

TOWN OF HOLLY SPRINGS, NORTH CAROLINA SPECIAL INSPECTIONS PROGRAM

This cover letter is to provide instructions for the completion of the Town of Holly Springs Statement of Special Inspections. (SSI) The SSI should be completed by the Registered Design Professional in responsible charge of the components of the building that are affected by special inspections per chapter 17 of the current North Carolina State Building Code (NCSBC).

- **Section 1 of the SSI:**
 - a. Properly identify the project with the name and address as listed on the plans submitted.
 - b. All related professionals shall be listed for each phase of the checklist in section 2. For special inspection agencies, please provide the name of the individual, qualifications, and company for each agency approving the special inspections. For the special inspection agent, please provide the name, qualification, and company of the person actually performing the inspections. If additional spaces are needed to provide agencies or agents, please attach those to section 1. If the list changes during construction, please provide a revised list prior to performing the inspections.
 - c. Please provide the names and signatures for the Registered Design Professional and the Owner or Owner Representative.
 - d. The signature of the Building Official will be provided at the time of the Special Inspections meeting once all documentation has been confirmed and approved.
- **Section 2 of the SSI:**
 - a. For each section of the checklist that requires special inspections, please indicate whether the required inspection will be periodic or continuous. If multiple agencies and/or agents are retained, please indicate which agency and agent will be performing and approving the special inspections required. You may attach a form if needed.
- **Section 3 of the SSI:**
 - a. On the Quality Assurance Plan, please indicate whether the Quality Assurance plan is required for each section. If the plan is required, provide a description of each system. Refer to sections 1705, 1706, 1707, and 1708 of the NCBC.
 - b. If a Quality Assurance Plan is required, please provide a Statement of Responsibility from each contractor retained for the installation of each system or component.

The completed SSI should be submitted with the building permit for review. Any job containing special inspections will required a meeting to be scheduled prior to the issuance of the building permit. If any questions arise during the completion of the SSI please call the Town of Holly Springs Building Code Enforcement Department at 919.557.3915 and request the Plan's Reviewer.

TOWN OF HOLLY SPRINGS, NORTH CAROLINA
SPECIAL INSPECTIONS PROGRAM
Statement of Special Inspections

PROJECT: _____

Address: _____

Building Owner: _____
Name _____ Company _____

Owner's Address: _____

Architect of Record: _____
Name & Qualification _____ Company _____

Structural Engineer of Record: _____
Name & Qualification _____ Company _____

Geotechnical Engineer of Record: _____
Name & Qualification _____ Company _____

Special Inspections Agency 1: _____
Name & Qualification _____ Company _____

Special Inspections Testing Agent 1: _____
Name & Qualification _____ Company _____

Special Inspections Testing Agent 2: _____
Name & Qualification _____ Company _____

Special Inspections Testing Agent 3: _____
Name & Qualification _____ Company _____

General Contractor: _____
Name & Qualification _____ Company _____

If additional spaces are needed to provide Special Inspection Agencies or Testing Agents, please attach to this form.

This Statement of Special Inspections is submitted as a condition for permit issuance in accordance with the North Carolina State Building Code. It includes a schedule of special inspections that will be applicable to this project.

The Special Inspections Agency shall keep records of specified special inspections and testing and shall furnish copies of inspection and testing reports to the Town of Holly Springs Code Enforcement and to the appropriate registered design professionals of record. Discrepancies from the approved plans and specifications and code violations observed during the conduct of special inspections services shall be brought to the immediate attention of the contractor for correction, to the attention of the Town of Holly Springs Code Enforcement, and to the appropriate registered design professionals of record. A final report of special inspections documenting completion of specified special inspections and correction of any discrepancies and observed code violations noted in the inspection and testing reports shall be submitted to the Town of Holly Springs Building Code Enforcement prior to or at the request for final building inspection.

