ALLOW FOR SEALING.
    - 5.2. WHERE PROPOSED CONCRETE ABUTS EXISTING CONCRETE OR IN BETWEEN POIRS OF PROPOSED CONCRETE (CONSTRUCTION JOINT), PROVIDE 5/8" DOWELS EVERY 30" CENTER TO CENTER HALF WAY ALONG THE THICKNESS OF THE PROPOSED PAVEMENT. ALTERNATE DOWELS SIZES AND SPACING MUST BE APPROVED BY THE ENGINEER PRIOR TO COMMENCING WORK AND VIA THE SUBMITTAL PROCESS.
    - 5.3. WHERE PROPOSED CONCRETE ABUTS EXISTING OR PROPOSED SIDEWALK OR CURBING, PROVIDE A MINIMUM 1/2" EXPANSION JOINT.
    - 5.4. CONTROL, LONGITUDINAL AND/OR TRANSVERSE JOINTS SHALL BE PLACED TO PROVIDE PANELS WITHIN THE PAVEMENT AS SQUARE AS POSSIBLE WITH THE FOLLOWING MAXIMUM SPACING PARAMETERS:
      - 5.4.1. 6-INCH THICK CONCRETE PAVEMENT: 12' X 12'
      - 5.4.2. 8-INCH THICK CONCRETE PAVEMENT: 15' X 15'
    - 5.5. IRREGULAR-SHAPED PANELS MAY REQUIRE THE USE OF REINFORCING MESH OR FIBER MESH AS DETERMINED BY THE ENGINEER. THE USE OF MESH MUST BE APPROVED BY THE ENGINEER PRIOR TO COMMENCING WORK AND VIA THE SUBMITTAL PROCESS.
    - 5.6. IF A JOINT PLAN IS NOT PROVIDED IN THE PLANS, THE CONTRACTOR SHALL SUBMIT ONE TO THE ENGINEER FOR REVIEW PRIOR TO COMMENCING WORK AND VIA THE SUBMITTAL PROCESS.
  6. CONCRETE CURBING JOINTING – UNLESS SHOWN OTHERWISE IN THE PLANS OR REQUIRED BY THE AUTHORITY HAVING JURISDICTION:
    - 6.1. JOINTS WHEN ADJACENT TO ASPHALT PAVEMENT:
      - 6.1.1. PLACE CONTRACTION JOINTS AT 10' INTERVALS
      - 6.1.2. PLACE 1/2" EXPANSION JOINT AT CATCH BASINS, EXISTING AND PROPOSED SIDEWALK OR EXISTING CURBING.
      - 6.1.3. PLACE 1" EXPANSION JOINT:
        - 6.1.3.1. AT SPRING POINTS OF INTERSECTIONS OR ONE OF THE END OF RADIUS LOCATIONS IN A CURVE
        - 6.1.3.2. AT 400' MAXIMUM INTERVALS ON STRAIGHT RUNS
        - 6.1.3.3. AT THE END OF RADIUS AT OPPOSITE ENDS IN A CURBED LANDSCAPE ISLAND
    - 6.2. JOINTS WHEN TIED TO CONCRETE PAVEMENT:
      - 6.2.1. PLACE CONTRACTION JOINTS OPPOSITE ALL TRANSVERSE CONTRACTION JOINTS IN PAVEMENT
      - 6.2.2. PLACE 1/2" EXPANSION JOINT AT CATCH BASINS, EXISTING AND PROPOSED SIDEWALK OR EXISTING CURBING.
      - 6.2.3. PLACE 1" EXPANSION JOINT OPPOSITE ALL TRANSVERSE EXPANSION JOINTS IN PAVEMENT
      - 6.2.4. CURB AND GUTTER AND CONCRETE SHALL BE TIED TOGETHER SIMILAR TO A LONGITUDINAL LANE TIE JOINT (MDOT B1 JOINT)
    - 6.3. IN BETWEEN POIRS OF PROPOSED CONCRETE CURBING (CONSTRUCTION JOINT):
      - 6.3.1. CARRY THE REBAR CONTINUOUSLY BETWEEN POIRS
      - 6.3.2. IF THE REBAR IS NOT LONG ENOUGH TO CARRY CONTINUOUSLY, THEN TIE TWO PIECES OF REBAR PER THE LATEST MDOT SPECIFICATIONS
  7. CONCRETE SIDEWALK JOINTING – UNLESS SHOWN OTHERWISE IN THE PLANS OR REQUIRED BY THE AUTHORITY HAVING JURISDICTION:
    - 7.1. PLACE TRANSVERSE CONTRACTION JOINTS EQUAL TO THE WIDTH OF THE WALK WHEN WIDTH IS LESS THAN 8'
    - 7.2. PLACE TRANSVERSE AND LONGITUDINAL CONTRACTION JOINTS EQUAL TO 1/2 THE WIDTH OF THE WALK WHEN WIDTH IS EQUAL TO OR GREATER THAN 8'
    - 7.3. PLACE 1" EXPANSION JOINT WHERE ABUTTING SIDEWALK RAMP AND/OR RADIUS IN INTERSECTION
    - 7.4. PLACE TRANSVERSE 1/2" EXPANSION JOINT AT MAXIMUM OF 100' SPACING
    - 7.5. PLACE 1/2" EXPANSION JOINT WHEN ABUTTING A FIXED STRUCTURE, OTHER PAVEMENT (CONCRETE PAVEMENT AND DRIVE APPROACHES), UTILITY STRUCTURES, LIGHT POLE BASES AND COLUMNS
    - 7.6. WHEN ALONG A CURVE, JOINTS MUST BE PERPENDICULAR TO THE CURVE WITH A MINIMUM LENGTH OF 1' FOOT BEFORE INTERSECTING ANOTHER JOINT(S) IN ANY DIRECTION. NO JOINTS ARE ALLOWED TO BE CUT AT AN ANGLE OTHER THAN 90° AT THE CURBLINE

