

**ADDENDUM No. 01**  
July 12, 2016

**SIMSBURY FARMS**

**Aquatic Facility Renovations**

**TOWN of SIMSBURY BID NUMBER 16-05**

The following changes and/or clarifications are hereby made to the Contract Documents dated 6/22/16 for the above captioned project.

***DRAWINGS***

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- 1) ADD: New Sheet “**ASK-01 – Alternate #5, Diving Pool Wall Repair**” (attached)

***PROJECT MANUAL***

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**1) Specification Section 131500:**

- |               |  |
|---------------|--|
| a) 2.09, B    | Delete: “(Provide one system at Chesley Park and one system at Washington Park Pool)”<br><br>Add: “(Provide one system for each of the four pools)”  |
| b) 2.09, Bf2: | Change “...shall be made of close-grained cast-iron ...” to “...shall be made of manufacturer’s standard non-metallic materials...”<br><br>Clarification: Provide a booster pump for each of the four systems. |
| c) 2.17, Ca:  | Change “Provide (3) 50”...” To “Provide (5) 50”...”.   |
| d) 2.17,D     | Add: “3. Owner’s Lift Chair is AXS-Lift 81-275, Serial Number A-3031. Provide an anchor at the Lap Pool, Diving Pool and Training Pool (3-total).”   |

***RFI Questions not Addressed Above***

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None

***GENERAL NOTES:***

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Deck removal and replacement: Regarding concerns from bidders about the support of the trench or the potential need to remove additional decking to open cut for the new drain piping in some areas: Any additional concrete decking that is undermined during excavation or that will be removed beyond the limits shown in the documents will be replaced at the contractor’s expense.

***ATTACHMENTS***

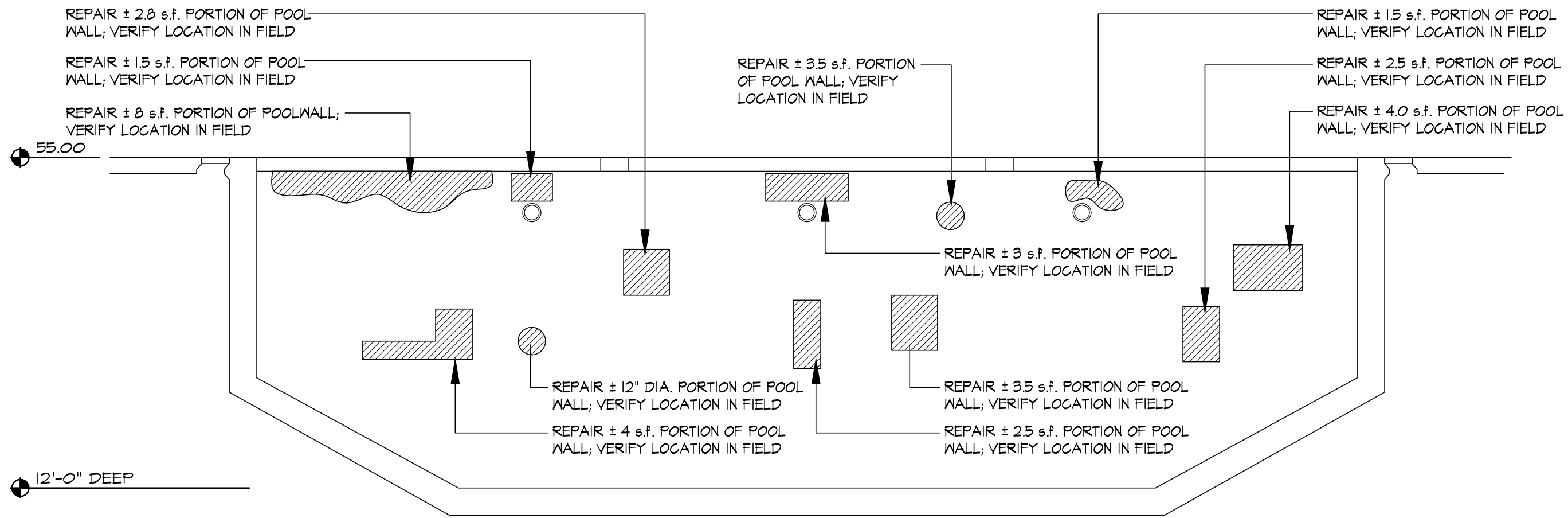
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1. Drawing ASK-01, **Alternate #5, Diving Pool Wall Repair**”, dated 7/12/16.

2. Sign-in Sheets from non-mandatory Pre-Bid Conference.
3. Plan Holders List as of this Addendum
4. Approved Substitution Request for the Dura-Slope-Trench-Drain as submitted by Michael McCrea of National Diversified Sales

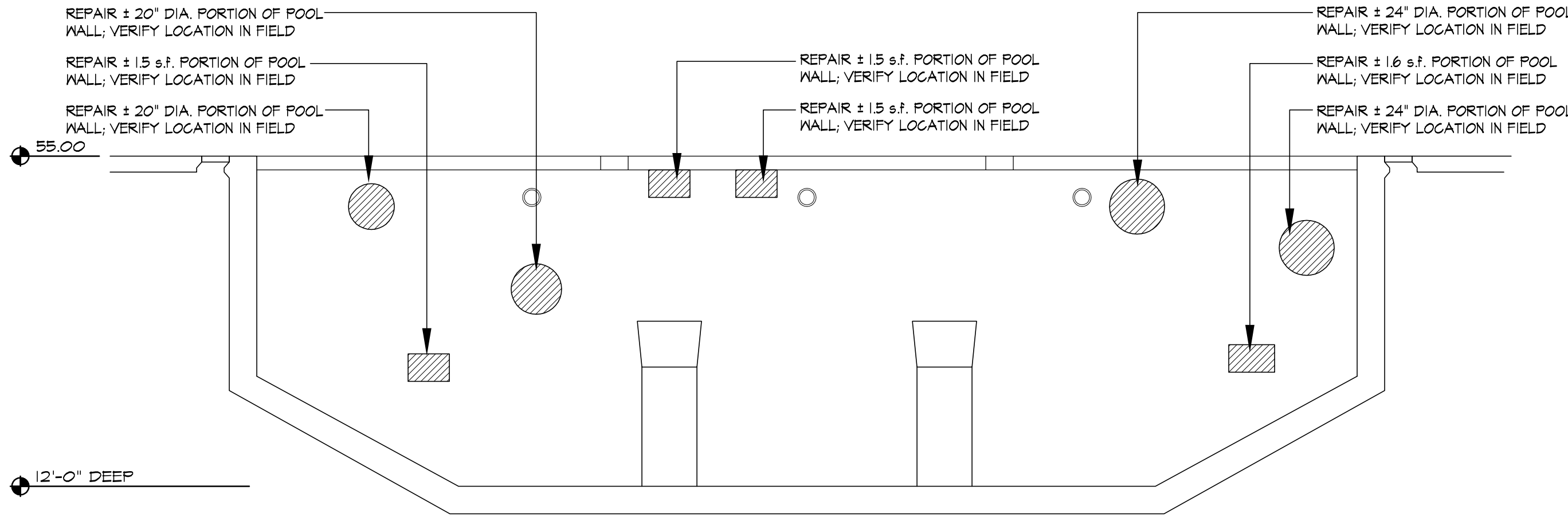
**END OF ADDENDUM**

T:\PROJECTS\15-019\_Simsbury Farms Pool Renovations\Bid Phase\ASK-01 Diving Pool Sections\_CSS.dwg, 7/12/2016 2:27:35 PM, CutePDF Writer