Prepared by NC Registered Design Professional in Responsible Charge:

(Type or print) Name _____ Signature & Date _____

Building Owner's Authorization: _____

Signature & Date _____

Town of Holly Springs Building Official: _____

Signature & Date _____

Special Inspections Checklist
2012 NC Building Code Section 1704
(check all boxes that apply)

Building Occupancy Category (Table 1604.5): II III IV

If Occupancy Category II: Building height in feet_____ No. Stories_____

Periodic Continuous

Soils (Table 1704.7)

<input type="checkbox"/>	<input type="checkbox"/> Verify materials below shallow foundations are adequate to achieve the design bearing capacity.
<input type="checkbox"/>	<input type="checkbox"/> Verify excavations are extended to proper depth and have reached proper material.
<input type="checkbox"/>	<input type="checkbox"/> Perform classification and testing of compacted fill materials.
<input type="checkbox"/>	<input type="checkbox"/> Verify use of proper materials, densities and lift thicknesses during placement and compaction of controlled fill.
<input type="checkbox"/>	<input type="checkbox"/> Prior to placement of compacted fill, observe subgrade and verify that site has been prepared properly.

Driven Deep Foundations (Table 1704.8)

<input type="checkbox"/>	<input type="checkbox"/> Verify element materials, sizes and lengths comply with the requirements.
<input type="checkbox"/>	<input type="checkbox"/> Determine capacities of test elements and conduct additional load tests, as required.
<input type="checkbox"/>	<input type="checkbox"/> Observe driving operations and maintain complete and accurate records for each element.
<input type="checkbox"/>	<input type="checkbox"/> Verify placement locations and plumbness.
<input type="checkbox"/>	<input type="checkbox"/> Confirm type and size of hammer.
<input type="checkbox"/>	<input type="checkbox"/> Record number of blows per foot of penetration.
<input type="checkbox"/>	<input type="checkbox"/> Determine required penetrations to achieve design capacity.
<input type="checkbox"/>	<input type="checkbox"/> Record tip and butt elevations.
<input type="checkbox"/>	<input type="checkbox"/> Document any pile damage.
<input type="checkbox"/>	<input type="checkbox"/> For steel elements, perform additional inspections in accordance with Section 1704.3.
<input type="checkbox"/>	<input type="checkbox"/> For concrete elements and concrete-filled elements, perform additional inspections in accordance with Section 1704.4.
<input type="checkbox"/>	<input type="checkbox"/> For specialty elements, perform additional inspections as determined by the registered design professional in responsible charge.
<input type="checkbox"/>	<input type="checkbox"/> For augered uncased piles and caisson piles, perform inspections in accordance with Section 1704.9.

Cast-In-Place Deep Foundations (Table 1704.9)

<input type="checkbox"/>	<input type="checkbox"/> Observe drilling operations and maintain complete and accurate records.
<input type="checkbox"/>	<input type="checkbox"/> Verify placement locations and plumbness.
<input type="checkbox"/>	<input type="checkbox"/> Confirm element diameter.
<input type="checkbox"/>	<input type="checkbox"/> Confirm element bell diameter (if applicable).
<input type="checkbox"/>	<input type="checkbox"/> Confirm element length.
<input type="checkbox"/>	<input type="checkbox"/> Confirm element embedment into bedrock (if applicable).
<input type="checkbox"/>	<input type="checkbox"/> Confirm adequate end-bearing strata capacity.
<input type="checkbox"/>	<input type="checkbox"/> For hollow stem auger cast piles monitor and record rate at which the auger is withdrawn.
<input type="checkbox"/>	<input type="checkbox"/> Record concrete or grout volumes.
<input type="checkbox"/>	<input type="checkbox"/> For concrete elements, perform additional inspections in accordance with Section 1704.4.

Special Inspections Checklist
2012 NC Building Code Section 1704
(check all boxes that apply)

Periodic Continuous

Helical Pile Foundations (1704.10)

<input type="checkbox"/>	Record installation equipment used.
<input type="checkbox"/>	Record pile dimensions.
<input type="checkbox"/>	Record tip elevations.
<input type="checkbox"/>	Record final depths.
<input type="checkbox"/>	Record final installation torques.
<input type="checkbox"/>	Record other pertinent installation data as specified by the designer.

Steel Construction (Table 1704.3)

Steel fabricator approved in accordance with Section 1704.2.2

yes no (If no, then in-plant special inspection is required.)