- GENERAL GRADING AND EARTHWORK NOTES:**
- THESE NOTES APPLY TO ALL CONSTRUCTION ACTIVITIES ON THIS PROJECT
1. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING TREES AND BRUSH AND REMOVE ALL THAT ARE NECESSARY TO GRADE SITE.
  2. ALL GRADES ARE TO TOP OF PAVEMENT UNLESS OTHERWISE NOTED.
  3. THE STAGING OF CONSTRUCTION ACTIVITIES SHALL OCCUR ONLY WITHIN THE SITE BOUNDARIES. ANY CONSTRUCTION ACTIVITIES OUTSIDE OF THE WORK AREA BOUNDARIES SHALL BE AT THE SOLE RESPONSIBILITY AND RISK OF THE CONTRACTOR.
  4. ALL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES IS SHALL MEET THE REQUIREMENTS OF THE AUTHORIZED PUBLIC AGENCY OF JURISDICTION.
  5. ALL EARTHWORK AND GRADING OPERATIONS SHALL BE PERFORMED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.
  6. REFER TO SOIL EROSION CONTROL PLAN FOR ADDITIONAL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES AND NOTES.
  7. ALL LANDSCAPING IS TO BE COMPLETED BY STALLANTIS.
  8. THE CONTRACTOR SHALL NOTE EXISTING UNDERGROUND UTILITIES WITHIN AND ADJACENT TO THE SITE. BACKFILL FOR EXISTING UTILITY TRENCHES SHALL BE EXAMINED CRITICALLY. ANY TRENCHES FOUND TO HAVE SOFT, UNSTABLE OR UNSUITABLE BACKFILL MATERIAL, IN THE OPINION OF THE THIRD PARTY TESTING COMPANY, THAT ARE TO BE WITHIN THE ZONE OF INFLUENCE OF PROPOSED BUILDINGS OR PAVEMENT SHALL BE COMPLETELY EXCAVATED AND BACKFILLED WITH SUITABLE MATERIAL.
  9. ON-SITE FILL CAN BE USED IF THE SPECIFIED COMPACTION REQUIREMENTS CAN BE ACHIEVED. IF ON-SITE SOIL IS USED, IT SHOULD BE CLEAN AND FREE OF FROZEN SOIL, ORGANICS, OR OTHER DELETERIOUS MATERIALS.
  10. THE FINAL SUBGRADE/EXISTING AGGREGATE BASE SHOULD BE THOROUGHLY PROFOILED USING A FULLY LOADED TANDEM AXLE TRUCK OR FRONT END LOADER UNDER THE OBSERVATION OF A GEOTECHNICAL/PAVEMENT ENGINEER. LOOSE OR YIELDING AREAS THAT CANNOT BE MECHANICALLY STABILIZED SHOULD BE REINFORCED USING GEORIGS OR REMOVED AND REPLACED WITH ENGINEERED FILL OR AS DICTATED BY FIELD CONDITIONS.
  11. THE REMOVAL OF EXISTING SOIL TO GET TO FINAL SUBGRADE ELEVATION SHALL NOT BE CONSIDERED SUBGRADE UNDERCUTTING. IT IS PART OF THE EARTHWORKS TO BALANCE THE SITE AND ESTABLISH THE ELEVATIONS FOR THE PLACEMENT OF THE PROPOSED PAVEMENT ELEVATIONS. THIS SHALL NOT BE PAID FOR SEPARATELY, BUT INCLUDED IN THE EARTHWORKS FOR THE PROJECT.
  12. SUBGRADE UNDERCUTTING, INCLUDING BACKFILLING SHALL BE PERFORMED TO REPLACE MATERIALS SUSCEPTIBLE TO FROST HEAVING AND UNSTABLE SOIL CONDITIONS. ANY EXCAVATIONS THAT MAY BE REQUIRED BELOW THE TOPSOIL IN FILL AREAS OR BELOW SUBGRADE IN CUT AREAS WILL BE CLASSIFIED AS SUBGRADE UNDERCUTTING.
  13. SUBGRADE UNDERCUTTING SHALL BE PERFORMED WHERE NECESSARY AND THE EXCAVATED MATERIAL SHALL BECOME THE PROPERTY OF THE CONTRACTOR. ANY SUBGRADE UNDERCUTTING SHALL BE BACKFILLED AS RECOMMENDED IN THE GEOTECHNICAL ENGINEERING REPORT FOR THE PROJECT.
  14. ANY SUB-GRADE WATERING REQUIRED TO ACHIEVE REQUIRED DENSITY SHALL BE CONSIDERED INCIDENTAL TO THE JOB.