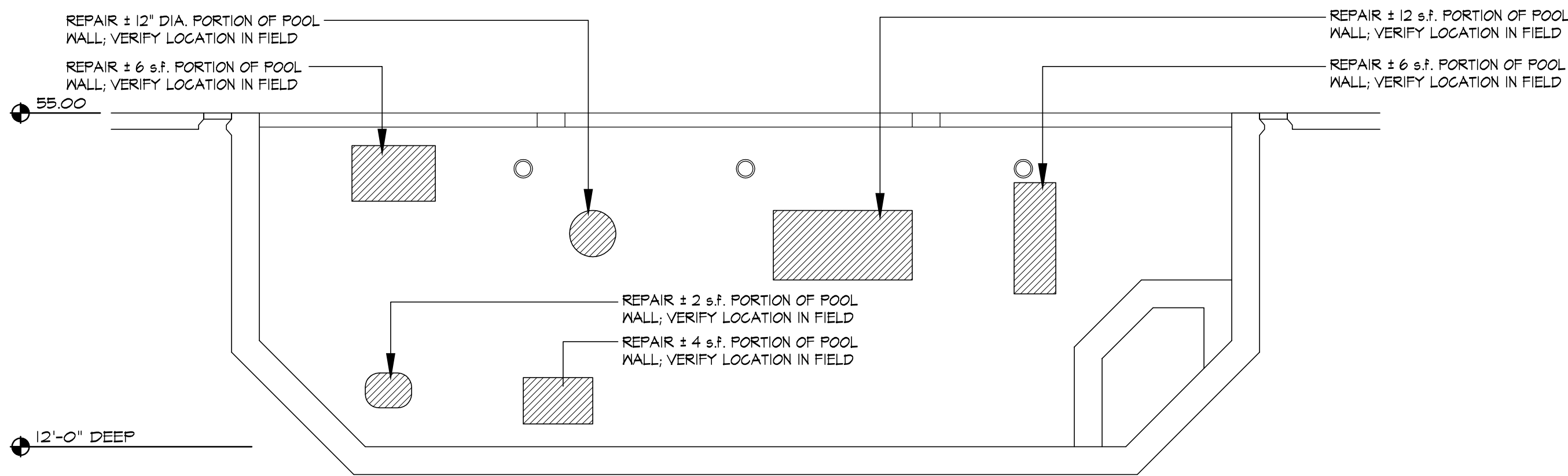
## 16 DIVING POOL SECTION - EAST WALL

1/4" = 1'-0"



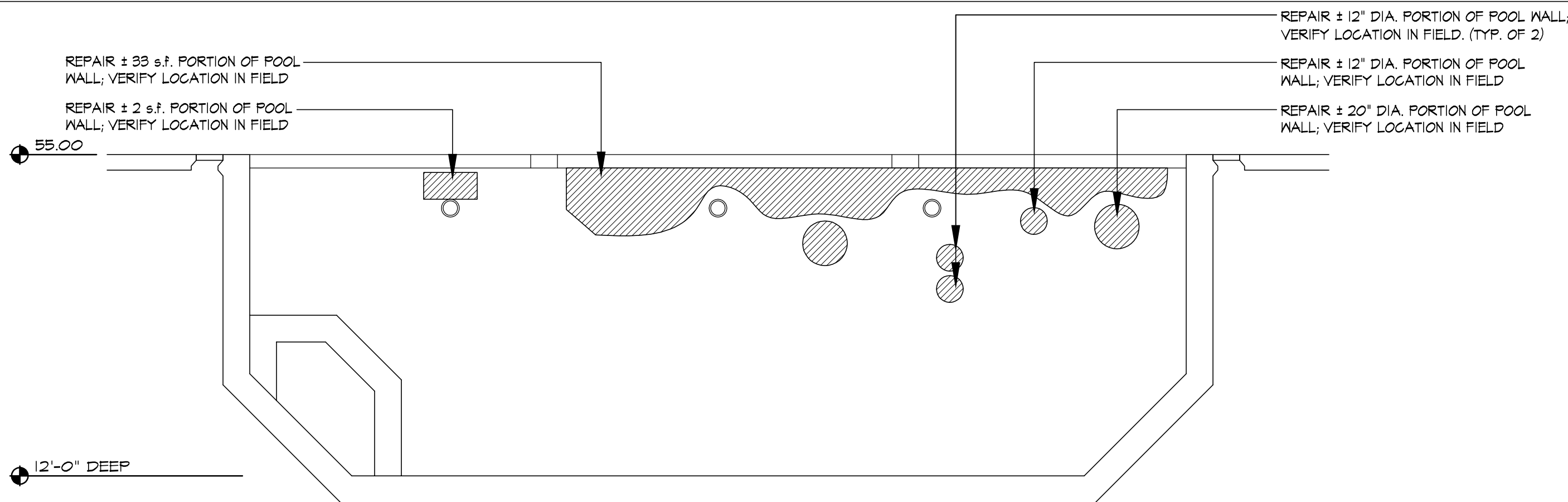
## 15 DIVING POOL SECTION - WEST WALL

1/4" = 1'-0"



## 14 DIVING POOL SECTION - SOUTH WALL

1/4" = 1'-0"



## 15 DIVING POOL SECTION - NORTH WALL

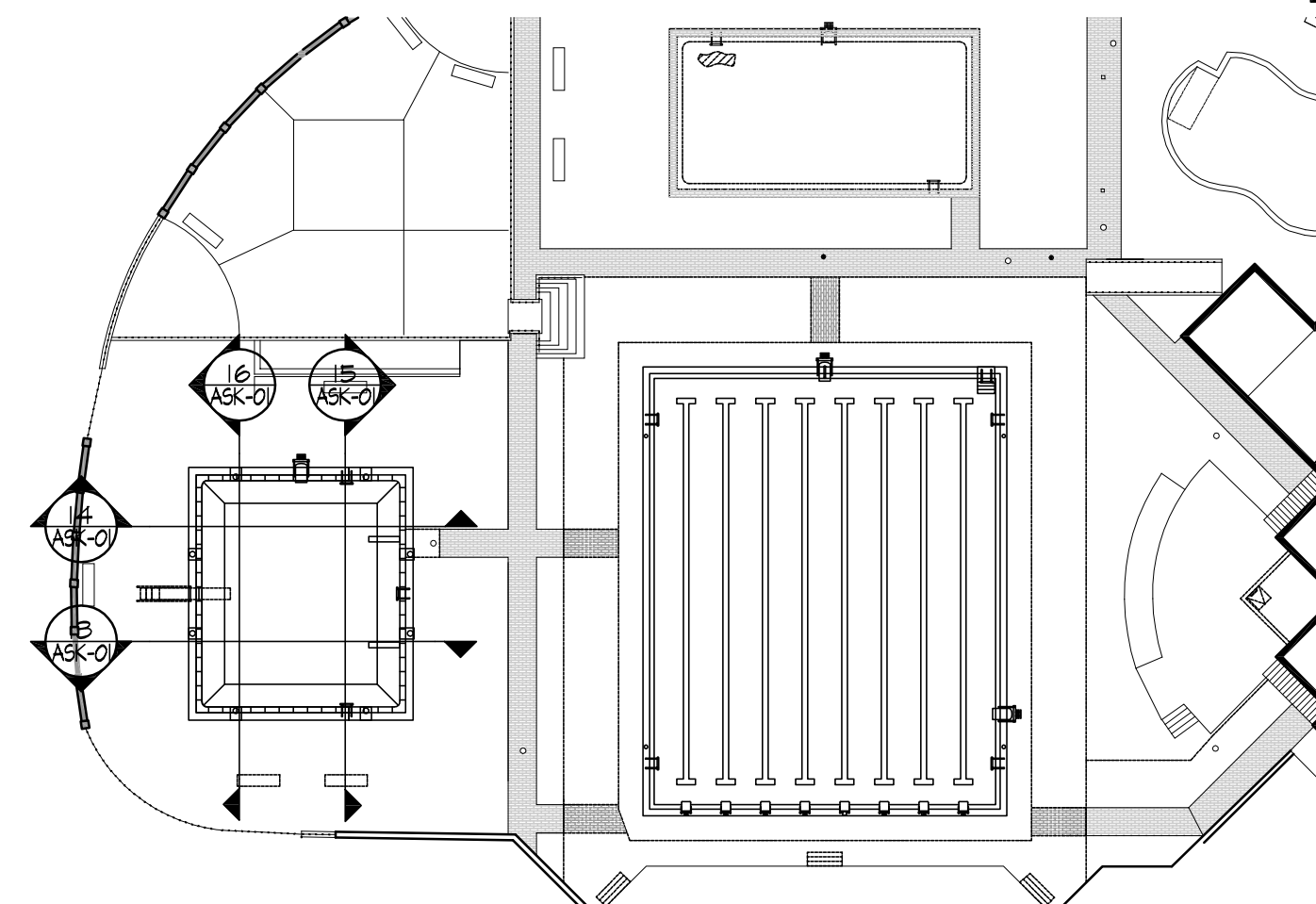
1/4" = 1'-0"

