

# SUGGESTED MASTER SPECIFICATION

## Dowel Aligners

### PART 1 - GENERAL

#### 1.1 SUMMARY

- A. Products supplied under this section: Dowel aligners.
- B. Related sections:
  - 1. Section 03100 – Concrete forms and accessories.
  - 2. Section 03200 - Concrete reinforcement.
  - 3. Section 03300 - Cast-in-place concrete.

#### 1.2 REFERENCES

- A. American Concrete Institute (ACI):
  - 1. ACI Detailing Manual SP-66.
  - 2. ACI 302.1R-04 Guide for Concrete Floor and Slab Construction.
  - 3. ACI 360R-06 Guide for Design of Slabs-on-Ground.

#### 1.3 SUBMITTALS

- A. Product data: Manufacturer's product data with application and installation instructions for proprietary materials and items, including but not limited to dowel aligners.
- B. Shop drawings: Indicate placement of dowel aligners.
  - 1. Indicate dimensions and spacings.
  - 2. Comply with ACI 302.1R-04, ACI 360R-06, ACI Detailing Manual (SP-66) and PNA installation guides indicating arrangement of dowels and aligners.

#### 1.4 QUALITY ASSURANCE

- A. Pre-installation meeting:
  - 1. Convene a pre-installation meeting \*\* two (2) \*\* \_\_\_\_\_ \*\* weeks before installation of PNA products. Require attendance of parties affecting the work of this section, including Contractor, Engineer, and installers.
  - 2. Review installation procedures and coordinate with other work.

#### 1.5 DELIVERY, STORAGE AND HANDLING

- A. Deliver dowel aligners in manufacturer's packaging.
- B. Deliver and handle materials to prevent damage or weakening to dowel aligners.
- C. Prevent accumulation of rust, debris or deleterious materials on dowel aligners during storing. Store off ground and under cover.

## **PART 2 - PRODUCTS**

### **2.1 MANUFACTURER**

- A. Acceptable manufacturer: PNA Construction Technologies, [www.pna-inc.com](http://www.pna-inc.com); 800-542-0214.

### **2.2 DOWEL ALIGNERS**

- A. Acceptable product: PNA Dowel Aligner.  
B. Material: Plastic.  
C. Fabrication: Fabricate plastic alignment component to maintain correct alignment of round or square dowels.  
D. Size: \*\*1/2" and \*\* 3/4". (Fill in appropriate dimensions.) \*\*

## **PART 3 - EXECUTION**

### **3.1 EXAMINATION**

- A. Notify Engineer at least 72 hours prior to placing concrete dowel systems to allow time for examination of accessories. Place no concrete in forms without Engineer's acceptance of concrete dowel systems.

### **3.2 INSTALLATION**

- A. Install dowel aligners in accordance with manufacturer's product data and in accord with shop drawings.  
B. Dowel aligner installation:  
1. Drill an oversize hole at spacings indicated on shop drawings. Do not locate dowel within 1'-0" of intersection of joints.

Hole Variations:

Square Dowel Size	Hole Size
1/2" Dowel	3/4" hole
3/4" Dowel	1-1/8" hole
1" Dowel	1-3/8" hole
1 1/4" Dowel	1-3/4" hole

2. Push dowel aligner into hole and nail to form; duplex nails are recommended.  
3. Lightly grease round dowels.  
4. Insert dowel into aligner.  
5. Install dowels to within +/- 1/4" of mid slab depth.  
6. Minimum embedment into each slab shall be equal to half dowel length +/- 1".  
7. Place and finish first slab. Use internal vibration as necessary per industry guidelines.  
8. After first slab is cast, pull nails and remove dowel aligner to facilitate form removal.  
9. Place and finish second slab. Use internal vibration as necessary per industry guidelines.

### **3.3 PROTECTION**

- A. Protect dowel aligners from displacement and from damage until concrete casting is complete.

**END OF SECTION**