- CONSTRUCTION MATERIAL SUBMITTALS**
- UNLESS REQUIRED OTHERWISE IN THE PROJECT SPECIFICATIONS, THE CONTRACTOR SHALL ONLY SUBMIT THE FOLLOWING CONSTRUCTION MATERIAL SUBMITTALS, AS APPLICABLE TO THE PLANS, FOR REVIEW BY THE ENGINEER. UNLESS APPROVED IN ADVANCE AND IN WRITING BY THE ENGINEER, ANY MATERIAL SUBMITTALS PROVIDED TO THE ENGINEER FOR REVIEW IN ADDITION TO THIS LIST SHALL BE RETURNED TO THE CONTRACTOR WITHOUT A REVIEW BEING PERFORMED.
1. SOIL EROSION AND SEDIMENTATION CONTROL MEASURES
  2. UTILITY TRENCH BACKFILL MATERIAL WITH ALL MATERIAL DATA INCLUDED IN THE SUBMITTAL BEING DATED WITHIN 60 DAYS OF THE SUBMITTAL UNLESS APPROVED OTHERWISE BY THE ENGINEER
  3. STORM SEWER STRUCTURES
  4. STORM SEWER STRUCTURE FRAME AND COVERS INCLUDING CLEAN OUTS
  5. PAVEMENT AGGREGATE BASE MATERIAL WITH ALL MATERIAL DATA INCLUDED IN THE SUBMITTAL BEING DATED WITHIN 60 DAYS OF THE SUBMITTAL UNLESS APPROVED OTHERWISE BY THE ENGINEER
  6. PAVEMENT UNDERDRAIN MATERIAL AND BACKFILL WITH ALL BACKFILL MATERIAL DATA INCLUDED IN THE SUBMITTAL BEING DATED WITHIN 60 DAYS OF THE SUBMITTAL UNLESS APPROVED OTHERWISE BY THE ENGINEER
  7. PAVEMENT MIX DESIGNS SUBMITTED FOR REVIEW BY THE ENGINEER MUST FOLLOW THE CURRENT MDOT REVIEW CHECKLISTS AS SUMMARIZED BELOW AND ALL MATERIAL DATA INCLUDED IN THE SUBMITTAL BEING DATED WITHIN 60 DAYS OF THE SUBMITTAL UNLESS APPROVED OTHERWISE BY THE ENGINEER:
    - \*8.1. CONCRETE MIX DESIGN REVIEW CHECKLIST (FORM 2000)
    - \*8.2. SUPERPAVE MIX DESIGN CHECKLIST (FORM 1865)
    - \*8.3. MARSHALL MIX DESIGN CHECKLIST (FORM 1849)
  8. SITE FENCING AND GATES
  9. ANY ITEMS SHOWN IN THE PLANS OR DETAIL SHEETS THAT SPECIFICALLY STATE FOR THE CONTRACTOR TO SUBMIT A SHOP DRAWING TO THE ENGINEER FOR REVIEW. THESE ITEMS INCLUDE, BUT ARE NOT LIMITED TO:
    - \*\* ANY SPECIALTY ITEMS SHOWN IN THE PLANS OR DETAIL SHEETS THAT SPECIFICALLY DO NOT STATE FOR THE CONTRACTOR SHALL SUBMIT A SHOP DRAWING TO THE ENGINEER FOR REVIEW BUT THE CONTRACTOR SHALL SUBMIT REQUESTS TO BE REVIEWED. THE CONTRACTOR'S REQUEST FOR REVIEW MUST BE IN WRITING AND APPROVED BY THE ENGINEER PRIOR TO SUBMITTING THE INFORMATION.