### NOTES:

- REFER TO SPECIFICATION SECTION 044500 "PORTLAND CEMENT BASED PATCH" FOR SPECIFICS ON POOL WALL REPAIR.
- THE WORK SHOWN HERE IS DIAGRAMMATIC. NOT ALL REMOVALS ARE NECESSARILY SHOWN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL POOL WALL REPAIR.

### LEGEND:

AREAS OF CEMENT PATCH



## 1 KEY PLAN

SCALE: 1/32" = 1' - 0"

AQUATIC FACILITY  
RENOVATION FOR

SIMSBURY FARMS POOL

100 OLD FARMS ROAD

SIMSBURY, CT. 06092

DATE: 07/12/16  
PROJECT NO: 15.019  
DRAWN: MPF/CSS  
CHECKED: MPF  
ISSUED FOR:  
APPENDUM #  
REVISIONS:

ASK-  
01

DIVING POOL WALL REPAIR

TJB  
ARCHITECTURE, LLC.

912 West Main Street  
Chester, Connecticut 06412  
860 526 9448 fax 860 526 9030

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FRE-BID  
SINISTOUR

POOL RENOVATIONS

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Gary Tower

Town of Suisun

Joe WORTHEN

C.S.N.E.

860-651-0500 CSNE3W

C.COMCAST.NET

## Simsbury Pool Improvements

Order Date	Company Name	First Name	Last Name	Street Address	City	State	Zip	Phone	Fax	Email
6/28/2016	Streamline Aquatics	Dawn	Peck	160 Oak Street 404	Glastonbury	CT	06033	860-430-1255	860-430-1251	dpeck@streamlineaquatics.com
6/28/2016	Dodge Data	Brad	Earich	3315 Central Ave	Hot Springs	AZ	71913	513-666-3341	800-768-5594	brad.earich@construction.com



## SUBSTITUTION REQUEST

(After the Bidding/Negotiating Phase)

Project: Simsbury Farms Aquatic Center Substitution Request Number: \_\_\_\_\_  
From: Mike McCrea National Diversified Sales  
To: Chris Strange TLB Architecture Date: 7/12/2006  
A/E Project Number: 15.019  
Re: Substitution Request – Trench Drain around Pool Contract For: \_\_\_\_\_

Specification Title: Trench Drain and Grate Description: Trench drain around pool  
Section: 334416 Page: 2 Article/Paragraph: 2.1

Proposed Substitution: Dura Slope  
Manufacturer: National Diversified Sales (NDS) Phone: 559-562-9888  
Address: 851 N. Harvard St. Lindsay CA. 93247  
Trade Name: \_\_\_\_\_ Model No.: { \_\_\_\_\_  
Installer: \_\_\_\_\_ Phone: \_\_\_\_\_  
Address: \_\_\_\_\_

History: ☐ New product ☐ 1-4 years old ☒ 5-10 years old ☐ More than 10 years old

Differences between proposed substitution and specified product:

Dura Slope is HDPE material, Polycast is polymer concrete. Dura Slope has a built in slope of 0.7%, Polycast has 0.65%

☒ Point-by-point comparative data attached — REQUIRED BY A/E

Reason for not providing specified item: \_\_\_\_\_

Similar Installation:

Project: Hilton Garden Inn Architect: Ivins Design Group  
Address: Denver, CO Owner: Hilton  
Date Installed: Jan. 2010

Proposed substitution affects other parts of Work: ☒ No ☐ Yes; explain \_\_\_\_\_

Savings to Owner for accepting substitution: \_\_\_\_\_ (\$ \_\_\_\_\_).

Proposed substitution changes Contract Time: ☒ No ☐ Yes [Add] [Deduct] \_\_\_\_\_ days.

Supporting Data Attached: ☐ Drawings ☒ Product Data ☐ Samples ☐ Tests ☒ Reports ☐ \_\_\_\_\_

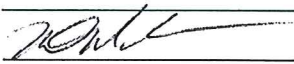
## SUBSTITUTION REQUEST

(After the Bidding/Negotiating Phase — Continued)

The Undersigned certifies:

- Proposed substitution has been fully investigated and determined to be equal or superior in all respects to specified product.
- Same warranty will be furnished for proposed substitution as for specified product.
- Same maintenance service and source of replacement parts, as applicable, is available.
- Proposed substitution will have no adverse effect on other trades and will not affect or delay progress schedule.
- Cost data as stated above is complete. Claims for additional costs related to accepted substitution which may subsequently become apparent are to be waived.
- Proposed substitution does not affect dimensions and functional clearances.
- Payment will be made for changes to building design, including A/E design, detailing, and construction costs caused by the substitution.
- Coordination, installation, and changes in the Work as necessary for accepted substitution will be complete in all respects.

Submitted by: Michael McCrea

Signed by: 

Firm: National Diversified Sales (NDS)

Address: 851 N. Harvard Lindsay, CA 93247

Telephone: (800) 726-1994

Attachments: ☒

\* Add list of attachments

### A/E's REVIEW AND ACTION

- ☒ Substitution approved - Make submittals in accordance with Specification Section 01 25 00 Substitution Procedures.  
☐ Substitution approved as noted - Make submittals in accordance with Specification Section 01 25 00 Substitution Procedures.  
☐ Substitution rejected - Use specified materials.  
☐ Substitution Request received too late - Use specified materials.

Signed by:  (CHRISTOPHER STRANGE)

Date: 7/12/2016

Additional Comments:

☐ Other:

☐ Contractor

☐ Subcontractor

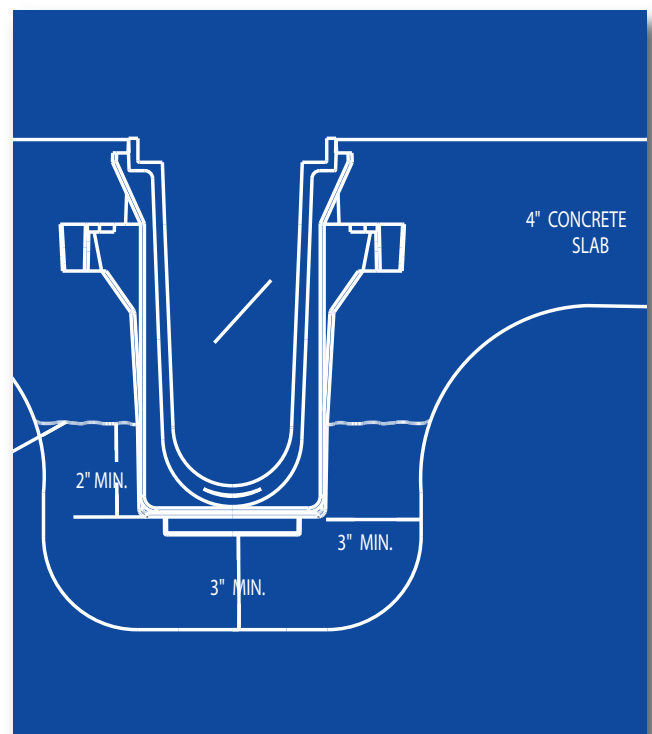
☐ Supplier

☐ Manufacturer

☐ A/E

# TECHNICAL SPECIFICATION GUIDE

## DURA SLOPE™



### NDS Customer Service

851 N. Harvard Ave, Lindsay, CA 93247

Phone: (800) 726-1994 • (559) 562-9888

Fax: (800) 726-1998 • (559) 562-4488

[www.NDSPRO.com](http://www.NDSPRO.com)