Material verification of high-strength bolts, nuts and washers:

<input type="checkbox"/>	Identification markings to conform to ASTM standards specified in the approved construction documents.
<input type="checkbox"/>	Manufacturer's certificate of compliance required.
Inspection of high-strength bolting:	
<input type="checkbox"/>	Snug-tight joints.
<input type="checkbox"/>	Pretensioned and slip-critical joints using turn-of-nut with matchmarking, twist-off bolt or direct tension indicator methods of installation.
<input type="checkbox"/>	Pretensioned and slip-critical joints using turn-of-nut without matchmarking or calibrated wrench methods of installation.

Material verification of structural steel and cold-formed steel deck

<input type="checkbox"/>	For structural steel, identification markings to conform to AISI 360.
<input type="checkbox"/>	For other steel, identification to conform to ASTM standards specified in the approved construction documents.
<input type="checkbox"/>	Review structural steel mill test reports.
<input type="checkbox"/>	Review fabricator's certified test reports.

Material verification of weld filler materials:

<input type="checkbox"/>	Identification markings to conform to AWS specification in the approved construction documents.
<input type="checkbox"/>	Manufacturer's certificate of compliance required.

Inspection of welding:

Structural steel and cold-formed steel deck:

<input type="checkbox"/>	Complete and partial penetration groove welds (radiographic or ultrasonic testing).
<input type="checkbox"/>	Multipass fillet welds.
<input type="checkbox"/>	Single-pass fillet welds $>5/16"$.
<input type="checkbox"/>	Plug and slot welds.
<input type="checkbox"/>	Single-pass fillet welds $\leq 5/16"$
<input type="checkbox"/>	Floor and roof deck welds.
<input type="checkbox"/>	Stud welding

Inspection of steel frame joint details for compliance:

<input type="checkbox"/>	Details such as bracing and stiffening.
<input type="checkbox"/>	Member locations.

Special Inspections Checklist
2012 NC Building Code Section 1704
(check all boxes that apply)

Periodic Continuous

Application of joint details at each connection.
 When the structure is designed to Seismic Design Category C, D, E, or F, special inspection shall be provided in accordance with AISC 341.

Concrete Construction (Table 1704.4)

Concrete materials:

Verifying use of required design mix.
 At the time fresh concrete is sampled to fabricate specimens for strength tests, perform slump and air content tests, and determine the temperature of the concrete.
 Inspection of concrete and shotcrete placement for proper application techniques.
 Inspection for maintenance of specified curing temperature and techniques.

Reinforcing steel and embedded accessories:

Verify reinforcing steel and prestressing tendons conform to the material, size, and grade specified in the contract documents.
 Inspect placement of reinforcing steel, including prestressing tendons.
 Inspect reinforcing steel welding in accordance with Table 1704.3, Item 5b, including verification of weldability of reinforcing steel other than ASTM A 706.
 Reinforcing steel-resisting flexural and axial forces in intermediate and special moment frames, and boundary elements of special reinforced concrete shear walls and shear reinforcement.
 Shear reinforcement.
 Inspect bolts to be installed in concrete prior to and during placement of concrete where allowable loads have been increased or where strength design is used.
 Verify embedments for structural connections to the concrete members are provided and placed.

Inspection of precast prestressed concrete:

Precast fabricator approved in accordance with Section 1704.2.2

yes no (If no, then in-plant special inspection is required.)

Review mill test reports for prestressing tendons

yes no

Review precast fabricators stressing records and concrete test reports.
 Verify erection of precast concrete members, including welded connections, placement of bearing pads, placement of expansion joint materials, and placement of joint sealants.
 Grouting of bonded prestressing tendons in the seismic-force-resisting system.

Inspection of post-tensioned concrete:

Review mill test reports for prestressing tendons

yes no

Application of post-tensioning forces. Record jacking forces and tendon elongations for post-tensioned concrete. Check recorded tendon elongations against calculated elongations for the applied prestressing forces.
 Grouting of bonded prestressing tendons in the seismic-force-resisting system.

Special Inspections Checklist
2012 NC Building Code Section 1704
(check all boxes that apply)

Periodic Continuous

- Verification of in-situ concrete strength, prior to stressing of tendons in posttensioned concrete and prior to removal of shores and forms from beams and structural slabs.
- Inspect formwork for shape, location and dimensions of the concrete member being formed.