- GENERAL UTILITY NOTES:**
1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE CITY OF TROY.
  2. ALL TRENCHES UNDER OR WITHIN THREE (3) FEET OR THE FORTY-FIVE (45) DEGREE ZONE OF INFLUENCE LINE OF EXISTING AND/OR PROPOSED PAVEMENT, BUILDING PAD OR DRIVE APPROACH SHALL BE BACKFILLED WITH SAND COMPACTED TO AT LEAST NINETY-FIVE (95) PERCENT OF MAXIMUM UNIT WEIGHT (ASTM D-1557). ALL OTHER TRENCHES TO BE COMPACTED TO 90% OR BETTER.
  3. WHERE EXISTING MANHOLES OR SEWER PIPE ARE TO BE TAPPED, DRILL HOLES 4" CENTER TO CENTER, AROUND PERIPHERY OF OPENING TO CREATE A PLANE OF WEAKNESS JOINT BEFORE BREAKING SECTION OUT.
  4. THE LOCATIONS AND DIMENSIONS SHOWN ON THE PLANS FOR EXISTING UTILITIES ARE IN ACCORDANCE WITH AVAILABLE INFORMATION WITHOUT UNCOVERING AND MEASURING. THE DESIGN ENGINEER DOES NOT GUARANTEE THE ACCURACY OF THIS INFORMATION OR THAT ALL EXISTING UNDERGROUND FACILITIES ARE SHOWN. CONTRACTOR SHALL FIELD VERIFY UTILITIES.
  5. THE CONTRACTOR SHALL COORDINATE TO ENSURE ALL REQUIRED PIPES, CONDUITS, CABLES AND SLEEVES ARE PROPERLY PLACED FOR THE INSTALLATION OF GAS, ELECTRIC, PHONE, CABLE, IRRIGATION, ETC IN SUCH A MANNER THAT WILL FACILITATE THEIR PROPER INSTALLATION PRIOR TO THE PLACEMENT OF THE PROPOSED PAVEMENT AND LANDSCAPING.
  6. PIPE LENGTHS INDICATED ARE FROM CENTER OF STRUCTURE AND TO END OF SECTION UNLESS NOTED OTHERWISE.
  7. CONTRACTOR SHALL INSPECT ALL EXISTING PUBLIC STORM SEWER, SANITARY SEWER AND WATER MAIN STRUCTURES WITHIN THE LIMITS OF CONSTRUCTION AND WITH THE GOVERNING AGENCY INSPECTOR PRIOR TO ESTABLISHING FINAL GRADE. NOTIFY THE ENGINEER, OWNER/DEVELOPER, AND GOVERNING AGENCY IF STRUCTURE IS DEEMED TO BE STRUCTURALLY UNSOUND AND/OR IN NEED OF REPAIR.
- STORM SEWER NOTES:**
1. ALL STORM SEWER LEADS SHALL BE CONSTRUCTED AT 1.00% MINIMUM SLOPE.
  2. ALL STORM SEWER 10" OR LESS AND/OR LEADS SHALL BE SDR 26.
  3. JOINTS FOR P.V.C. PIPE SHALL BE ELASTOMERIC (RUBBER GASKET) AS SPECIFIED IN A.S.T.M. DESIGNATION D-3212.