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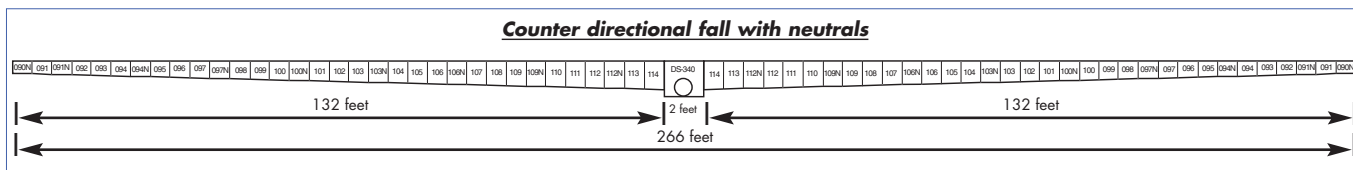
This information is relevant *only* to the product(s) identified within this document and is not intended for use with any other products. Please consult NDS Tech Services at (888) 825-4716 or e-mail [TechService@NDSPRO.net](mailto:TechService@NDSPRO.net) if you have any questions pertaining to specifications, installations, or recommended applications that are beyond the scope of this document.  
BEFORE BEGINNING ANY PROJECT, CONSULT A CURRENT EDITION OF THESE SPECS AT: [WWW.NDSPRO.COM](http://WWW.NDSPRO.COM)

## Overview

NDS is the innovator of exterior surface drainage products. We offer a complete line of catch basins, grates, sewer and drain fittings, and channel drains such as the Dura Slope<sup>™</sup> pre-sloped trench drain system. These products are used to collect excess runoff water and dispense it into an underground drainage pipe which then discharges water to street curbs, storm water sewers, drainage ditches or other runoff areas. NDS drainage products can be tied to an existing drain pipe or downspout connection and are essential in maintaining healthy plant and lawn life, as well as protecting man-made structures from damage due to excess ground water. Locating low spots in landscaping, anticipating rainfall, and keeping in mind that water flows downhill are the keys to installing an effective drainage system.

Dura Slope<sup>™</sup> is a high-quality structural foam polyethylene trench drain system with a built-in slope. The system has been specifically designed and manufactured to ensure strength, structural integrity and durability while incorporating excellent hydraulic characteristics and chemical resistance. Dura Slope<sup>™</sup> is an economical alternative to traditional polymer concrete trench drain systems, while offering ease of installation. The NDS Dura Slope<sup>™</sup> is the best choice for a variety of drainage solutions including driveways, parking areas, warehouses, loading docks, gas station entrances, and other areas for the interception and collection of surface run-off.

- Foundations • Tennis Courts • Swimming Pools • Driveways
- Dog Kennels • Garages • Marinas • Saunas and Spas
- Patios • Hot Tubs • Nurseries • Golf Courses • Gas Stations
- Loading Docks • Warehouses • Tracks
- ...and much more!



## Product Specifications

<b>Specify</b>	Dura Slope™ is a high quality , dependable, and best-in-class trench drain system.
<b>Material</b>	Manufactured from molded, structural foam HDPE with UV inhibitors.
<b>Channel Sizes</b>	48" length, 6" width, 3.998" to 12.062" inner depth range
<b>Grate Sizes</b>	24" length, 6" width
<b>Grate Materials</b>	Stainless Steel, Galvanized Steel, Cast Iron, Ductile Iron, Plastic (structural foam polyolefin
<b>Grate Colors/Finishes</b>	Metallic finishes, black, gray, white, green, sand, red
<b>Load Class</b>	Class A = 1-160 psi. Class B = 61-175 psi. Class C = 176-325 psi. Class D = 326-575 psi. Loads are based on encasing product in concrete and grate selection.
<b>Strength</b>	Material shall withstand a compressive strength of 2900 psi. Material tensile stress shall be 4550 psi and material flexural strength shall be 5800 psi.
<b>Channel Weight Per Unit</b>	Ranges between 7.452 lbs. for shallow channel to 16.06 lbs for deep channel.
<b>Grate Weight Per Unit</b>	Ranges between 2.92 lbs. for polyolefin to 16.0 lbs. for ductile iron.
<b>Unique Product Features</b>	Lower installed cost than polymer concrete. Fewer parts required.
<b>Pre-Sloped Run Lengths</b>	194 feet of continous slope 266 feet w/neutral sections added
<b>Pipe Outlet Sizes</b>	3", 4", 6", 8" Pipe.

## Product Features

- Faster and easier to install. Low cost installation.
- Interlocking tongue and groove joints to secure alignment and ensure straight channel runs.
- DuraLoc<sup>™</sup> integral joint lock prevents joint movement during installation.
- ProFit<sup>™</sup> locking system locks grate to integral frame and supports product in shipping and installation.
- LeveLoc<sup>™</sup> re-bar supports with integral protruding knob levels channel and grips rebar requiring fewer accessories.
- Various grating options; ADA compliant. Stainless steel, galvanized, cast iron, and plastic grates available.
- Decorative grates available in five different designs: weave, tile, brick, diamond, and slot.
- Blank grate inserts that eliminates use of plywood. Slides for overlapping of channel sections, and includes grate screws.
- Made of HDPE material for high durability. Durable, traffic rated up to H20 rating.
- Dura Slope<sup>™</sup> installs in a snap without clamps or screws.
- Lower installed cost than polymer concrete. Fewer parts required.
- Light in weight, Dura Slope<sup>™</sup> channels can be installed by one person.
- Counter directional fall up to 194 ft., up to 266 ft. with neutrals added.
- Bottom outlet on each channel section. System versatility that requires fewer accessories.
- Universal catch basin.

## Material Composition

### Dura Slope™ Pre-Sloped Trench Drain

Dura Slope™ shall be manufactured from molded, structural foam polyethylene with UV inhibitors and shall have a nominal outside top dimension of 6-5/8" (168.3mm). Trench drain shall have an inside nominal flow path width of 4" (101.6mm), and shall have a bottom radius of 2" (50.8mm) to facilitate sediment removal. The system shall include neutral and pre-sloped sections to provide variable trench depth as required by site conditions. Pre-sloped sections shall have a slope of 0.7%.

Dura Slope™ channel and grating shall be designed to withstand loads up to Load class D (up to 575psi), when installed per the appropriate installation methods (see NDS installation instructions and grating specifications included in the Dura Slope™ catalog). Channel grating shall be installed per manufacturer load rating recommendations, and shall be attached to the channel using stainless steel screws with the manufacturer-supplied Pro Fit™ locking system. The channel shall include LeveLoc™ integral re-bar supports located at 24" (60cm) intervals along each side of the channel to provide height adjustment using #4 re-bar (1/2") during installation. The channel shall have tongue and groove Dura Loc™ joints that ensure precise alignment during installation with snap-lock mechanisms to eliminate joint movement.