Masonry Construction (Level 1) (Table 1704.5.1)

- Compliance with required inspection provisions of the construction documents and the approved submittals shall be verified.
- Verification of f'_m and f'_{aac} prior to construction except where specifically exempted by this code.
- Verification of slump flow and VSI as delivered to the site for self-consolidating grout.

As masonry construction begins, the following shall be verified to ensure compliance:

- Proportions of site-prepared mortar.
- Construction of mortar joints.
- Location of reinforcement, connectors, prestressing tendons and anchorage.
- Prestressing technique.
- Grade and size of prestressing tendons and anchorage.

During construction the inspection program shall verify:

- Size and location of structural elements.
- Type, size and location of anchors, including other details of anchorage of masonry to structural members, frames or other construction.
- Specified size, grade and type of reinforcement, anchor bolts, prestressing tendons and anchorages.
- Welding of reinforcing bars.
- Protection of masonry during cold weather (temperature below 40°F) or hot weather (temperature above 90°F).
- Application and measurement of prestressing force.

Prior to grouting, the following shall be verified to ensure compliance:

- Grout space is clean.
- Placement of reinforcement and connectors and prestressing tendons and anchorage.
- Proportions of site-prepared grout and prestressing grout for bonded tendons.
- Construction of mortar joints.
- Grout placement shall be verified to ensure compliance with code and construction document provisions.
- Grouting of prestressing bonded tendons.
- Preparation of any required grout specimens, mortar specimens and/or prisms shall be observed.

Special Inspections Checklist
2012 NC Building Code Section 1704
(check all boxes that apply)

Periodic Continuous

Masonry Construction (Level 2) (Table 1704.5.3)

<input type="checkbox"/>	<input type="checkbox"/>	Compliance with required inspection provisions of the construction documents and the approved submittals.
<input type="checkbox"/>	<input type="checkbox"/>	Verification of f'_m and f'_{aac} prior to construction and for every 5,000 square feet during construction
<input type="checkbox"/>	<input type="checkbox"/>	Verification of proportions of materials in premixed or preblended mortar and grout as delivered to site..
<input type="checkbox"/>	<input type="checkbox"/>	Verification of slump flow and VSI as delivered to the site for self-consolidating grout.
The following shall be verified to ensure compliance:		
<input type="checkbox"/>	<input type="checkbox"/>	Proportions of site-prepared mortar, grout and prestressing grout for bonded tendons.
<input type="checkbox"/>	<input type="checkbox"/>	Placement of masonry units and construction of mortar joints.
<input type="checkbox"/>	<input type="checkbox"/>	Placement of reinforcement, connectors and prestressing tendons and anchorage.
<input type="checkbox"/>	<input type="checkbox"/>	Grout space prior to grouting.
<input type="checkbox"/>	<input type="checkbox"/>	Placement of grout.
<input type="checkbox"/>	<input type="checkbox"/>	Placement of prestressing grout.
<input type="checkbox"/>	<input type="checkbox"/>	Size and location of structural elements.
<input type="checkbox"/>	<input type="checkbox"/>	Type, size and location of anchors, including other details of anchorage of masonry to structural members, frames or other construction.
<input type="checkbox"/>	<input type="checkbox"/>	Specified size, grade and type of reinforcement, anchor bolts, prestressing tendons and anchorages.
<input type="checkbox"/>	<input type="checkbox"/>	Welding of reinforcement bars.
<input type="checkbox"/>	<input type="checkbox"/>	Protection of masonry during cold weather (temperature below 40°F) or hot weather (temperature above 90°F).
<input type="checkbox"/>	<input type="checkbox"/>	Application and measurement of prestressing force.
<input type="checkbox"/>	<input type="checkbox"/>	Preparation of any required grout specimens, mortar specimens and/or prisms shall be observed.