- GENERAL BARRIER FREE NOTES:**
- THE FOLLOWING NOTES PROVIDE AN OUTLINE OF SOME OF THE REQUIREMENTS CONTAINED WITHIN THE "STANDARDS FOR ACCESSIBLE DESIGN – AMERICANS WITH DISABILITIES ACT 2010", AND "ACCESSIBLE AND USEABLE BUILDINGS AND FACILITIES", (2010/ANSI A117-1-2009). THE CONTRACTOR IS RESPONSIBLE FOR ALL OF THE REQUIREMENTS PRESENTED WITHIN THESE DOCUMENTS, WHICH ARE AVAILABLE IN FULL UPON REQUEST:
1. AN ACCESSIBLE ROUTE CONSISTS OF WALK SURFACES, CURB RAMPS AND RAMPS. AT LEAST ONE ACCESSIBLE ROUTE SHALL BE PROVIDED WITHIN THE SITE FROM ACCESSIBLE PARKING SPACES, ACCESSIBLE PASSENGER LOADING ZONES, AND PUBLIC STREETS AND SIDEWALKS TO PUBLIC TRANSIT STOPS TO THE BUILDING OR FACILITY ENTRANCE THEY SERVE.
  2. ALL RUNNING SLOPE OF ALL WALKING SURFACES SHALL NOT EXCEED 5% (1:20) AND THE CROSS-SLOPE SHALL NOT EXCEED 2% (1:48).
  3. WALKING SURFACES MUST BE LEVEL WITH PERMITTED VERTICAL CHANGES IN LEVEL NOT TO EXCEED 1/4" OR REVEALED CHANGES IN LEVEL NOT TO EXCEED 1/2". REFER TO DETAIL DET-B THIS SHEET. ANY CHANGE IN LEVEL GREATER THAN 1/2" MUST BE RAMPED.
  4. TURNING SPACES ALONG ACCESSIBLE ROUTES MUST BE AT LEAST 5 FEET WIDE IN ALL DIRECTIONS AND NOT EXCEED 2% SLOPE (1:48) IN ANY DIRECTION.
  5. ACCESSIBLE ROUTES WILL BE DESIGNED TO BE A MINIMUM OF 5 FEET WIDE. THE MINIMUM CLEAR WIDTH IS 3 FEET.
  6. RAMPS ALONG ACCESSIBLE ROUTES WILL HAVE A RUNNING SLOPE GREATER THAN 5% (1:20) AND LESS THAN 8.3% (1:12).
  7. THE CROSS-SLOPE OF RAMP RUNS SHALL NOT EXCEED 2% (1:48).
  8. THE MINIMUM CLEAR WIDTH OF ANY RAMP IS 36 INCHES.
  9. THE MAXIMUM RISE FOR ANY RAMP (NOT INCLUDING CURB RAMPS) SHALL NOT EXCEED 30 INCHES. LANDINGS ARE REQUIRED AT THE TOP AND BOTTOM OF EACH RAMP. LANDINGS SHALL HAVE A CROSS-SLOPE NOT EXCEEDING 2% (1:48). SHALL BE 6 FEET LONG AND AT LEAST AS WIDE AS THE RAMP CLEAR WIDTH. IF THERE IS A CHANGE OF DIRECTION AT A LANDING, THEN THE LANDING MUST BE AT LEAST 5 FEET WIDE AND 5 FEET LONG.
  10. CURB RAMPS ALONG ACCESSIBLE ROUTES SHALL NOT RISE MORE THAN 6 INCHES, NOR BE STEEPER THAN 8.3% (1:12). APPROACHING SLOPES TO THE RAMP CANNOT EXCEED 5% WHICH INCLUDES SIDEWALKS, PAVEMENT, GUTTERS ETC.
  11. IF CURB RAMP SIDES ARE FLARED, THE FLARES SHALL NOT BE STEEPER THAN 10% (1:10).
  12. LANDINGS ARE REQUIRED AT THE TOP OF ALL CURB RAMPS. THE CLEAR LENGTH OF THE LANDING SHALL BE A MINIMUM OF 36" AND WILL BE AS WIDE AS THE CURB RAMP.
  13. CURB RAMPS SHALL BE LOCATED OR PROTECTED TO PREVENT THEIR OBSTRUCTION BY PARKED VEHICLES.
  14. HANDRAILS ARE NOT REQUIRED ON CURB RAMPS.
  15. WHERE DETECTABLE WARNING IS REQUIRED AT CURB RAMPS, THE DETECTABLE WARNING SHALL BE 24" MINIMUM IN DEPTH AND SHALL EXTEND THE FULL WIDTH OF THE RAMP. THE DETECTABLE WARNING SHALL BE LOCATED SO THE EDGE NEAREST THE CURB IS 6 INCHES MINIMUM AND 8 INCHES MAXIMUM FROM THE CURB LINE.
  16. ACCESSIBLE PARKING SPACES ON SITE SHALL BE PROVIDED AS REQUIRED IN SECTION 802 OF THE A.D.A. IF THE SITE HAS MORE THAN ONE PARKING FACILITY, EACH FACILITY IS REQUIRED TO MEET THESE REQUIREMENTS SEPARATELY. THE REQUIRED NUMBER OF SPACES SHALL BE BASED ON THE TOTAL NUMBER OF PARKING SPACES IN EACH PARKING FACILITY ON SITE.
  17. FOR EVERY SIX OR FRACTION OF SIX ACCESSIBLE PARKING SPACES, ONE VAN ACCESSIBLE SPACE SHALL BE PROVIDED.
  18. ACCESSIBLE PARKING SPACES SHALL BE LOCATED ON THE SHORTEST ACCESSIBLE ROUTE FROM PARKING TO A BUILDING ENTRANCE. IF THERE IS MORE THAN ONE ACCESSIBLE ENTRANCE, PARKING SHALL BE DISPERSED ALONG THE SHORTEST ACCESSIBLE ROUTE TO THE ACCESSIBLE ENTRANCES.
  19. BARRIER FREE CAR PARKING SPACES SHALL BE A MINIMUM OF 8 FEET WIDE WITH AN ACCESS AISLE 5 FEET WIDE MINIMUM. VAN ACCESSIBLE PARKING SPACES SHALL BE AT LEAST 11 FEET WIDE WITH A 5' WIDE ACCESS AISLE. VAN ACCESSIBLE SPACES ARE ALSO ACCEPTABLE WITH AN 8 FOOT WIDTH AND 8 FOOT WIDE ACCESS AISLE. THE ACCESS AISLE IN ALL CASES MUST EXTEND THE FULL LENGTH OF THE PARKING SPACE.
  20. SURFACE SLOPES WITHIN THE PARKING SPACES AND AISLES SHALL NOT EXCEED 2% (1:48).
  21. ACCESSIBLE AREAS INCLUDING PARKING SPACES, AISLES AND PATHWAYS, REQUIRE A MINIMUM VERTICAL CLEARANCE OF 98 INCHES.
  22. ACCESSIBLE PARKING SPACES ARE REQUIRED TO BE IDENTIFIED BY SIGNS. THE SIGNS SHALL INCLUDE THE INTERNATIONAL SYMBOL OF ACCESSIBILITY. VAN PARKING SPACES ARE REQUIRED TO BE DESIGNATED AS "VAN ACCESSIBLE". REFER TO DETAILS ON THIS SHEET.