### Molding Technique

Dura Slope™ is proudly manufactured in the U.S.A. in Lindsay, California. The channels are injection molded to exacting specifications to an exact temperature range that will not damage the molecular chain of the polymer. The use of high quality resins coupled with computerized manufacturing technologies guarantees the Dura Slope™ channel drain system will preserve in strength over time.

### Testing Methods

The Dura Slope™ channel and grates undergo a battery of tests with each production run, as is the process with all of the products manufactured by NDS. All of the manufacturing tests are conducted within the manufacturing cycle to assure a quality-finished product.

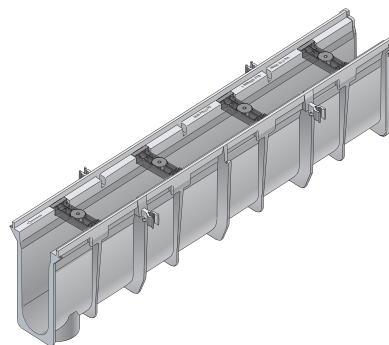
### Compression Tests

Compression tests are used to determine the load strength of NDS channel drains. Material absorption rate shall not exceed .01%. Material shall withstand a compressive strength of 2900 psi. Material tensile stress shall be 4550 psi and material flexural strength shall be 5800 psi. The Dura Slope™ System has the ability to withstand freeze/thaw cycles and provide chemical resistance, including road salt.

# DURA SLOPE™

## CHANNEL DRAINS

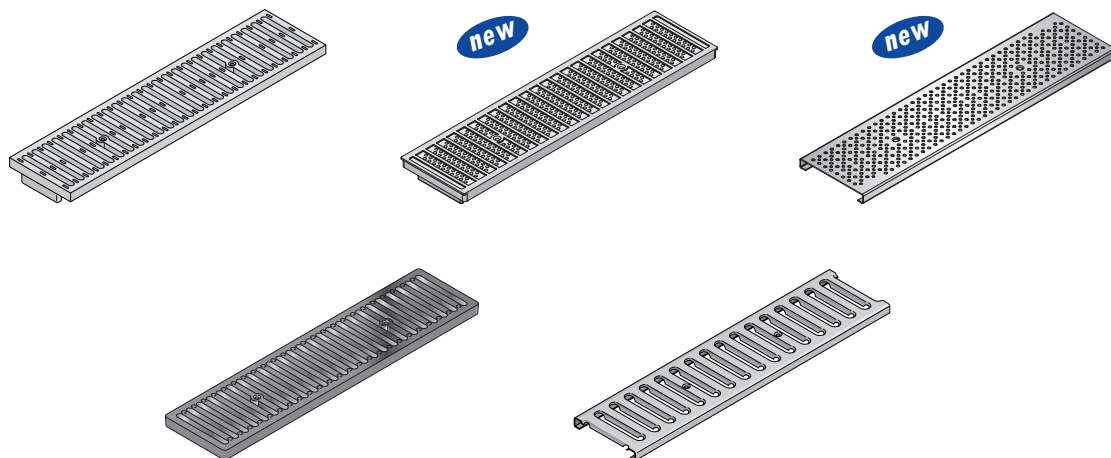
NDS Dura Slope™ is a 6<sup>5</sup>/<sub>8</sub>" wide, 4-foot-long trench drain system with a built-in slope of 0.7%. Each channel section is molded of gray structural foam polyethylene with UV inhibitors and has a 4" inside diameter with a 2" radius bottom. The system consists of 4-foot channel sections including 24 pre-sloped channel sections and 9 neutral channel sections. The sloped channel sections enable the system to extend to a length of 96 feet with a continuous slope.



Part No.	Description	Flow Rate GPM	Min. Inner Depth	Max. Inner Depth	Min. Outer Depth	Max. Outer Depth	Wt. Ea. (lbs.)
DS-090N	3.99" Deep Neutral Dura Slope Channel	75	3.998	3.998	5.354	5.760	7.45
DS-091	3.99" to 4.34" Deep Dura Slope Channel	75	3.998	3.998	5.690	5.770	7.52
DS-091N	4.34" Deep Neutral Dura Slope Channel	89	4.334	4.334	5.692	6.103	7.81
DS-092	4.34" to 4.67" Deep Dura Slope Channel	89	4.334	4.670	6.062	6.106	7.92
DS-093	4.67" to 5.00" Deep Dura Slope Channel	103	4.670	5.006	6.362	6.442	8.27
DS-094	5.00" to 5.34" Deep Dura Slope Channel	117	5.006	5.342	6.698	6.778	8.64
DS-094N	5.34" Deep Neutral Dura Slope Channel	131	5.342	5.342	6.700	7.111	8.93
DS-095	5.34" to 5.68" Deep Dura Slope Channel	131	5.342	5.678	7.034	7.114	8.99
DS-096	5.68" to 6.01" Deep Dura Slope Channel	145	5.678	6.014	7.370	7.450	9.36
DS-097	6.01" to 6.35" Deep Dura Slope Channel	159	6.014	6.350	7.706	7.786	9.74
DS-097N	6.35" Deep Neutral Dura Slope Channel	173	6.350	6.350	7.708	8.119	10.04
DS-098	6.35" to 6.69" Deep Dura Slope Channel	173	6.350	6.686	8.042	8.122	10.11
DS-099	6.69" to 7.02" Deep Dura Slope Channel	187	6.686	7.022	8.378	8.458	10.48
DS-100	7.02" to 7.36" Deep Dura Slope Channel	201	7.022	7.358	8.714	8.794	10.86
DS-100N	7.36" Deep Neutral Dura Slope Channel	215	7.358	7.358	8.716	9.127	11.16
DS-101	7.36" to 7.69" Deep Dura Slope Channel	215	7.358	7.694	9.050	9.130	11.23
DS-102	7.69" to 8.03" Deep Dura Slope Channel	229	7.694	8.030	9.386	9.466	11.60
DS-103	8.03" to 8.37" Deep Dura Slope Channel	243	8.030	8.366	9.722	9.802	11.98
DS-103N	8.37" Deep Neutral Dura Slope Channel	257	8.366	8.366	9.724	10.135	12.27
DS-104	8.37" to 8.70" Deep Dura Slope Channel	257	8.366	8.702	10.058	10.138	12.34
DS-105	8.70" to 9.04" Deep Dura Slope Channel	271	8.702	9.038	10.394	10.474	12.71
DS-106	9.04" to 9.37" Deep Dura Slope Channel	285	9.038	9.374	10.730	10.810	13.07
DS-106N	9.37" Deep Neutral Dura Slope Channel	299	9.374	9.374	10.732	11.143	13.39
DS-107	9.37" to 9.70" Deep Dura Slope Channel	299	9.374	9.710	11.066	11.146	13.4
DS-108	9.70" to 10.05" Deep Dura Slope Channel	313	9.710	10.046	11.402	11.482	13.83
DS-109	10.05" to 10.38" Deep Dura Slope Channel	327	10.046	10.382	11.738	11.818	14.20
DS-109N	10.38" Deep Neutral Dura Slope Channel	341	10.382	10.382	11.740	12.151	14.50
DS-110	10.38" to 10.71" Deep Dura Slope Channel	341	10.382	10.718	12.074	12.154	14.57
DS-111	10.71" to 11.05" Deep Dura Slope Channel	355	10.718	11.054	12.410	12.490	14.95
DS-112	11.05" to 11.39" Deep Dura Slope Channel	368	11.054	11.390	12.746	12.826	15.32
DS-112N	11.39" Deep Neutral Dura Slope Channel	382	11.390	11.390	12.785	13.158	15.6
DS-113	11.39" to 11.72" Deep Dura Slope Channel	382	11.390	11.726	13.082	13.162	15.69
DS-114	11.72" to 12.06" Deep Dura Slope Channel	396	11.726	12.062	13.418	13.498	16.06

Note: All dimensions are nominal. All weights are for shipping purposes only. Availability is subject to change.