Wood Construction (1704.6)

High-load diaphragms		
<input type="checkbox"/>	<input type="checkbox"/>	Inspect wood structural panels for grade and thickness shown in the approved construction documents.
<input type="checkbox"/>	<input type="checkbox"/>	Verify nominal size of framing members at adjoining panel edges meet the requirements in the approved construction documents.
<input type="checkbox"/>	<input type="checkbox"/>	Verify nail or staple diameter and length meet the requirements in the approved construction documents.
<input type="checkbox"/>	<input type="checkbox"/>	Verify fastener lines and fastener spacing meets the requirements in the approved construction documents.
Wood Trusses		
<input type="checkbox"/>	<input type="checkbox"/>	For clear truss span is $\geq 60'$ verification that temporary restraint/bracing is installed in accordance with the construction documents.
<input type="checkbox"/>	<input type="checkbox"/>	For clear truss span is $\geq 60'$ verification that permanent restraint/bracing is installed in accordance with the construction documents.
Where design wind velocity is ≥ 110 mph Exposure Category B, ≥ 120 mph for Exposure Category C, or Seismic Design Category is C, D ,E, or F:		
<input type="checkbox"/>	<input type="checkbox"/>	Verify locations of shear walls.

Special Inspections Checklist
2012 NC Building Code Section 1704
(check all boxes that apply)

Periodic **Continuous**

<input type="checkbox"/>	<input type="checkbox"/>	Verify fastening and anchorage of all elements of the lateral load resisting system, including shear walls, diaphragms, drag struts, braces and hold-downs, conforms to the contract documents when nail spacing for sheathing materials is 4" or less.
<input type="checkbox"/>	<input type="checkbox"/>	Verify fastening of roof sheathing and roofing material.
		Verify fastening of wall sheathing and siding materials.

Sprayed Fire-Resistant Materials (1704.12)

Structural member surface conditions:

<input type="checkbox"/>	<input type="checkbox"/>	Verify surface is prepared in accordance with the approved fire-resistance design or the approved manufacturer's written instructions.
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Application:

<input type="checkbox"/>	<input type="checkbox"/>	Verify the ambient temperature of the substrate before and after application meets the requirements of the manufacturer's written instructions.
<input type="checkbox"/>	<input type="checkbox"/>	Verify that the area for application is ventilated during and after application as required by the approved manufacturer's written instructions.

Thickness:

<input type="checkbox"/>	<input type="checkbox"/>	Verify the average thickness of the sprayed material is not less than the thickness required by the approved fire-resistance design.
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Density:

<input type="checkbox"/>	<input type="checkbox"/>	Verify that the density of the sprayed fire-resistant material is not less than that required by the approved fire-resistance design.
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Bond Strength:

<input type="checkbox"/>	<input type="checkbox"/>	Verify that the cohesive/adhesive bond strength of the sprayed fire-resistant material applied to structural elements is not less than 150psf.
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Smoke Control Systems (1704.16)

<input type="checkbox"/>	Test leakage and record device location.
<input type="checkbox"/>	Test pressure differences, flow measurements and detection and control verification.

Mastic and Intumescent Fire-Resistant Coatings (1704.13)

<input type="checkbox"/>	Inspection in accordance with AWCI 12-B and the approved construction documents.
<input type="checkbox"/>	Verification of water-resistive barrier complying with ASTM E 2570 (if applicable)

Special Inspections Checklist
2012 NC Building Code Section 1704
(check all boxes that apply)

Periodic Continuous

Exterior Insulation and Finish Systems (EIFS) (1704.14)

(Special Inspection required for conventional EIFS. Not required for EIFS drainage systems installed over water resistant barrier.)

<input type="checkbox"/>	<input type="checkbox"/>	Verify correct installation of reinforcing mesh and application of base coat.
<input type="checkbox"/>	<input type="checkbox"/>	Visually inspect all transitions in materials and joint sealants, including window, doors and run-out flashings.
<input type="checkbox"/>	<input type="checkbox"/>	Conduct water penetration testing in accordance with Section 1403.2, exception 2.