REGISTRATION SEAL

CONSULTANT

**PEA**  
GROUP

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PROJECT TITLE  
**Barnard  
Elementary School  
3601 FORGE DRIVE**

**Playground Renovation  
Bid Package No.01A**

Troy School District  
Troy, Michigan

DRAWING TITLE  
**Notes & Details**

ISSUE DATES

11--9-2023 CONSTRUCTION DOCUMENTS

DATE ISSUED FOR:

DRAWN WR

CHECKED RR

APPROVED TD

PROJECT NO.  
**22086B**

DRAWING NO.  
**CE-1.5.0**

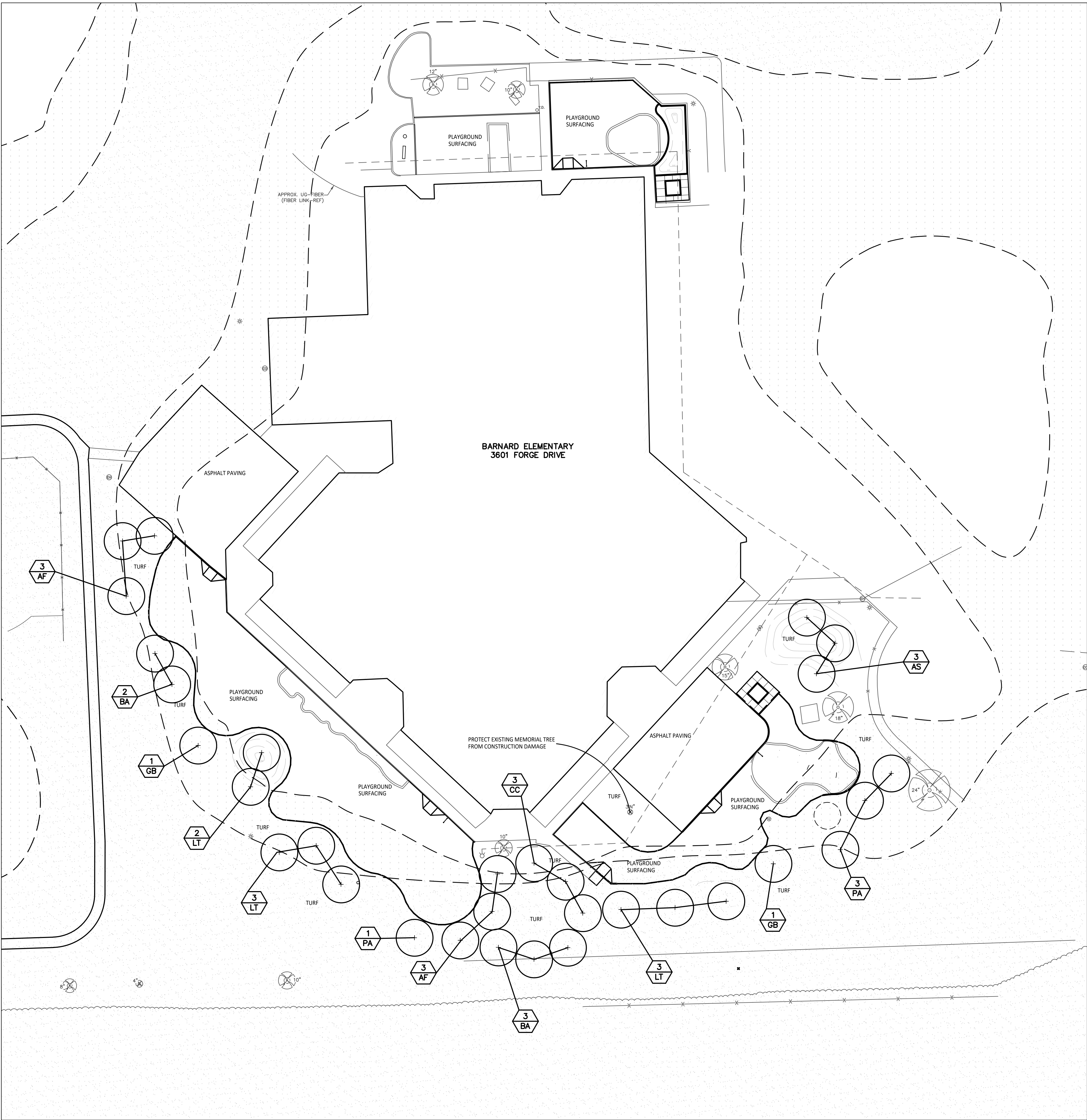












1 Site Landscape Plan  
Scale: 1"=30'-0"

PROPOSED FEATURES LEGEND:

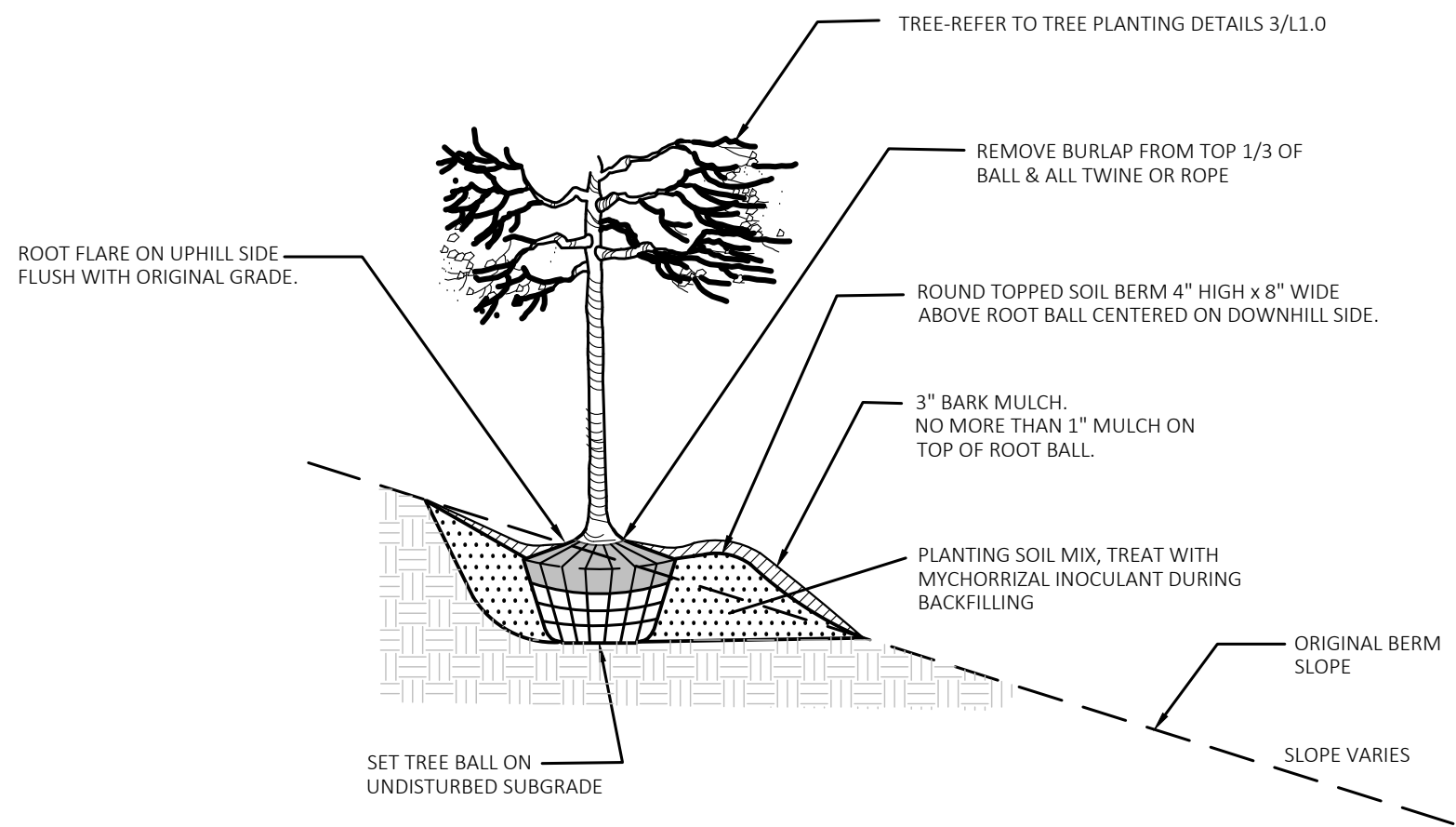
SYMBOL	DESCRIPTION	DETAIL
	PROPOSED DECIDUOUS TREE	2 & 3/L1.0
	FEMA FLOOD ZONE X	
	FEMA FLOOD ZONE AE	
	LIMIT OF WORK	
	PROPERTY LINE	
	PLANT TAG- REFERS TO TYPE AND NUMBER OF PLANTINGS TO BE PROVIDED AND MAINTAINED BY CONTRACTOR.	

LANDSCAPE NOTES:

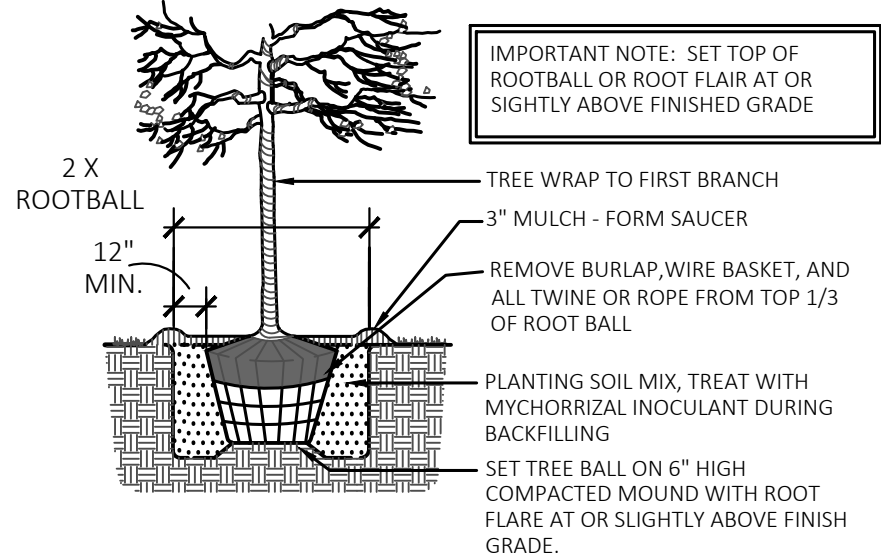
1. SURVEY OF EXISTING CONDITIONS PROVIDED BY PEA GROUP, 1849 POND RUN, AUBURN HILLS, MICHIGAN, 48326, (248)689-9090.
2. CALL "MISS DIG" AND VERIFY ALL UNDERGROUND UTILITIES PRIOR TO BEGINNING WORK. 72 HOURS BEFORE YOU DIG CALL "MISS DIG" AT 1-800-482-7171. ANY UTILITIES DISTURBED BY CONSTRUCTION SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE.
3. ANY DISCREPANCIES BETWEEN THESE PLANS AND ACTUAL FIELD CONDITIONS SHOULD BE REPORTED TO THE CONSTRUCTION MANAGER IMMEDIATELY FOR RESOLUTION.
4. IN AREAS OF NEW TURF PLACE 4" MINIMUM TOPSOIL, FINE GRADE & ESTABLISH TURF WITHIN SEED LIMIT LINES.
5. PLACE SHREDDED HARDWOOD MULCH TO A 3" DEPTH IN ALL TREE & SHRUB BEDS & TO A 2" DEPTH IN ALL GROUND COVER BEDS.
6. UNLESS OTHERWISE NOTED, TOPSOIL, FINE GRADE AND SEED ALL DISTURBED AREAS WITHIN THE SEEDING LIMIT SHOWN AND AREAS DISTURBED BY CONSTRUCTION.
7. REPAIR AND RESTORE ANY DAMAGE OUTSIDE OF LIMIT OF WORK LINE TO ORIGINAL CONDITION.
8. PROTECT ALL TREES AND EXISTING FEATURES TO REMAIN AS SPECIFIED.
9. ALL TOPSOIL AND EXCESS FILL MATERIAL SHALL BE STOCKPILED ON SITE SEPARATELY FOR LATER RE-USE. LOCATE STOCKPILES IN AREAS AS DIRECTED BY CONSTRUCTION MANAGER AND PROTECT FROM EFFECTS OF EROSION.
10. ALL NURSERY STOCK SHALL BE TRUE TO TYPE AND NAME. ALL STOCK SHALL BE FIRST CLASS QUALITY WITH WELL DEVELOPED BRANCH SYSTEMS AND VIGOROUS HEALTHY ROOT SYSTEMS. ALL STOCK SHALL BE WELL FORMED AND THE TRUNKS OF TREES SHALL BE UNIFORM AND STRAIGHT.
11. CONTRACTOR RESPONSIBLE TO LOCATE SITE LIGHTING SERVICES. CONTRACTOR RESPONSIBLE TO NOTIFY CONSTRUCTION MANAGER IF DAMAGE TO LIGHTING ELECTRICAL DISTRIBUTION OCCURS.
12. ALL AREAS OF TREE CLEARING SHALL BE STAKED FOR ARCHITECTS APPROVAL PRIOR TO CLEARING.
13. UNLESS OTHERWISE SPECIFIED, ALL PERENNIALS, GRASSES AND GROUNDCOVERS SHALL BE GROWN IN THEIR CONTAINER FOR ONE YEAR PRIOR TO INSTALLATION.

PLANT LIST:

	SYM.	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	SPACING	STATUS
TREES	AF	<i>Acer x freemanii 'Nimbus'</i>	Nimbus Freeman Maple	2" CAL.	888	PER PLANS	NATIVE
	AS	<i>Acer saccharum 'Commemoration'</i>	Commemoration Sugar Maple	2" CAL.	888	PER PLANS	NATIVE
	BA	<i>Betula alleghaniensis</i>	Yellow Birch	2" CAL.	888	PER PLANS	NATIVE
	CC	<i>Carpinus caroliniana</i>	Hornbeam	2" CAL.	888	PER PLANS	NATIVE
	GB	<i>Ginkgo biloba 'Autumn Gold'</i>	Autumn Gold Ginkgo Tree (no female)	2" CAL.	888	PER PLANS	NON-NATIVE
	PA	<i>Platanus x acerifolia 'Woodgold'</i>	London Planetree	2" CAL.	888	PER PLANS	NON-NATIVE
	LT	<i>Liriodendron tulipifera</i>	Tulip Tree	2" CAL.	888	PER PLANS	NATIVE



2 Tree On Berm Detail 1/4 Slope or Greater  
NOT TO SCALE



3 Tree Planting Detail  
NOT TO SCALE



T M P ARCHITECTURE I N C  
1191 WEST SQUARE LAKE ROAD  
BLOOMFIELD HILLS - MICHIGAN - 48302  
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REGISTRATION SEAL

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PROJECT TITLE

**Barnard  
Elementary School  
Playground Renovation  
Bld Package No.01A**

**Troy School District  
Troy, Michigan**

DRAWING TITLE

**Site Landscape Plan**

ISSUE DATES

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11-09-23 CONSTRUCTION DOCUMENTS

DATE: ISSUED FOR:

DRAWN ...

CHECKED ...

APPROVED ...

PROJECT NO.

**22086B**

DRAWING NO.

**L1.0**