# DURA SLOPE™ GRATES



Part No.	Description	Color	Pkg. Qty.	Wt. Ea. (lbs.)	Inflow Capacity (GPM)	Specifications
660	2 ft. Channel Grate	White	12	2.92	27	NDS #660, #661, #662, #663, #664, #665, 2 ft. Structural Foam Polyolefin secured channel grate with UV inhibitor. Open surface area of 20.61 square inches per foot. 27.00 GPM per foot.
661	2 ft. Channel Grate	Dark Gray	12	2.92	27	
661LG	2 ft. Channel Grate	Gray	12	2.92	27	
662	2 ft. Channel Grate	Green	12	2.92	27	
663	2 ft. Channel Grate	Black	12	2.92	27	
664	2 ft. Channel Grate	Sand	12	2.92	27	
665	2 ft. Channel Grate	Brick Red	12	2.92	27	
DS-670	2 ft. Plastic Perforated Channel Grate	Gray	12	3.0	11.3	NDS #DS-670, 2' Structural Foam Polyolefin, secured channel grate with UV inhibitors; light traffic rated, heel-proof, ADA compliant. Open surface area of 9.36 square inches per foot; 12.2 GPM per foot.
DS-226	2 ft. Stainless Steel Perforated Channel Grate	Steel	12	3.22	9.6	NDS #DS-226, Stainless Steel grate, light traffic rated, heel-proof, ADA compliant. Open surface area of 7.92 square inches per foot; 10.4 GPM per foot.
DS-228	2 ft. Galvanized Steel Perforated Channel Grate	Steel	12	3.22	9.6	
DS-231	2 ft. Cast Iron Channel Grate	Black	1	15.00	22.6	#DS-231 2 ft. Heavy Duty Cast Iron Channel Grate. NDS #DS-232, 2 ft. Heavy Duty Ductile Iron Channel Grate. Open surface area of 15.27 square inches per foot; 20.00 GPM per foot. H-20 Load Rating.
DS-232	2 ft. Ductile Iron Channel Grate	Black	1	16.00	22.6	
DS-221	2 ft. Galvanized Steel Channel Grate	Steel	12	4.00	31.4	NDS #DS-221, 2 ft. Galvanized Rolled Steel Grate. Open surface area of 19.85 square inches per foot; 26.00 GPM per foot.

ADA Compliant

Use with Dura Slope Drains and Dura Slope Catch Basins

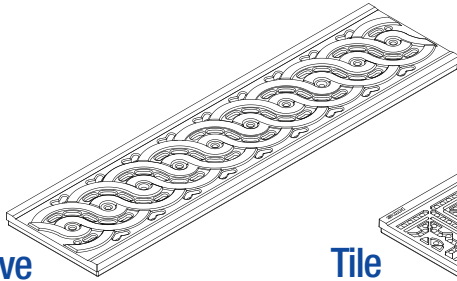


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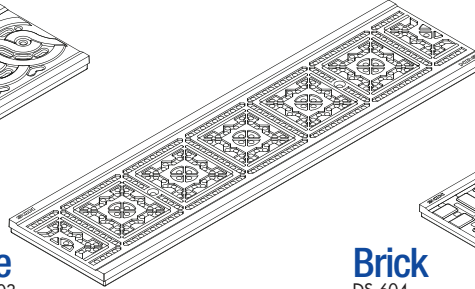
# **DURA SLOPE™**

## **DECORATIVE GRATES**

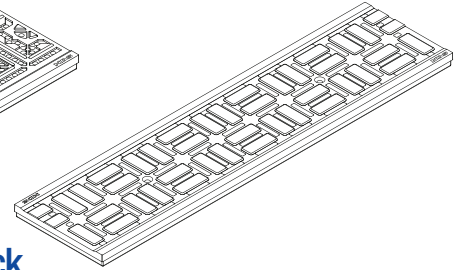
**Weave**  
DS-601



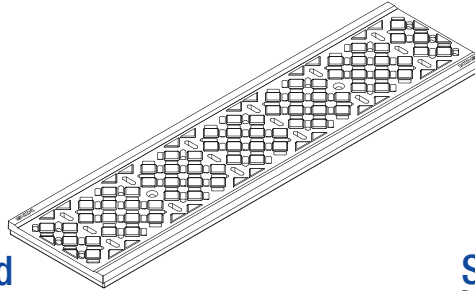
**Tile**  
DS-603



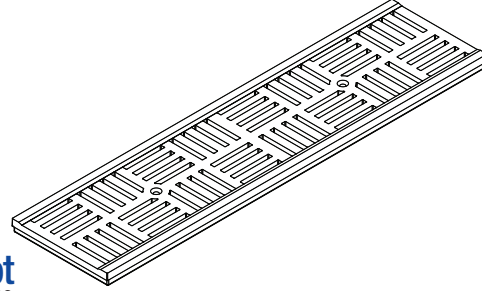
**Brick**  
DS-604



**Diamond**  
DS-602



**Slot**  
DS-609



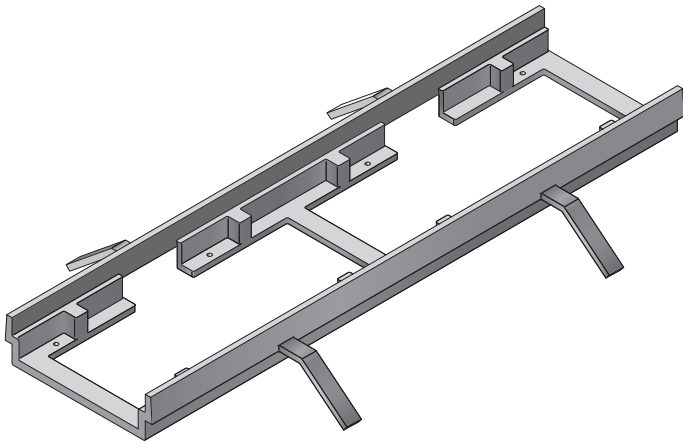
Pattern	Raw	Powder Coat Color									Pkg. Qty.	Wt.Ea. (lbs.)
		Black (K)	White (W)	Silver (S)	Bronze (Z)	Green (G)	Blue (B)	Orange (O)	Gray (Y)	Brown (N)		
Weave	DS-601	DS-601K	DS-601W	DS-601S	DS-601Z	DS-601G	DS-601B	DS-601O	DS-601Y	DS-601N	1	14.5
Diamond	DS-602	DS-602K	DS-602W	DS-602S	DS-602Z	DS-602G	DS-602B	DS-602O	DS-602Y	DS-602N	1	14.3
Tile	DS-603	DS-603K	DS-603W	DS-603S	DS-603Z	DS-603G	DS-603B	DS-603O	DS-603Y	DS-603N	1	14.7
Brick	DS-604	DS-604K	DS-604W	DS-604S	DS-604Z	DS-604G	DS-604B	DS-604O	DS-604Y	DS-604N	1	14.3
Slot	DS-609	DS-609K	DS-609W	DS-609S	DS-609Z	DS-609G	DS-609B	DS-609O	DS-609Y	DS-609N	1	14.5



# DURA SLOPE™

## DUCTILE IRON FRAME

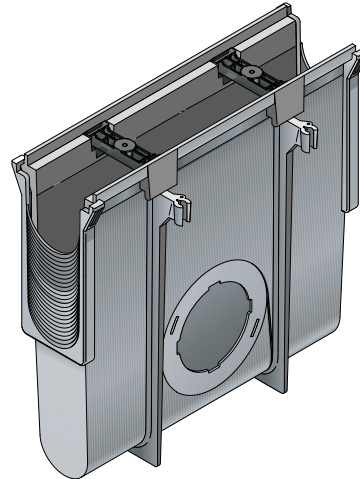
Dura Slope™ Ductile Iron Frame provides a Class D load rating of 326-575 psi and is suitable for heavy-duty hard tire equipment at speeds less than 20 mph. The DS-200 Ductile Iron Frame is recommended for use with pneumatic tire traffic such as fork lifts. The ductile iron frame can be used with the cast and ductile iron grates.