Special Cases (1704.15)

<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/>	<input type="checkbox"/>	_____

Architectural, Mechanical and Electrical Components

<input type="checkbox"/>	<input type="checkbox"/>	Provide periodic special inspection on buildings classified as Seismic Design Category D, E, or F for the fastening of interior and exterior wall claddings or veneers over 30 feet in height and weighing more than 5psf and anchorage of interior and exterior walls with the exception of interior nonbearing walls weighing 15 psf or less.
<input type="checkbox"/>	<input type="checkbox"/>	Provide periodic special inspection for the anchorage of electrical equipment for emergency or standby power systems in buildings classified as Seismic Design Category C, D, E, or F.
<input type="checkbox"/>	<input type="checkbox"/>	Provide periodic special inspection during the installation of piping systems intended to convey flammable, combustible, or highly toxic contents and their associated mechanical units in buildings classified as Seismic Design Category C, D, E, or F.
<input type="checkbox"/>	<input type="checkbox"/>	Provide periodic special inspection during the installation of HVAC ductwork that will contain hazardous materials in structures assigned to Seismic Design Categories C, D, E, or F.
<input type="checkbox"/>	<input type="checkbox"/>	Provide periodic special inspection during the installation of vibration isolation systems in structures assigned to Seismic Design Categories C, D, E, or F where the construction documents require a nominal clearance of $\frac{1}{4}$ " or less between the equipment support frame and restraint.

TOWN OF HOLLY SPRINGS, NORTH CAROLINA
SPECIAL INSPECTIONS PROGRAM
Quality Assurance Plan

Quality Assurance for Seismic Resistance

Seismic Design Category

Quality Assurance Plan Required (Y/N)

Description of seismic force resisting system and designated seismic systems requiring special inspections (Review Section 1705, 1707 and 1708 of the NCSBC to prepare this section):

Quality Assurance for Wind Requirements

Basic Wind Speed (3 second gust)

Wind Exposure Category

Quality Assurance Plan Required (Y/N)

Description of wind force resisting system and designated wind resisting components requiring special inspections (Review Section 1706 of the NCSBC to prepare this section):

Contractor's Statement of Responsibility

Each contractor responsible for the construction or fabrication of a system or component designated in the Quality Assurance Plan must submit a Statement of Responsibility.

Project:

Contractor's Name:

Address:

License No.:

Description of designated building systems and components included in the Statement of Responsibility:

Contractor's Acknowledgment of Special Requirements

I hereby acknowledge that I have received, read, and understand the Quality Assurance Plan and Special Inspection program.

I hereby acknowledge that control will be exercised to obtain conformance with the construction documents approved by the Building Official.

Signature

Date

Contractor's Provisions for Quality Control

Procedures for exercising control within the contractor's organization, the method and frequency of reporting and the distribution of reports is attached to this Statement.

Identification and qualifications of the person(s) exercising such control and their position(s) in the organization are attached to this Statement.

SEE ATTACHED LETTER

- Contractor's Statement of Responsibility •

EXAMPLE

Steel On Corporation
100 1st Street Drive NW,
Catfish, NC 28677

16 July 2008

Town Holly Springs, North Carolina
128 South Main Street
PO Box 8
Holly Springs, NC 27540

Subject: Provisions for Quality Control at Shopping Center 1

Building Official,

Steel-On has been selected as the subcontractor responsible for erection of the structural steel and decking that is a component of the seismic force resisting system identified on the approved plans, specifications and Quality Assurance Plan for Seismic Resistance.

Mr. John Doe, field supervisor of this organization is the responsible person exercising control and accountability of the system installation.

Mr. Doe has been employed with this firm for 25 years and has served as a field supervisor for the past 15 years. Mr. Doe has in excess of 30 years experience in steel erection and supervision of structures ranging in height from 1 to 4 stories.

Mr. Doe will be responsible for the all daily activities during the steel erection as well as material inventory and quality control on site. He will be responsible for ensuring that the special inspections firm will have access to all shop drawings and material specifications under his control. He will also coordinate erection schedules and timelines with the general contractor to ensure adequate notification is given to the special inspection firm for conducting inspections of all steel components and systems based on Chapter 17 of the North Carolina Building Code.

Mr. Doe will also ensure all copies of engineering reports, lab results, discrepancies, or other correspondence relating to the installation will be distributed to the following individuals (**Joe Snuffy Project Manager, Mike Estimator**) of this firm on a (**daily, weekly, monthly**) basis for final oversight, resolution and records retention.

If you have any question please contact me at (888)888-8888 or email me at jsteel.steelon@charter.net.

Cordially,

Jim Steel
Owner

Cc: Mike Snuff, Snuff Architecture
Jay Owens, Structural Engineer
Joe Builder- General Contractor