Part No.	Description	Color	Pkg. Qty.	Wt. Ea. (lbs.)	Product Class
DS-200	Dura Slope™ Ductile Iron Frame	Black	1-2 ft	7.50	25DS
Note: All dimensions are nominal. All weights are for shipping purposes only. Availability is subject to change.					

# **DURA SLOPE**<sup>™</sup> **CATCH BASIN**

The NDS Dura Slope<sup>™</sup> in-line catch basin is designed to fit all depth ranges of the Dura Slope<sup>™</sup> trench drain sections. Catch basin inlets are designed to be sized as required to accept the Dura Slope<sup>™</sup> trench drain section. The Dura Slope<sup>™</sup> catch basin is 2 feet long and 2 feet deep with an outlet on both sides of the basin. One Universal Adapter Plug, one blank grate insert and two grate screws are included with each Dura Slope<sup>™</sup> in-line catch basin. The NDS universal basin outlets are used to adapt the catch basin to 3", 4", 6" and 8" pipe.



Part No.	Description	Color	Pkg. Qty.	Wt. Ea. (lbs.)	Product Class
DS-340	Dura Slope <sup>™</sup> In-Line Catch Basin  DS-340 Available for use of one or two outlets Use #1242, #1243, #1245, #1266, #1206, or #1888 Universal Outlets	Gray	1	12.00	25DS

Note: All dimensions are nominal. All weights are for shipping purposes only. Availability is subject to change.

# DURA SLOPE™ TRASH BUCKET

Dura Slope™ Trash Bucket is made to fit inside the Dura Slope™ Catch Basin (NDS Part #DS-340). It has a handle for easy removal to clean leaves and debris, which requires removal of the grate. Constructed of zinc plated steel, it is durable to climatic conditions.

Note: The Trash Bucket is not intended for use with any of the Dura Slope™ channel drains or with the Ductile Iron Frame (NDS Part #DS-200).



Part No.	Description	Color	Pkg. Qty.	Wt. Ea. (lbs.)	Product Class
DS-240	<p>Dura Slope™ Trash Bucket Fits inside the Dura Slope™ Catch Basin (NDS Part #DS-340)</p> <p>Note: Trash Bucket not for use with the Ductile Iron Frame (NDS Part #DS-200)</p>	Steel	1	5.0	25DS
<p>Note: All dimensions are nominal. All weights are for shipping purposes only. Availability is subject to change.</p>					

## Chemical Resistance

The following results were derived from testing using standard procedures including ASTM D543 "Standard Test Method for Resistance of Plastics to Chemical Reagents." Actual results will vary for different applications depending on environmental conditions for each particular application and other modifying factors. The following table assumes ambient temperature of 75 degrees Fahrenheit.

The comparative information presented considers the environmental and stress-cracking tendencies of the polymeric material. Sunlight can be destructive because of its ability to cleave main chain bonds of polymers. When specifying plastic products for outdoor use, include the requirement for NDS products with ultra-violet stabilizers to protect against deterioration and discoloration due to exposure to sunlight.

### NDS Chemical Resistance Guide

Chemicals	%	NDS Plastic Materials @ max. Temp (°F) or Rating				Metals Rating			Flo Control Gaskets @ max. Temp (°F) or Rating		
		ABS	Polyolefin	Polystyrene	PVC	Brass	Cast Iron	Ductile Iron	EPDM	Buna-n	Viton
Acetic Acid	25	-	180	A	73	C	C	C	180	C	C
Acetic Acid	50	-	140	A	73	C	C	C	140	C	C
Acetic Acid	80	-	100	B	73	C	C	C	100	C	C
Acetone	-	-	73	C	C	A	A	A	130	C	C
Aluminum Chloride	Sat	-	180	A	140	C	C	C	210	70	150
Aluminum Fluoride	Sat	-	-	B	73	C	C	C	210	180	-
Aluminum Sulfate	Sat	-	180	B	140	C	C	C	210	200	150
Ammonium Acetate	Sat	-	73	B	140	C	-	-	140	-	-
Ammonium Chloride	Sat	-	180	A	140	C	C	C	210	180	A
Ammonium Hydroxide	10	-	180	B	225	C	-	-	210	70	A
Ammonium Sulfate	-	-	180	A	140	C	B	B	210	180	A
Amyl Alcohol	-	-	180	A	100	A	B	B	210	140	A
Barium Chloride	Sat	-	180	A	180	A	B	B	250	180	A
Barium Hydroxide	Sat	-	180	-	140	A	B	B	250	180	A
Benzene	-	-	C	C	C	A	A	A	C	C	A
Benzoic Acid	All	-	140	A	140	C	C	C	C	C	-
Borax	Sat	-	180	A	140	A	A	A	210	140	A
Boric Acid	Sat	-	180	A	140	B	B	C	210	140	A
Calcium Chloride	-	100	180	A	140	B	A	A	210	100	A
Calcium Hydroxide	-	-	180	-	140	C	C	C	210	140	A
Carbon Tetrachloride	-	-	C	-	73	A	C	C	C	C	A
Chlorine Gas (Dry) ppm	<150	-	C	B	120	C	B	A	C	C	B
Chlorine Gas (Wet) ppm	>150	C	C	B	120	C	C	C	C	C	B
Chlorinated Water ppm	<3500	-	-	B	140	C	-	-	B	C	B
Chlorinated Water ppm	>3500	-	C	B	C	C	-	-	C	C	B
Chromic Acid	10	C	150	B	140	C	C	C	70	C	B
Chromic Acid	30	C	150	B	140	C	C	C	C	C	-
Chromic Acid	40	C	150	B	140	C	C	C	C	C	-
Chromic Acid	50	C	C	B	75	C	C	C	C	C	-
Citric Acid	Sat	-	180	A	140	C	C	C	210	70	A
Copper Chloride	Sat	-	-	-	140	C	C	C	210	180	150
Copper Cyanide	-	-	-	-	140	C	C	C	210	180	-
Copper Nitrate	30	-	-	-	140	C	C	C	210	B to 70	-
Copper Sulfate	Sat	-	120	A	140	C	C	C	210	180	150
Creosote	-	-	-	-	73	B	A	A	C	73	B
Crude Oil	-	-	-	-	140	C	C	C	C	70	-
Dibutyl Ether	-	-	-	-	-	-	-	-	C	C	C
Diesel Fuel	-	-	-	-	140	A	A	A	C	70	-
Ethyl Alcohol	-	-	180	-	140	A	A	A	170	180	A

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		ABS	Polyolefin	Polystyrene	PVC	Brass	Cast Iron	Ductile Iron	EPDM	Buna-n	Viton
Ethyl chloride	Dry	-	73	C	C		A	A	B to 70	C	B
Ethylene Glycol	-	-	120	A	140	A	A	A	210	180	A
Ethyl Ether	-	-	C	-	C	-	-	-	C	C	-
Fatty Acids	-	-	120	-	140	C	C	C	C	140	-
Formic Acid	-	-	73	B	73	-	C	C	200	C	C
Fructose	-	-	-	-	140	-	A	A	175	140	-
Gasoline(Leaded)	-	-	C	C	C	A	A	A	C	70	A
Gasoline(Unleaded)	-	-	C	C	C	A	A	A	C	70	A
Glycerine	-	-	180	A	140	A	A	A	200	70	A
Hydrolc Oil	-	-	-	-	73	-	A	A	C	C	-
Hydrobromic Acid	20	-	120	-	140	C	C	C	140	C	-
Hydrobromic Acid	50	-	-	-	140	C	C	C	140	C	-
Hydrochloric Acid	<25	-	150	B	140	C	C	C	150	C	-
Hydrochloric Acid	37	-	150	B	140	C	C	C	150	C	-
Hydrocyanic Acid	10	-	73	-	140	C	C	C	200	70	-
Hydrogen Peroxide	50	-	150	A	140	C	C	C	100	C	A
Hydrogen Peroxide	90	-	-	A	140	C	C	C	C	C	B
Inks	-	-	-	-	-	C	C	C	-	70	-
Jp-4 Fuel	-	-	-	-	C	A	A	A	C	70	A
Kerosene	-	C	73	C	140	A	A	A	C	140	A
Lactic Acid	25	-	150	A	140	C	C	B	70	-	A
Lactic Acid	80	-	150	A	73	C	C	B	70	C	A
Lead Acetate	Sat	-	180	A	140	-	C	C	210	70	-
Linseed Oil	-	-	150	A	140	A	A	A	B to 70	180	A
Magnesium Chloride	Sat	-	180	A	140	B	C	C	170	180	150
Magnesium Sulfate	-	-	180	A	140	A	A	A	175	180	150
Mercury	-	-	150	A	140	C	A	A	210	140	A
Mineral Oil	-	70	120	-	140	A	A	A	C	140	A
Naphtha	-	B to 70	73	C	140	-	A	A	C	140	-
Nickel Sulfate	Sat	-	180	A	140	-	C	C	210	-	150
Nitric Acid	<10	73	140	B	140	C	C	C	70	C	B
Nitric Acid	30	C	73	B	140	C	C	C	70	C	B
Nitric Acid	40	C	C	B	100	C	C	C	C	C	B
Nitric Acid	50	C	C	B	100	C	C	C	C	C	B
Nitric Acid	70	C	C	B	73	C	C	C	C	C	B
Nitric Acid	fuming	C	C	C	C	C	C	C	C	C	B
Nitrous Acid	10	-	-	-	73	C	C	C	-	C	-
Oxalic Acid	50	-	180	A	140	-	C	C	150	C	A
Phosphoric Acid	10	-	180	A	140	C	C	C	140	70	A
Phosphoric Acid	50	-	180	A	140	C	C	C	70	C	A
Phosphoric Acid	85	-	180	A	140	C	C	C	70	C	-
Phosphorus Trichloride	-	-	-	-	C	-	-	-	-	C	-
Picric Acid	10	C	170	-	170	C	C	C	140	C	-
Potassium Bicarbonate	Sat	-	170	-	140	-	-	-	170	70	-
Potassium Bromide	-	-	180	A	140	-	C	C	170	180	-
Potassium Carbonate	-	70	140	A	280	B	A	A	170	180	-
Potassium Chlorate	-	-	180	A	140	-	A	A	140	B to 70	-
Potassium Chloride	-	-	180	A	140	A	B	B	210	180	A
Potassium Cyanide	-	-	-	-	140	C	B	B	140	180	A
Potassium Dichromate	Sat	-	-	B	140	-	B	B	170	180	-
Potassium Ferricyandide	-	-	-	-	140	-	B	B	140	70	-
Potassium Hypochlorite	-	C	C	-	140	-	-	-	C	C to 70	-
Potassium Iodide	-	-	73	-	-	-	-	-	140	100	-
Potassium Nitrate	-	-	-	A	140	B	B	B	210	180	-
Potassium Sulfate	-	-	180	A	140	B	A	A	210	140	A

## NDS Chemical Resistance Guide

Chemicals	%	NDS Plastic Materials @ max. Temp (°F) or Rating				Metals Rating			Flo Control Gaskets @ max. Temp (°F) or Rating		
		ABS	Polyolefin	Polystyrene	PVC	Brass	Cast Iron	Ductile Iron	EPDM	Buna-n	Viton
Silver Cyanide	-	-	-	-	140	C	C	C	140	C	-
Sodium Acetate	Sat	-	180	A	140	-	B	B	170	C	-
Sodium Bicarbonate	-	70	180	-	140	B	A	A	250	180	A
Sodium Borate	Sat	-	73	A	-	-	B	B	140	70	-
Sodium Bromide	Sat	-	180	A	140	-	C	C	210	70	-
Sodium Chloride	-	-	180	A	140	A	B	B	140	140	A
Sodium Fluoride	-	-	185	A	140	-	C	C	140	70	-
Sodium Hydroxide	<10	140	180	A	140	-	-	-	180	140	A
Sodium Hydroxide	30	70	180	A	140	-	-	-	140	100	B
Sodium Hydroxide	50	70	180	A	140	-	-	-	140	C	B
Sodium Hydroxide	70	C	180	A	140	-	-	-	70	C	B
Sodium Nitrate	Sat	-	180	B	140	B	A	A	210	140	A
Sodium Peroxide	-	-	-	-	140	C	C	C	140	B to 70	A
Sour Crude Oil	-	-	-	-	140	-	A	A	C	C	-
Stannic Chloride	-	-	-	-	140	C	C	C	100	140	A
Stannous Chloride	15	-	-	-	140	C	C	C	70	140	A
Stearic Acid	-	-	73	A	140	-	-	-	C	140	A
Succinic Acid	-	-	150	-	140	-	A	A	70	70	-
Sugar	-	-	-	-	140	-	-	B	100	140	-
Sulfur	-	-	C	A	140	C	B	B	-	C	B
Sulfur Chloride	-	-	C	-	-	C	C	C	C	70	A
Sulfuric Acid	to 30	100	180	A	140	C	C	C	140	C	A
Sulfuric Acid	50	70	150	A	140	C	C	C	70	140	A
Sulfuric Acid	60	C	150	A	140	C	C	C	C	C	A
Sulfuric Acid	70	C	120	A	140	C	C	C	C	C	A
Sulfuric Acid	80	C	73	A	140	C	C	C	C	C	A
Sulfuric Acid	90	C	C	B	100	C	C	C	C	C	A
Sulfuric Acid	93	C	C	B	100	C	C	C	C	C	A
Sulfuric Acid	94	C	C	B	100	C	C	C	C	C	A
Sulfuric Acid	95	C	C	B	100	C	C	C	C	C	A
Sulfuric Acid	96	C	C	B	100	C	C	C	C	C	-
Sulfuric Acid	98	C	C	B	C	C	C	C	C	C	-
Sulfuric Acid	fuming	C	C	B	C	C	C	C	C	C	A
Sulfurous Acid	Sat	C	140	-	140	C	C	C	75	-	A
Tannic Acid	10	C	180	A	140	B	B	C	70	100	A
Tartaric Acid	-	-	-	A	150	C	C	C	C	70	A
Titanium Tetrachloride	-	-	-	-	C	-	-	-	C	-	-
Trichloroacetic Acid	-	-	150	-	140	-	C	C	70	B to 70	-
Turpentine	-	-	C	C	140	A	A	A	C	70	A
Vinegar	-	73	180	A	140	C	C	C	180	C	-
Xylene	-	C	C	C	C	A	A	A	C	C	A
Zinc Chloride	-	-	180	A	140	-	C	C	180	70	A
Zinc Sulfate	-	-	180	A	140	-	C	C	180	140	A

### Interpretation of Comparative Ratings as follows:

**Temperatures are in °F = Max. Temperature recommended**

**A = Suitable for use**

**B to (Temp.) = Contact manufacturer**

**C = Strongly affected, not recommended**

**Blank = No information is available**

**DISCLAIMER:** Further Chemical Compatibility results can be looked up by NDS Technical Service by request: (888) 825-4716.

This guideline made by NDS is only meant to be used as a reference and does not carry any warranty. It's recommended that you contact the manufacturer or supplier of these chemicals and follow handling instructions for all materials.

**NDS Customer Service**

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